



Training regulations and how they come about

Federal Institute for
Vocational Education
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This brochure provides information on a unique procedure for the development of training regulations. The arrangements form the basis for initial training in the dual system, in which many young people in Germany begin their vocational qualification.

This procedure has the great advantage that its results are fully accepted by training practice. It involves those affected – employers organisations for the enterprises and trade unions for workers – in all important decisions about the content, objectives, duration and requirements of training.

How does this procedure operate? Experts from training practice develop the outlines of the new training regulations together with the Federal Institute for Vocational Education and Training (BIBB) and harmonise them with the draft framework curricula in consultation with experts from the vocational schools. Employers and trade unions promote the new training regulations in the enterprises and the Federal Government gives them the force of law.



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Preface

The 1969 Vocational Training Act (BBlG) was amended in 2005. The amendment came into force on 1 April 2005¹. One of the goals of the Act is to ensure that young people just getting started in the world of work have full vocational capacity in a wide range of activities. Only then can they cope with the constantly changing requirements of working life. In the old as well as the amended Act the State declared the entire field of non-school vocational education and training² to be a public task, the implementation of which, however, is entrusted largely to the employers in the private sector and the public administrations. All those involved in vocational education and training contribute to the planning and preparation of new or modernised occupations:

- ▶ the companies and the Chambers (employers),
- ▶ the trade unions (workers),
- ▶ the federal states and
- ▶ the federal government.

Under the Works Constitution Act and the Employee Representation Act the trade unions have extensive rights of participation in the implementation of vocational education and training. The associations of employers represent the interests of the enterprises – mostly private law entities – in which the training takes place.

The federal government dictates the legal framework of initial vocational education and training through laws and regulations. Training regulations are regulations that set the objectives, content and examination requirements for training in enterprises. These are adopted by the competent federal ministries in agreement with the Federal Ministry of Education and Research (BMBF) through ordinances, which do not require the con-

1 The Vocational Training Act (BBlG) of 1 April 2005 does not apply to vocational education and training in vocational schools, which are subject to the school laws of the federal states. It also does not apply to vocational education and training that is carried out in professional or comparable degree courses at universities on the basis of the Higher Education Framework Act and the higher education acts of the federal states, vocational education and training in public employment and vocational training on merchant vessels (article 3, paragraph 2, nos 1–3 BBlG).

2 According to the Basic Law (GG) the federal government is responsible under its concurrent legislative powers for industry and labour law jurisdiction (art. 74 no. 11 and 12 GG), and hence for in-company vocational training. The federal states are responsible for the school system, in this case for the vocational schools.

sent of the Bundesrat (Federal Council). They apply nationwide and have the force of law.

Established in 1970 on the basis of the Vocational Training Act (BBiG), the Federal Institute for Vocational Education and Training (BIBB) prepares the content of the training regulations. It develops the outlines together with experts from the relevant occupations who are delegated by the employers and trade unions. Many of the provisions set forth in the Vocational Training Act for the regulation of initial vocational education and training are based on arrangements previously developed in the course of training that have proven their worth there.

Training regulations

framework for occupations in the dual system

Most young people in Germany³ begin their initial vocational education and training after leaving school with an apprenticeship, that is, a course of training in the dual system.

The system is called “dual” because training takes place at two learning venues; in the enterprise and in the vocational school. Another possible learning venue is extra-company vocational training; it can take place in vocational training institutions outside vocational school and in-company training.

Access to initial vocational education and training is not formally dependent on a particular school-leaving qualification; training is basically open to anyone.

The young people conclude a training contract with a training company for a training relationship in a “recognised training occupation”.

The so-called exclusivity principle states that in-company vocational training for young people under 18 years of age may take place only in government-recognised training occupations. The Vocational Training Act defines the requirements that must be met by such a training occupation. It stipulates that initial vocational education and training has to provide the capabilities, knowledge and skills (vocational capacity) necessary for the exercise of a qualified vocational activity in a changing working environment in a well-regulated course of training. It also has to make possible the acquisition of the occupational experience required (article 1, paragraph 3 BBiG). This ensures binding quality standards for the vocational training of young people in the spirit of protection of minors.

3 The first-year trainee ratio, that is, the calculated proportion of persons in the resident population who began an apprenticeship in the dual system, was 56.9% in 2011 (Data Report 2013, p. 9, datenreport.bibb.de).

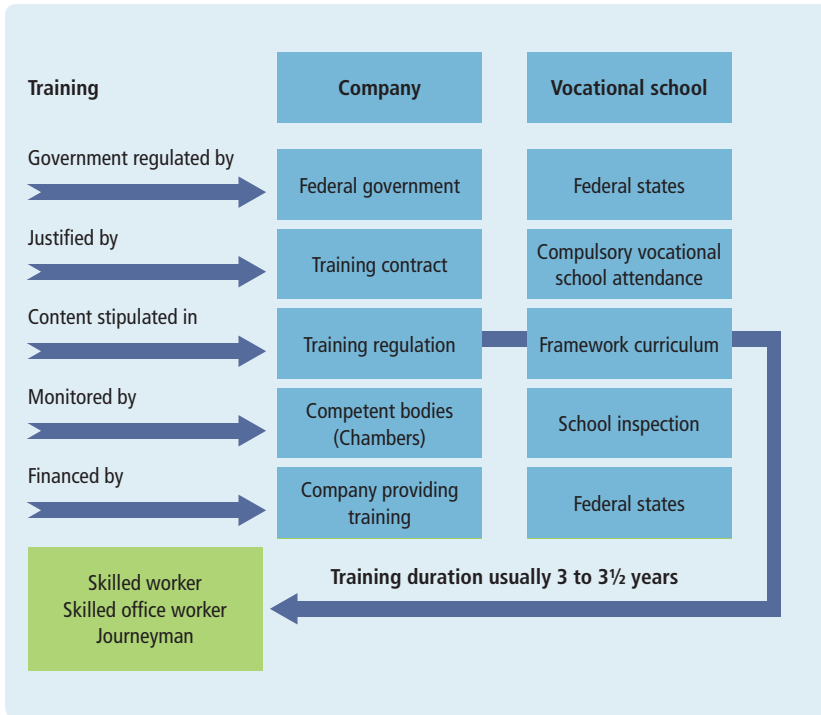


Figure 1: Duality of initial vocational education and training

Training regulations are issued for recognised training occupations by the relevant ministry, usually the Federal Ministry for Economic Affairs and Energy (BMWi), in agreement with the Federal Ministry of Education and Research (BMBF). They contain minimum standards for the in-company part of initial vocational education and training.

