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## **VET Data Report Germany 2013**

Facts and analyses accompanying the Federal Report on Vocational Education and Training – selected findings



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The Federal Ministry of Education and Research (BMBF) has the statutory duty to monitor developments in vocational education and training and to submit a report regarding such developments (Report on Vocational Education and Training) to the Federal Government on 1 April each year (§ 86 Vocational Training Act, BBiG).

The Federal Institute for Vocational Education and Training (BIBB) is required to assist in the preparation of the Report on Vocational Education and Training (§ 90 Paragraph 1, 1a). In the spring of 2008, the BMBF took the decision to reform and restructure the Report on Vocational Education and Training. The restructuring took account of the recommendation made by the BIBB Board that the Report on Vocational Education and Training should be separated into a political part to be consulted upon and adopted by the Federal Government and a non-political part for which BIBB would be responsible. Since 2009, BIBB has issued the "[Year] Data Report to accompany the Report on Vocational Education and Training. Information and analyses on the development of vocational education and training". This Data Report represents the central source of information and main data basis for the BMBF Report on Vocational Education and Training. The BMBF provides funding for the preparation and publication of the Data Report.

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#### **Preface**



Up-to-date education reporting, presented in a structured manner, is an indispensable precondition for identifying trends in the development of the VET system and for reacting to them adequately. The Data Report of the Federal Institute for Vocational Education and Training (BIBB) reports regularly and systematically on the current situation and the newest developments in vocational education and training. It is based on empirical data and social research analyses and forms the data basis for the Report on Vocational Education and Training of the Federal Ministry of Education and Research (BMBF). Both the editing of the Report on Vocational Education and Training by the BMBF and the participation of the BIBB in preparing the Report on Vocational Education and Training are tasks regulated by law in the Vocational Training Act (§§ 86, 90).

This English version of the 2013 Data Report provides a selection of the main findings. The first two chapters present the current situation in initial vocation training and in continuing vocational training and highlight changes that have taken place over the course of time. Chapter 3 ('In focus') deals with the development and use of digital media in VET as a thematic priority. Chapter four widens the perspective to the international context with issues such as youth unemployment, recognition and mobility. The full text of the report in German as well as additional information is available on the Internet portal www.bibb.de/datenreport.

The 2013 Data Report in English provides valuable insights into the German VET system as contribution to the debate on the role of VET in society and economy. We are looking forward to any feedback you may have on the Data Report. We will be pleased to receiving ideas, remarks and constructive criticism (datenreport@bibb.de).

Professor Dr. Friedrich Hubert Esser

President

### Table of contents

Initial vocational and training indicators
Key facts in brief
Newly conducted training contracts in general and by areas of responsibility
Regional distribution of VET
Training occupations
Structure and number of recognised training occupations pursuant to BBiG/HwO
New and modernised recognised training occupations
Development of number of apprentices
Expectations and destination of school leavers
Apprentices in Germany
Gender distribution
Learning trajectories
Age structure of beginners and graduates
Beginners and participation rates
Profiles of apprentices by previous education and training activities
Dissolution of training contracts
Access to labour market
Companies in vocational education and training
Structural patterns of companies offering apprenticeships
Enterprise participation in training and training rate
Hiring of successful graduates
Training personnel in in-company training
Financing and costs of training
Training allowance
Public expenditure
Contributions by training enterprises

2.	Continuing vocational education and training indicators
	Key facts in brief
	Occupation-related continuing education and training
	General trend
	Willingness to engage in continuing education and continuing education activities among older workers
	Company provision for continuing education and training
	In-company continuing education and training in European comparison
	In-company CVET, initial training participation and external recruitment
	Provision of continuing education and training
	Providers of continuing education and training
	Provision for persons with disabilities
	Publicly funded continuing education and training
	Continuing education and training supported by the Federal Employment Agency (SGB II and SGB III)
	Upgrading Training Assistance Act -
	Continuing education and training scholarship programme
	Upgrading scholarship programme
	Continuing Education Grant programme
	Regulated further training qualifications
	Regulations of the federal and state governments and competent bodies for further vocational training and retraining
	Continuing vocational education and training in trade and technical schools
	Further education and training examinations and retraining examinations
3.	In focus: Digital media
	Mega-trend 'Computerization of skilled labour'
	Use of digital media in initial and continuing education and training
	Recommendations for action
4.	International issues: Youth unemployment, recognition and mobility
	Youth unemployment
	Mobility
	Recognition of foreign professional qualifications
Ar	nnex: List of abbreviations

### List of tables and figures

Table 1:	Development of the number of newly concluded training contracts by area of responsibility between 1996 and 2012 in Germany
Table 2:	Structure of recognised training occupations (2003 to 2012)
Table 3:	Modernised training occupations 2012
Table 4:	Newly conducted training contracts since 2008 for new and modernised training occupations in Germany
Table 5:	Development of number of apprentices as of 31.12 by area of responsibility, in East and West Germany and in Germany
Table 6:	Previous participation in vocational preparation qualification or basic vocational education by area of responsibility, federal territory 2011 (more than one answer possible)
Table 7:	Trainees with newly concluded training contracts by highest general education school leaving certificate (N = 565,824; 2011)
Table 8:	Premature dissolution of contracts according to areas of respnsibility and time of dissolution (absolute and in %), Federal territory 2011
Table 9:	Contract dissolution rates (in %) in the 20 most frequently chosen dual education and training occupations, federal territory, 2011
Table 10:	Rates of participation in occupation-related continuing education and training of employed persons by qualifications and gender, 2005 to 2010 (in %)
Table 11:	Climate value, business situation and expectations for selected categories of CVET providers 2011
Table 12:	Youth unemployment rates in EU Member States (in %)
Table 13:	Usage of the German occupation profiles
Figure 1:	Company apprenticeships offered per 100 applicants according to extended definition in the employment agency districts in the year 2012
Figure 2:	Implemented educational and career paths of school leavers in the autumn of the years 2004 to 2012 (in %)
Figure 3:	Profiles of apprentices by previous education and training activities
Figure 4:	Change in the proportion of all enterprises providing training that had apprenticeship vacancies for the training years 2010/2011 and 2011/2012 according to selected structural characteristics (in %)
Figure 5:	Development of participation of companies in providing training in Germany between 1999 and 2011 (base year 1999=100%)
Figure 6:	Distribution in percent of apprentices according to enterprise size classes between 1999 and 2011 in Germany

Figure 7:	Participation rates of older workers in continuing education and training in 2006 and 2012 in Germany	32
Figure 8:	Percentage of enterprises offering CVET in 2010 and 2005 (in %)	34
Figure 9:	Comparison of enterprises' participation in in-company continuing education and training in the years 2011 and 2010 according to selected structural characteristics (in %)	35
Figure 10:	Facilities suitable for persons with disabilities (rooms, media, staff and support services) in vocational and general continuing education	37
Figure 11:	Admissions to courses of CVET under SGB II and SGB III between 2001 and 2011	39
Figure 12:	Approved grants pursuant to the Upgrading Training Assistance Act (AFBG) total, full-time and part-time, from 2001 to 2011	39
Figure 13:	Variety of digital media formats (comparison between 2008 and 2012)	43
Figure 14:	Media mix in distance learning	43

### 1. Initial vocational and training indicators

The dual system is at the core of vocational education and training in Germany. It is based on the Vocational Training Act of 1969 (amended in 2005). It is still the main pathway for the young generation into employment. Every young person who has completed full-time compulsory education has access to dual vocational training. A characteristic of this training path are the two learning venues: the company and the part-time vocational school. The companies sign contracts with applicants under private law and train them in line with the binding provisions of the vocational training directives which guarantee a national standard. This is monitored by the "competent bodies", mainly the chambers (of industry and commerce, crafts, agriculture, doctors, lawyers) but also by competent bodies in the public service or for the purview of the churches.