There are currently (as of 1 August 2013) 331 officially recognised training occupations to choose from. In addition, there are a number of occupations in Germany that are regulated by other legislation outside the scope of the Vocational Training Act. By way of example, the health professions are regulated not by the Vocational Training Act but by the Nursing Act (KrPflG). Historical roots of the “classification” of in-company training are already to be found in the Middle Ages. Individual craft and trade associations, the guilds, regulated apprenticeships for their enterprises. A systematic form of training in enterprise and school, the so-called master craftsmen training, developed out of those occupational regulations. The foundations for our modern training regulations were laid at the begin-

ning of the 20th century: As the process of industrialization began, the industries adopted the concept of craft training and adapted it to their needs. In order to arrive at uniform standards of training, they regulated vocational training through the establishment of a mandatory catalogue of skills and knowledge⁴ and guidelines for the duration of the training. This removed both regional differences and differences resulting from the kind and size of enterprises.

Gradually “national standards” were created for the qualification of skilled workers. This step was not taken in other industrialized countries which also have a history of crafts training. Its establishment in law, however, was delayed for a very long time. A bill introduced in 1919 was thwarted by irreconcilable contradictions between employers and the trade unions, which insisted on having a voice in decision-making. It was not until after the Second World War, in 1953, that vocational training in the crafts was regulated under the Crafts Statutes (Gesetz zur Ordnung des Handwerks – HwO). In 1969 the Grand Coalition of Christian Democrats and Social Democrats finally adopted a law that had no counterpart anywhere in the world, on the cooperation of employers, trade unions, Chambers and public authorities to promote vocational qualification for the majority of the population: the Vocational Training Act (BBiG). The principle of equal participation was also adhered to in the amended Vocational Training Act of 2005.

Vocational schools also look back on a long tradition that can be traced back to the 16th and 17th century. In those days reading, writing and arithmetic were taught in religious and commercial “Sunday schools”. Although compulsory vocational school instruction was not finally introduced until 1938, the public authorities could already oblige enterprises to send their apprentices to vocational school more than a hundred years ago.

4 In the Vocational Training Act of 2005 the concept of “skills and knowledge” was expanded to include “capabilities”; so that we now speak of “skills, knowledge and capabilities” in the sense of comprehensive vocational competence.

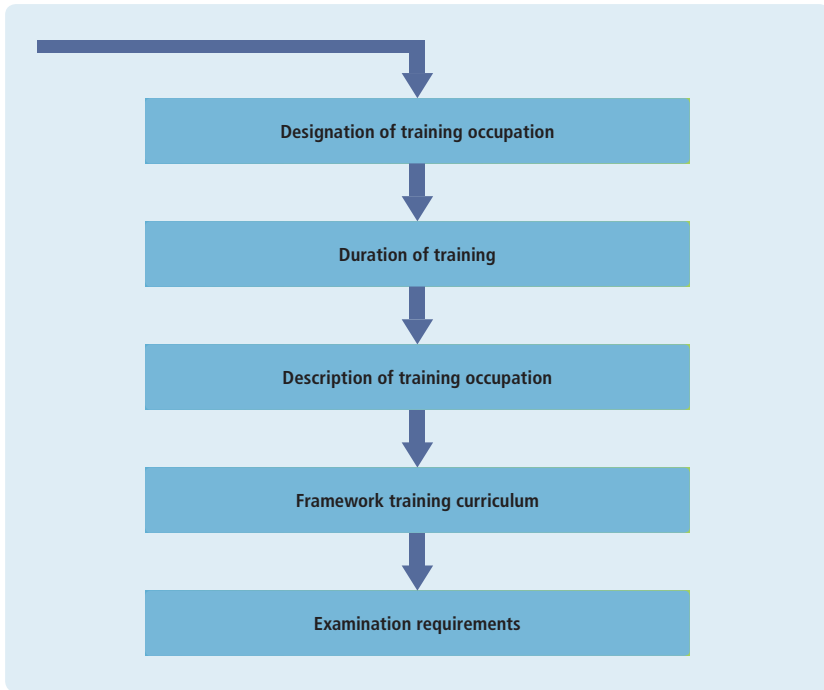


Figure 2: What does a training regulation stipulate?

The training regulations have a central role in the Vocational Training Act. They form the framework for regulating the occupations.

A training regulation regulates (article 5 paragraph 1 BBiG)

- ▶ the designation of the training occupation,
- ▶ the duration of the training – which shall be not less than two and not more than three years⁵,
- ▶ the description of the training occupation – the typical “skills, knowledge and capabilities” of the profession in summary form,
- ▶ the framework training curriculum – a guide to how the teaching of skills, knowledge and capabilities is to be structured in terms of content ⁶ and time,
- ▶ the examination requirements.

5 Most training programmes take three years, but a not inconsiderable number are shorter (two years) or longer (three and a half years) in duration.

6 The substantive outline covers the educational content and educational goals of the training regulation.

These provisions describe the minimum requirements for a modern course of training. They define the standards, i.e. the currently indispensable skills, knowledge and capabilities of a qualified specialist, as well as the scope of his or her practical activity in order to be able to integrate additional qualifications as well as hitherto unforeseeable future developments in education and training.

The openness of training in the dual system to new developments and different training possibilities is an essential precondition for the readiness of the enterprises to provide training for the new generation and at the same time for the occupational flexibility of employees. The Vocational Training Act is open for further developments in the dual system. Since the amended Vocational Training Act (BBiG) came into force on 1 April 2005, trainees have been able to take limited segments of their vocational training abroad. The period spent abroad is treated legally as part of the vocational training as long as it serves the purpose of the course of training and does not exceed a quarter of the duration of the training as stipulated in the training regulation.

Under the terms of the Act, the training regulations can also provide for the acquisition of supplementary qualifications⁷. These complement the trainee's vocational capacity and expand the skills, knowledge and capabilities referred to in the description of the training occupation. In the final examination, the supplementary qualifications are examined and certified separately.

Parallel to in-company training, part-time vocational school instruction is provided under the authority of the federal states in accordance with the division of responsibilities set forth in the Basic Law.