The dual system provides broad vocational training and competences for 344 recognised training occupations (in 2012). The programmes in the dual system usually take 3 years, some last 2 and some  $3\frac{1}{2}$  years. After completing their training in the dual system, the majority of participants then take up employment as a skilled worker. Later on, many of them make use of the opportunities for continuing vocational training. Outside the dual system there are also VET pathways in full-time vocational schools (about 15 % of the age cohort). The programmes of these pathways take between 1 and 3 years, depending on the particular vocational orientation and objective.

#### Key facts in brief

Newly concluded training contracts. The number of newly concluded training contracts decreased in the year 2012 in relation to the previous year by approximately 18,000 (–3.2%). The supply of training places amounted to about 585,000 and decreased compared with the previous year by 2.4%. Despite the decline in the number of contracts, the training opportunities for young people deteriorated only slightly in Western as in Eastern Germany compared

with the previous year due to the negative demographic development.

Applications for apprenticeship. The Federal Employment Agency registered about 76,000 unsuccessful apprenticeship applicants as of September 30, 2011. Now as before, a significant number of interested young people have no access to the dual system of vocational education and training. At the same time, many companies face growing problems in actually filling their training places. According to findings of the BIBB Qualification Panel, 37.4% of the companies with training places to offer were partially or completely unable to fill their apprenticeship vacancies. Companies in the new federal states had the biggest problems. The BIBB projections, however, assume a further decline by 21,900 places in the number of apprenticeships offered for 2013.

Attitude of youngsters towards VET. BIBB analyses of the training behaviour of young people show that the interest of school-leavers in dual vocational education and training is receding. The reason for this is an increase in the numbers entitled to go on to higher education and thus a change in the structure of the school leaving population. The employment opportunities of young people interested in dual education and training have improved. The 2012 BA/BIBB Survey of Applicants, however, shows that of all male and female applicants registered for vocational training places with the Federal Employment Agency 31% are still unsuccessful applicants from previous years (repeat applicants).

Development of recognised training occupations. The number of recognised training occupations has changed little in the last 10 years. There were 344 recognised training occupations in the year 2012.

First-year trainee rate. In 2011, according to the results of the vocational education and training statistics, there were 1,460,658 young people in dual vocational training, 1,233,819 in Western Germany

and 226,839 in Eastern Germany. The number has decreased by 3.2% compared to the previous year. Women are underrepresented at 39.3%. The first-year trainee rate, that is, the calculated proportion of persons in the resident population who began an apprenticeship in the dual system, was 56.9% in 2011.

Training company rate. As in the two previous years, the participation of enterprises in training declined in 2011. At the end of the reporting year, 455,100 enterprises were participating in providing training. The training company rate decreased by 0.8 percentage points to 21.7 %. That is the lowest level since 1999. The decline in the training company rate was, to a very large extent, due to developments in smaller enterprises.

Take-up rate – rate of apprentice hiring. According to the findings of the IAB Establishment Panel survey, the rate of trainee hiring, i.e. the rate at which successful graduates of vocational education and training are hired by the companies, was 66% in 2011. In the new federal states the take-up rates were significantly lower than in the old federal states.

In-school training. The number of beginners in fully-qualifying school training courses has fallen by  $1.3\,\%$  to 209,582 compared with the previous year.

Transition area. According to the results of the integrated training reporting (iABE), the number of beginners for the year 2012 in the transition area was still 266,732.

Unskilled rate in the population. On the basis of evaluations of the micro-census, the BIBB has come to the conclusion that the unskilled rate has been gradually declining in recent years. In the 20- to 29-year-old age group, the unskilled rate in the year 2010 was 14.1%.

# Newly conducted training contracts in general and by areas of responsibility

In the survey of newly concluded training contracts as of September 30, 2012 the bodies responsible for initial vocational education and training reported to the BIBB 551,271 newly concluded training contracts for the period from October 1, 2011 to September 30, 2012. This meant a nationwide decline of –3.2% compared to the year 2011. Nationwide, this documented a further low point since reunification after 2005. This development is the result of a declining number of in-company training contracts as well as the dismantling of predominantly publicly funded (extra-company) training.

In the development of newly concluded training contracts, declines were recorded in almost all areas of responsibility. 60.3% of all newly concluded training contracts (332,622 contracts) were registered in the largest area of responsibility, industry and commerce. The details of these developments can be found in Table 1.