The framework training curricula in the training regulations for the companies are coordinated with the corresponding framework curricula for vocational schools, so that in-company training and vocational school education complement one another.

7 In the 2009 restructuring of the music salesperson training occupation, supplementary qualifications were included among the regulation instruments for the first time in the dual system.

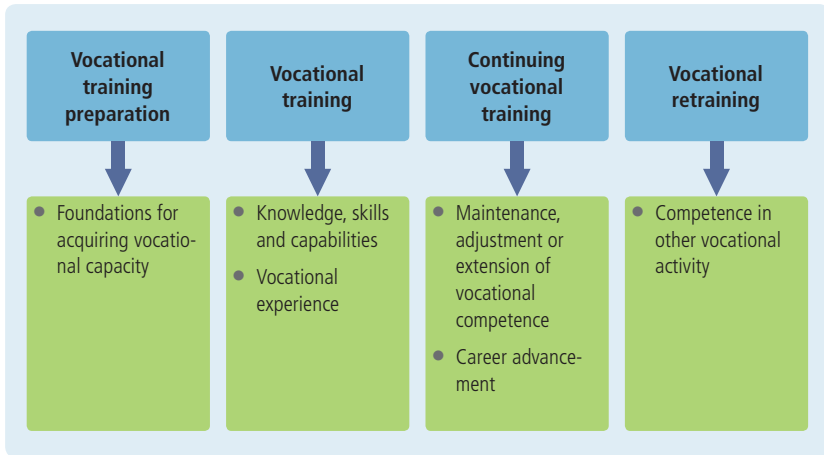


Figure 3: Vocational education and training

Enterprises and competent bodies

organisers of vocational education and training

Out-of-school vocational education and training is governed uniformly and nationwide by the Vocational Training Act. Each individual enterprise finances the training by itself. Special services, such as the training of disadvantaged young people in enterprises or inter-enterprise training of trainees, are subsidised by the State, but this does not revoke the principle that enterprises have to fund their own vocational training.

Whether a company has “training competence”, depends on whether it is suitable as a training facility and whether it employs instructors with the requisite personal and professional qualifications. The verification of this “competence” is the responsibility of the competent authorities.

The implementation of initial vocational education and training in private enterprises and public administrations is monitored by the “competent bodies”. The term “competent bodies” refers to the Chambers ⁸ (that is, Chambers of Industry and Commerce, Chambers of Crafts and Trades, Chambers of Agriculture, and chambers of the liberal professions, such as the Medical Chambers), the competent authorities of the public service and the competent bodies of churches and other religious organisations governed by public law.

Under the terms of the Vocational Training Act, the competent authorities have the task of

- ▶ supervising vocational training preparation, vocational training and retraining,
- ▶ maintaining the directory of apprenticeships⁹, in which the essential content of the vocational training relationship is to be entered (in the crafts, this is the “Apprentices’ Register”),

8 All companies in a particular sector are compulsory, dues-paying members of the relevant Chamber. Decisions are made by a General Assembly elected by all members of the Chamber. The Chambers are subject to legal supervision by a higher authority of the federal states, usually the ministries of the ministries of economy.

9 To ensure the completeness and up-to-dateness of this directory, the enterprises providing training are obliged to notify their Chambers of all apprenticeships or training contracts.

- ▶ to advise the enterprises in all training issues through the intermediary of training counsellors,
- ▶ to monitor the aptitude of the training staff and the training facility,
- ▶ to conduct the intermediate and final examinations or journeyman examinations,
- ▶ to monitor and support stays in other countries.

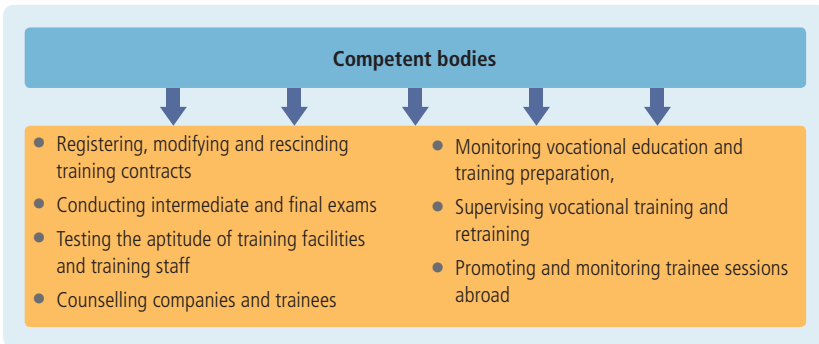


Figure 4: Competent bodies

Under the terms of the Vocational Training Act the competent authorities are obliged to set up vocational education and training committees consisting of six representatives of trade unions, six employers' representatives and six teachers at vocational schools. The vocational education and training committees must be informed and heard in all important matters concerning vocational education and training. Also, they have the task of promoting continuous development of the quality of vocational education and training under the terms of the Vocational Training Act.

The implementation and design of initial vocational education and training in the enterprises is their responsibility. There are numerous opportunities and options available for doing so. For example, the teaching of training content that the enterprise that is actually responsible cannot provide (for technical, economic or personal reasons) can be done in inter-company training centres (überbetriebliche Berufsbildungsstätten, ÜBS) or in a training alliance with other companies. The curricula formulated in the training regulations represent minimum standards. Each enterprise thus has the possibility to take up other topics in its training and to offer the trainees additional qualifications.

The Federal Institute for Vocational Education and Training

development centre for new training regulations and platform for dialogue between the social partners

The Federal Institute for Vocational Education and Training was established in 1970 on the basis of the Vocational Training Act of 1969 as an institute for researching, developing and promoting out-of-school vocational education and training¹⁰. Today, it is the acknowledged centre of excellence for research into and development of vocational education and training in Germany, performing its duties within the context of the education policy of the federal government.

The Federal Institute for Vocational Education and Training is the scientific partner of the social partners (employers and unions) and the federal government for the restructuring of occupations. It supports coordination and agreement between employers, unions and government regarding new educational approaches through research and development. It also shapes the process of developing training regulations and is involved in their coordination with the corresponding framework school curricula of the federal states.

One of the crucial tasks of the Federal Institute for Vocational Education and Training is to collaborate “under the authority of the competent Federal Ministry in preparing training regulations and other ordinances (...)” (article 90, paragraph 3, no. 1 BBiG). Through vocational education research, the preconditions are created for ensuring that the training regulations can be newly designed as well as revised and customized to keep up with economic, technological and social changes. A 1972 agreement between federal and state governments (“joint memorandum”) regulates the procedure for coordinating training regulations and framework curricula.

10 After the Vocational Training Act (BBiG) of 1969 and the Vocational Training Promotion Act (BerBiFG) of 1981, the current legal basis of the Federal Institute for Vocational Education and Training is the Vocational Training Act (BBiG) of 2005.

The further tasks of the Federal Institute for Vocational Education and Training include

- ▶ participating in the preparation of the annual Vocational Education and Training Report¹¹ of the Federal Ministry of Education and Research,
- ▶ participating in the compiling of the Vocational Education and Training Statistics of the Federal Statistical Office,
- ▶ promoting pilot projects, including supporting scientific research,
- ▶ participating in international cooperation in vocational education and training,
- ▶ other administrative tasks of the federal government to promote vocational education and training,
- ▶ promoting the inter-company training centres and supporting the planning, establishment and further development of these facilities,
- ▶ managing the directory of recognised training occupations,
- ▶ performing the tasks described in the Distance Learning Protection Act and contributing to the improvement and expansion of vocational distance learning through the promotion of development projects.

The Board of the Federal Institute for Vocational Education and Training is made up of eight representatives of the employers, eight representatives of the trade unions and eight representatives of the state governments as well as five representatives of the federal government. Employers and trade unions participate intensively in the development of training regulations by the Federal Institute for Vocational Education and Training in order to turn the experience from training to good use and to heighten acceptance of new training regulations in the enterprises providing training. This intensive cooperation applies to the entire process. It starts with the joint elaboration of the educational policy benchmarks essential for a regulatory measure and continues up to the adoption of the training regulation. This adoption usually happens only after the competent social partners have had the opportunity to comment on the draft, and the BIBB Board has approved it.

This procedure, generally called “principle of consensus” in the vocational educational policy discussion, goes beyond the sphere of preparation of training regulations. It is also decisive in the putting into practice of the training regulations.

11 For that purpose the Federal Institute for Vocational Education and Training has prepared a “data report on the vocational education report” annually since 2009: datenreport.bibb.de

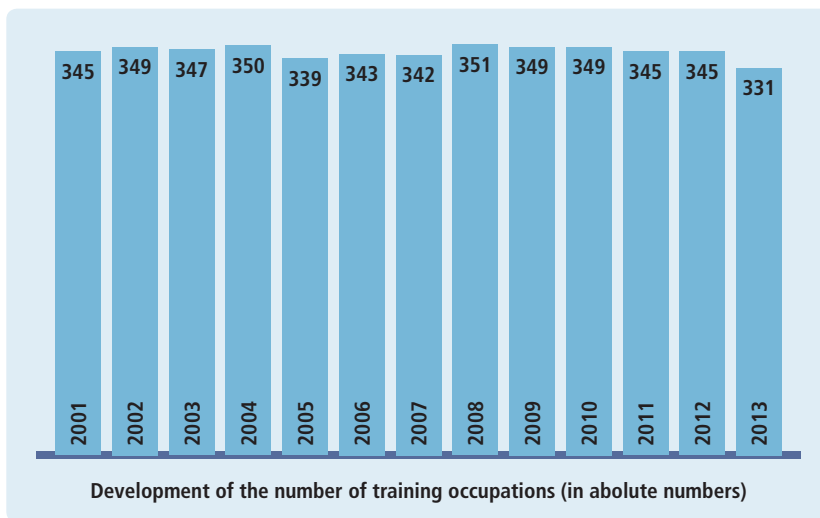


Figure 5: Trend: Number of training occupations

At the Federal Institute for Vocational Education and Training, essential¹² tasks related to the development of training regulations are dealt with in the department responsible for the organisation of vocational education and training. There especially the preparatory research and the actual regulatory procedures are performed, separately for each occupational field. Similarly, the application of new and modernised training regulations and the putting into practice of new examination structures are studied and evaluated in the BIBB.

New training regulations and framework curricula have been adopted for various occupations in response to technical, economic and social developments. Obsolete occupations have disappeared, whole occupational fields have been revised, restructured and merged into new complex occupations.

In the late 1980s, for example, many old specialised occupations in the metal and electrical trades, which are severely affected by changes in technology and job organisation, were grouped together into a few new occupations.

12 Qualification research, early detection and testing of training concepts are also dealt with by other departments of the Federal Institute for Vocational Education and Training.

It became necessary also to develop completely new occupations; for example, the new occupation of production technologist came into effect on 1 August 2008. New qualification requirements emerged in the machinery and plant engineering industry. The combination of new production technologies as well as the processing of new materials requires intensified use of information technology. The traditional metal-working trades could not meet these qualifications. At the same time the further training regulation for certified process manager/production technology was developed. Such interlocking of initial and continuing training regulations can modernize the German vocational education and training system. It can also increase the attractiveness of the vocational training system, since it can open up new career paths to skilled workers and also give enterprises the chance to provide process-related training for their personnel.

In the years from 2003 to 2012 a total of 194 training occupations were restructured. Among them were 159 modernized and 35 new training occupations. Five modernised training occupations came into force in 2012 (source: Data report 2013, p. 116, datenreport.bibb.de).

Training modules were developed to facilitate access to the dual system. These are intended to permit transition to the regular dual training for old applicants¹³ with the possibility of time credit for skills already acquired or admission to the external examination before the Chamber. The training modules of a training occupation are developed from the current training regulation underlying the occupation and the corresponding framework curriculum. They have to include all the (minimum) content prescribed in those regulation instruments. They are geared to the principles of a complete action and oriented on “acting in situations”. The sum of all module times corresponds to the regulated training duration prescribed by the training regulation.

The purpose of the training is to make it possible for young people to acquire the comprehensive vocational capacity that enables them to take efficient, effective and innovative action independently, on their own responsibility and in co-operation with others. The Vocational Training Act takes this overall objective into account by including the concept of vocational capacity in the amended Vocational Training Act of 2005. Only very well trained skilled workers can keep up with the increasingly rapid

13 Old applicants are applicants from earlier school leaver cohorts, who have so far applied in vain for apprenticeships.

developments that are changing people’s work and occupations. Since specialized knowledge once learned is not sufficient for a whole working life, the readiness to keep on learning should already be awakened during training so that one can cope with the changes and new challenges in the workplace. At the same time it is becoming ever more important in training to develop a wide range of social and methodological skills as well as personal skills in addition to expertise.

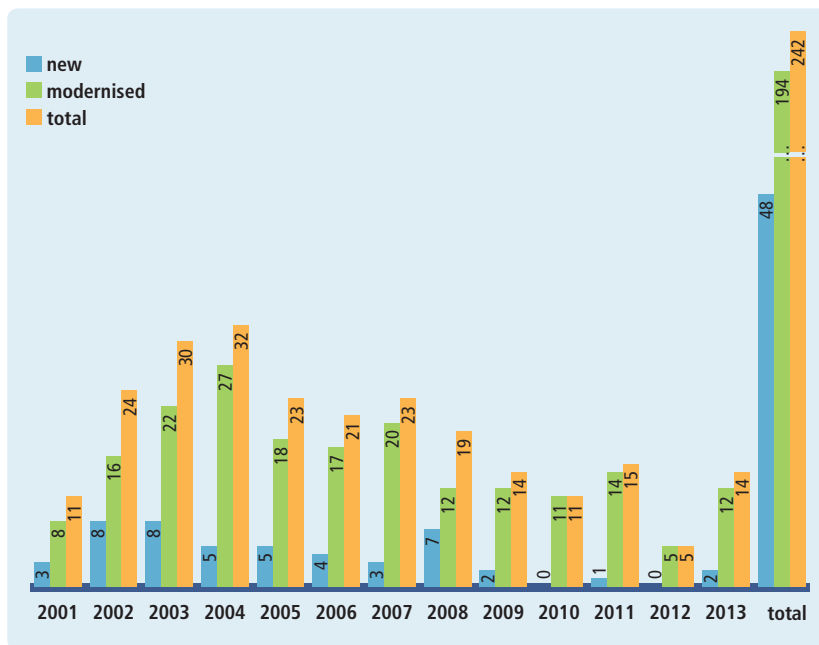


Figure 6: New and modernised training occupations 2001–2013

These dimensions of competence are taken into account in the German Qualifications Framework (GQF) adopted in 2013 as well. In October 2006, the Federal Ministry of Education and Research (BMBF) and the Standing Conference of the Ministers of Education and Cultural Affairs (KMK) agreed to jointly develop a German Qualifications Framework for Lifelong Learning. In the following years, with the involvement of the relevant stakeholders, the German Qualifications Framework was developed, tested, revised and, in May 2013, finally adopted. It is the prerequisite for the implementation of the European Qualifications Framework (EQF) in Germany and is intended to promote transparency and permeability between the strands of the education system.

The GQF has eight levels to which formal qualifications from general education, higher education and vocational education are assigned. The qualifications are described on the basis of the competence categories ‘professional competence’ and ‘personal competence’ each of which is again divided into two subcategories (professional competence: “knowledge” and “skills”, personal competence: “social competence” and “independence”).

Level indicator 1			
Structure of requirements			
Professional competence		Personal competence	
Knowledge	Skills	Social competence	Autonomy
Depth and breadth	Instrumental and systemic skills, judgement	Team/leadership systemic skills, involvement and communication	Autonomous responsibility/ responsibility, reflectiveness and learning competence

Figure 7: Structure of the GQF (AK DQR 2011, S. 5, <http://www.deutscherqualifikationsrahmen.de/?t=/documentManager/sfdoc.file.supply&fileID=1382436343763>)

The concept of action competence is at the centre of the German Qualifications Framework: “In the context of the GQF, competence means the ability and willingness of the individual to use knowledge and skills as well as personal, social and methodical capabilities and to behave in a thoughtful and individually and socially responsible manner. Competence in this sense is seen as comprehensive action competence.”

In the vocational sphere, the concept of competence used in the GQF is equated with vocational capacity as defined in the Vocational Training Act.

In a top-level meeting on 31 January 2012, the federal and state governments, social partners and business organisations agreed on a common position on the implementation of the German Qualifications Framework (GQF); under its terms, the two-year occupations of the dual system are assigned to level 3, the three-year and three-and-a-half-year occupations to level 4. The assignment is shown in the Europass Certificate supplements as well as in the “directory of recognised training occupations”. In 2017 the assignments will be reconsidered, taking into account the hitherto unassigned general education diplomas.

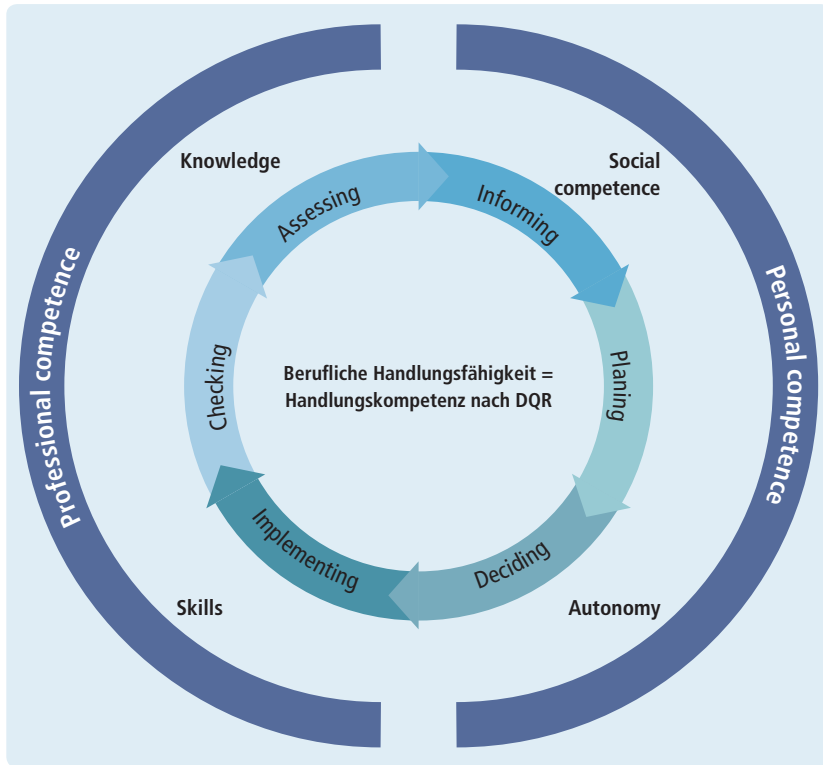


Figure 8: What is vocational capacity?

In the context of the implementation of the German Qualifications Framework (GQF), a proposal for the restructuring of the occupation profiles will be formulated in the Federal Institute for Vocational Education and Training together with the social partners and the ministries. The proposal is to be put into adopted in 2014.

Conduct of the procedure

If the content or the structure of a training occupation needs to be modernised or if a new occupation needs to be created, the initiative generally comes from the trade associations, the employers' umbrella organisations, the trade unions or the Federal Institute for Vocational Education and Training. The decision is made by the competent Federal Ministry in coordination with the federal states after consulting all stakeholders. Often the Federal Institute for Vocational Education and Training first issues a position statement or – especially in the case of a major reform project – carries out a research project.

The development of new training regulations and framework curricula or the adaptation of existing training rules to changing vocational practices proceeds according to a regulated procedure involving the federal government, the state governments, employers, trade unions and vocational education researchers.

The federal and state governments have agreed to limit the duration of such procedures in principle to about a year. The work of the experts¹⁴ should generally be completed by at most eight months after the decision of the Coordinating Committee, the body in which the federal and state governments deliberate.

The regulatory work must take into consideration on the one hand the binding character of the intended legislation specifying the content and goals of the training and on the other hand the dynamics of technological, economic and social development. The use of certain methods or the use of certain technical systems is not a mandatory provision of the training regulation. The objectives are listed in a technologically neutral and function-oriented manner and this it remains open to new developments.

14 The federal government experts support the formulation of the training regulation, including the framework in-company training curricula. They are appointed by the social partners. The state government experts, appointed by the Standing Conference of the Ministers of Education and Cultural Affairs of the federal states (KMK), prepare the framework curricula for the vocational schools.

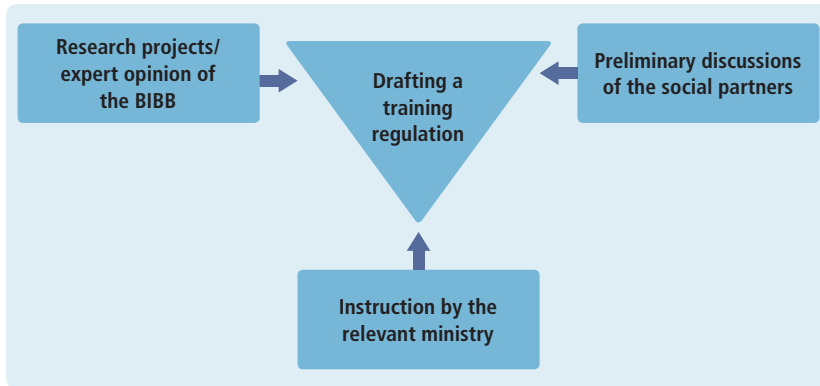


Figure 9: Initiating a restructuring procedure

The ensuing procedure for drafting training regulations contains these steps:

- ▶ Defining the “benchmarks” for the training regulation,
- ▶ Elaboration and coordination,
- ▶ Adoption of the regulation.

These steps lead from the application, submitted to the relevant ministry, to the new occupation.

To make the abstract process more understandable, we shall use the example of vocational education and training in the geo-information technologies to describe the emergence of a training regulation. At the same time the example shows the range of design options.

On the initial situation:

Ongoing technological developments in the three training occupations of surveying technician, mountain surveying technician and cartographer necessitated dealing with geographic information systems for the collection, processing and visualization of geodata.

The new qualification requirements combined or separated the occupational content of the aforementioned occupations in a new way. The previous content demarcations were therefore no longer useful. To take account of this trend and open up the training for new industries, the social partners agreed on a new overall concept for vocational education and training in geo-information technology (now with two training occupations). The occupations of geomatics engineer and surveying technician, with the disciplines of surveying and mountain measurement, were to be connected through common training content at the beginning of the training. The content of

the occupation to be dispensed with, that of cartographer, was to be integrated primarily into that of the geomatics engineer and the content of the occupation of mountain surveying technician, also to be dispensed with, was to be integrated primarily into the occupation of surveying technician.

Modernising and initiating occupations

The benchmark proposals for a training occupation can arise in different ways:

- ▶ as a result of preliminary consultations between the social partners,
- ▶ based on the results of research projects or expert opinions of the Federal Institute for Vocational Education and Training,
- ▶ on the basis of a directive from the relevant ministry.

The social partners usually generate the benchmark figures when they see the need for the development of a new occupation or revision of an existing occupation. The umbrella organisations of the social partners (Coordinating Association of German Industry for Vocational Education (KWB) and usually the German Trade Union Confederation (DGB)) propose the benchmarks to the regulatory authority (the relevant ministry) with a request for consideration and for the setting of a date for an application interview.

1st step:

Specification of the benchmarks for the training regulation

The “benchmarks” of the training regulation are set in an “application interview” at the relevant ministry (in most cases the Federal Ministry for Economic Affairs and Energy).

The following benchmark figures for the restructuring of vocational education and training in the geo-information technologies were laid down in the application interview held in January 2009: The vocational education and training in the training occupations of geomatics engineer and surveying technician is grouped together in a family under the name of “vocational training in the geo-information technologies” and published in a regulation. The joint training takes place over a period of 12 months at least and 18 months at most.

a) Occupational title

Geomatics engineer
Surveying technician

b) Duration of training

The duration of training is three years.

c) Structure and composition of training¹⁵

Mono-occupation
Occupation differentiated into two fields of specialisation

d) Form of examination

Interim and final examinations in both occupations

e) Time outline

Reference times¹⁶ in weeks with separation before and after the interim examination.

f) Environmental protection

Learning objectives that go beyond the standard item "Environmental protection"¹⁷ are taught together with other learning content.

g) Catalogue of skills, knowledge and capabilities¹⁸

The catalogue of skills and knowledge contains the minimum requirements for vocational education and training for the occupations of geomatics engineer and surveying technician.

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- 15 **Mono-occupations** designates self-contained training courses with qualification profiles that formally show no specialisation. The training content is identical for all trainees. **Training occupations with internal differentiation** are training courses with special training content for individual areas of responsibility or fields of activity. The specialisation takes place in particular in the form of priority topics and disciplines. Differentiation according to priority topics takes specific company characteristics into account. In the 2nd and 3rd year of training, **priority** topics usually claim no more than 6 months out of the entire training period. If there are industry-specific features, greater differentiation is achieved by means of **disciplines**. The 3rd training year is intended for imparting the necessary skills, knowledge and capabilities. The examination requirements are specified for each discipline, unlike the priority topics. The use of **elective qualification units** is possible particularly for highly specialized industries in which each enterprise offers a different range of services and specialization transcending the limits of disciplines is necessary. With this model, specialized company requirements can be depicted by combining different elective qualification units. The number of elective qualification units offered and to be selected and the time they consume during the training vary substantially.
- 16 Broken down into reference times, the training content of the framework training curriculum is grouped into content segments. A reference time in weeks is stipulated for each content segment. This indicates approximately how much time is to be allotted for imparting and deepening knowledge of the content in the company.
- 17 Decision No. 73 of the Board of the Federal Institute for Vocational Education and Training of 4/5 February 1988: Inclusion of environmental issues in vocational education and training.
- 18 The catalogue of skills, knowledge and capabilities is contained in all training regulations

2nd step: Elaboration and coordination

In the elaboration and coordination phase training regulations for the enterprises and framework curricula for vocational schools are prepared and co-ordinated.

The Federal Institute for Vocational Education and Training asks the umbrella associations of employers and trade unions to appoint experts, who then act as federal government experts (workplace representatives) in working out the restructuring of the training occupation together with the Federal Institute.

They prepare the so-called general provisions section and the appended framework training curriculum for the draft training regulation. The substantive structure and time schedule are set forth in the framework training curriculum, the general provisions section contains inter alia the training occupation title, the training occupation description and the examination requirements.

In coordination with the work of the federal government experts, experts from the federal states draft a framework curriculum for vocational school instruction. In a joint session at the end of the development phase, the federal and state experts have a final discussion of the two drafts and co-ordinate them with regard to time schedule correspondence and content.

The number of appointed experts and deputy experts who helped prepare the documents required for the restructuring of the training occupations in each BIBB process was determined by the umbrella associations of the employers and trade unions. In selecting the experts, special emphasis was placed on ensuring professional representation of the previous areas, surveying, mountain surveying and cartography, as well as the branch to be newly integrated, remote sensing.

The coordinated draft training regulation is submitted to the Board of the Federal Institute for Vocational Education and Training for comment. The favourable comment of the Board on the regulatory documents is at the same time a recommendation to the federal government that it enact the training regulations in the form in which they are presented. In addition, the designated experts formulate the Europass Certificate supplements for the occupation concerned which are annexed to the graduation certificate. To improve mobility, especially in Europe, and to

facilitate cross-border job applications, the Europass Certificate supplements are in French and English as well as German. They are part of the Europass.

This is a free service of the European Commission that helps make qualifications, skills and competences easier to understand throughout Europe. It serves the purpose of registering all qualifications acquired in the course of one's life, regardless of how. It focuses more and more on learning outcomes and less on learning paths and learning periods.

From April 2009 to January 2010 the federal government experts, together with the Federal Institute for Vocational Education and Training and the relevant federal ministries, prepared the drafts of the regulations and the framework training curricula for the training occupations of geomatics engineer and surveying technician.

The following questions in particular were discussed at the meetings:

- *What is the common content of the two occupations and how profound must the teaching be for the common content?*
- *What training period will be required to cover the common content?*
- *How must the learning objectives in the occupation of geomatics engineer be formulated so that the occupation can be taught in many different fields?*
- *Is the specific content of surveying and mountain surveying adequately represented in the discipline model or can the differentiation be displayed more meaningfully through priority topics?*

The outcome of the deliberations was that the mono-occupation of geomatics engineer and the occupation of surveying technician with the disciplines of surveying and mountain surveying were defined. The two occupations have common content for 12 months at the beginning of the training.

Parallel to the appointment of the federal experts, the Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the federal states (KMK) appointed a Framework Curriculum Committee chaired by the state of North Rhine-Westphalia to prepare the school-based framework curriculum. The draft of the framework curriculum was prepared in the period from June 2009 to January 2010.

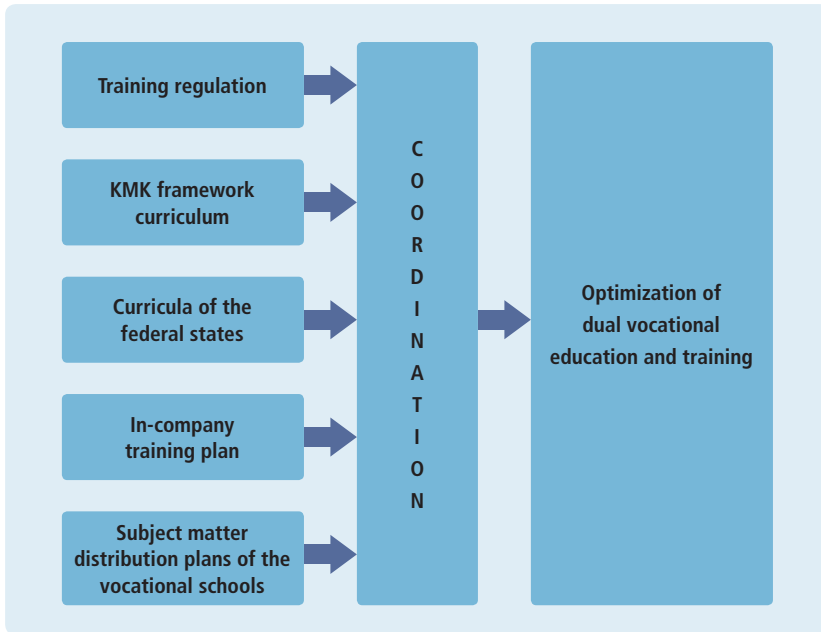


Figure 10: The coordination of in-company and in-school training

3rd step: Adoption of the training regulation

The “Federal/State Coordinating Committee on Training Regulations/Framework Curricula” (KoA)¹⁹ gives final approval to the new training regulation and the framework curriculum co-ordinated with it.

The relevant ministry then adopts the training regulation in agreement with the Federal Ministry of Education and Research and publishes it in the Federal Law Gazette; the beginning of the next training year, that is, 1 August, is usually set as the date of entry into force.

¹⁹ The “Federal/State Coordinating Committee on Training Regulations/Framework Curricula” (KoA) consists of representatives from the ministries responsible for vocational education and training of all 16 federal states, the Federal Ministry of Education and Research (BMBF) and the ministries responsible for the respective training regulations, usually the Federal Ministry for Economic Affairs and Energy (BMWi). It is not a statutory body, but it is based on a federal/state agreement (Joint Memorandum of 30 May 1972).

The framework curriculum is usually either directly adopted by the individual federal states or transformed into state-specific curricula for the vocational schools.

It is clear from the restructuring procedure described above that the responsibility and competencies for vocational education and training are interrelated and intertwined. Only through careful weighing up of the various interests and wishes of all those involved can a workable outcome be achieved, since a training regulation will only be accepted by the companies if it has been drafted by consensus by all parties.

The Board of the Federal Institute for Vocational Education and Training approved the vocational education and training in the geo-information technologies with the two training occupations of geomatics engineer and surveying technician; on 25 March 2010, the Federal/State Coordinating Committee on Training Regulations/Framework Curricula (KoA) also endorsed this vocational education and training. Once its conformity to law had been assessed by the Federal Ministry of Justice, the new training regulation was issued by the Federal Minister for Economic Affairs and Energy and the Federal Minister of the Interior on 30 May 2010.²⁰

20 Regulation on Vocational Education and Training in Geo-information Technology of 30 May 2010 (Federal Law Gazette vol. 2010, part I, no. 28, Bonn, 4 July 2010).

Directory of recognised training occupations

Training regulations are published in the Federal Law Gazette; in addition, they appear together with the framework curricula in the Federal Gazette. The new training regulations are included in the directory of recognised training occupations, which is managed by the Federal Institute for Vocational Education and Training and published annually in its latest version.

The directory lists the recognised training occupations, those being tested as well as the occupations that have been repealed or amended, and provides information about the duration of the training and the legal bases (references). It also provides information about the Austrian and French examination certificates which are on a par with the German ones. In addition, the directory contains provisions of the federal and state governments concerning occupations in the health and social services as well as provisions concerning vocational training for disabled persons. It also reflects the provisions for continuing vocational training and retraining and contains a list of the competent authorities and a statistics section.

The directory of recognised training occupations is available at the Federal Gazette online site. The printed part of the directory can be purchased from the W. Bertelsmann Verlag (wbv). The homepage of the BIBB provides further information on the directory.

www.bibb.de/de/wlk49696.htm

Support for training practice by the Federal Institute for Vocational Education and Training

The enterprises and vocational schools are responsible for the implementation of the training regulations and framework curricula. The Federal Institute for Vocational Education and Training, however, provides support by means of publications and various forms of counselling.

The Federal Institute for Vocational Education and Training is done through publications in the series “Shaping Training”, information and online materials for the individual training occupations, further support by the Federal Institute for Vocational Education and Training.

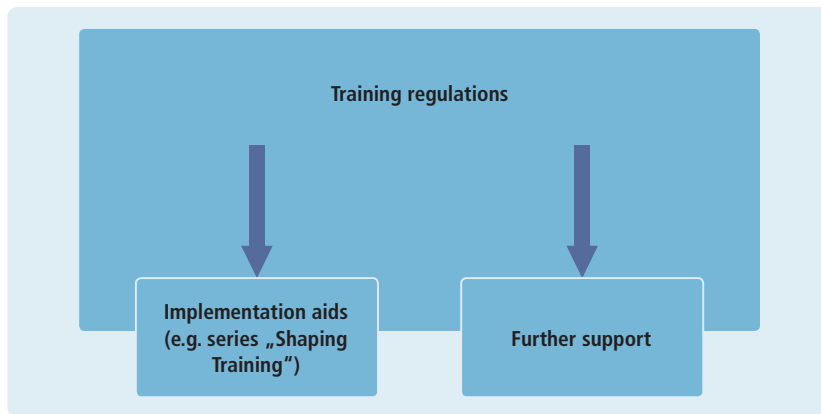


Figure 11: Offers of the Federal Institute for Vocational Education and Training

Implementation aids for training regulations

The implementation in particular of new training regulations in practical training places high demands on all people involved in companies, vocational schools, inter-company training centres and the competent authorities as well as on the trainees. The “Shaping Training” series issued by the Federal Institute for Vocational Education and Training provides valuable assistance and suggestions.

Innovations are presented in detail and explained. The individual sections of the regulation text concerned are commented on at length. Comments on the objectives of the framework training curriculum illustrate the training content. Exemplary learning projects and tasks concretise the skills, knowledge and capabilities to be taught and thus facilitate the implementation of training for the instructors. Valuable tips for instructors and examiners as well as trainees are found in the examples of ways of organising the intermediate and final examinations in new and modernised occupations. These application examples provide an idea of the range of examination requirements. Notes on training planning, for example checklists for the enterprise providing training, notes on creating a company training plan and examples of written evidence of formal qualifications support all those involved in the training. The training profile and the framework curriculum for vocational school instruction serve the purpose of information. The explanations and practice assistance are supplemented by information about possible continuing training and qualifications as well as further reading.



Implementation aids have been published for approximately 150 new and modernised training occupations in the past few years.

More detailed information and sources can be found at www.bibb.de.

In the course of the restructuring process the social partners asked the Federal Institute for Vocational Education and Training to prepare implementation aids for vocational education and training in the geo-information technologies to support training practitioners. These were developed with experts who had already been involved in the reorganisation as federal government experts and have been available since April 2011.

Further support from the Federal Institute for Vocational Education and Training

In addition to the above-mentioned aids the Federal Institute for Vocational Education and Training offers many more opportunities to obtain information for all those involved in vocational education and training and other interested persons. Different advisory services are offered through various Internet portals.

The Examiners Portal offers information and advice on issues relating to examinations (www.prueferportal.org).



foraus.de advises the training personnel (www.foraus.de).



Current news in the field of initial and continuing vocational education and training, publications and information about incentive programmes, meetings and the newest findings in vocational education and training research are to be found on the homepage of the Federal Institute for Vocational Education and Training: www.bibb.de

Abstract

The German government uses laws and regulations to regulate the legal framework for vocational training in the “dual” vocational training system (which combines part-time vocational schooling with practical work experience). Training regulations are legal provisions that outline the aims and content of and examination requirements for in-company training.

The Federal Institute for Vocational Education and Training prepares the content of training regulations for the government. It develops drafts together with on-the-ground experts from the actual vocational training field who have been delegated by management and labour.

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

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