Table 1: Development of the number of newly concluded training contracts by area of responsibility¹ between 1996 and 2012 in Germany

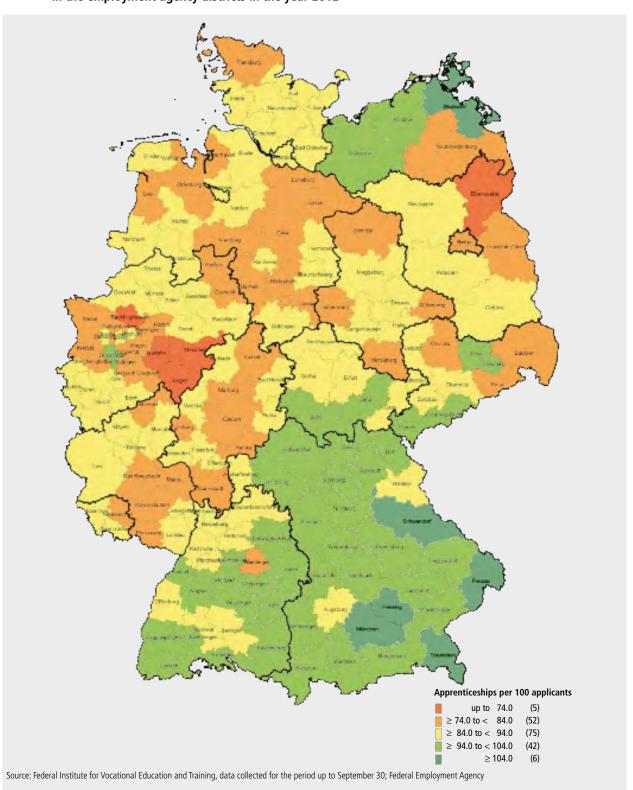
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006	2007	2008	5000	2010	2011	2012	absolute	%
								3	Germany										
Industry and commerce	268,038	286,239	311,664	333,552	334,419	337,221	311,364	308,565	322,758	316,164	336,936	367,485	369, 195	333,405	331,044	342,783	332,622	-10,161	-3.0
Crafts	215,148	211,572	212,382	210,549	199,482	188,463	173,889	165,783	168,291	157,026	162,603	179,697	170,070	155,583	155,178	154,506	147,327	-7,179	-4.6
Public service <sup>2, 3</sup>	15,900	16,521	15,198	14,940	15,576	15,381	14,814	13,821	15,129	14,172	14,082	13,413	13,227	13,725	13,554	12,402	12,102	-300	-2.4
Agriculture	14,301	15,504	15,762	15,654	14,736	13,695	13,992	15,009	15,192	14,784	15,813	15,903	15,327	14,646	13,923	13,482	13,260	-222	-1.7
Liberal professions <sup>2</sup>	56,142	53,076	51,861	51,042	52,494	54,318	53,253	49,407	46,539	43,617	42,111	44,556	43,947	42,675	42,441	42,612	43,014	402	0.9
Home economics <sup>2</sup>	4,644	4,461	5,505	5,118	4,848	5,025	4,830	4,899	4,875	4,119	4,320	4,473	4,272	3,996	3,582	3,345	2,763	-582	-17.4
Maritime transport	150	147	156	159	141	135	183	147	195	297	288	360	306	279	240	249	183	99-	-26.6
Total 5	574,326	587,517	612,528	631,014	621,693	614,238	572,322	557,634	572,979	550,179	576,153	625,884	616,341	564,306	559,959	569,379	551,271 -	-18,108	-3.2
								Wes	West Germany	>									
Industry and commerce	200,908	216,719	234,868	250,545	255,997	258,693	237,339	234,092	246,836	244,095	259,002	289,372	296,933	271,025	273,904	289,428	283,018	-6,411	-2.2
Crafts	160,062	159,756	163,246	162,037	156,484	150,025	139,477	133,536	135,936	127,679	131,660	147,561	142,481	131,842	132,724	134,225	128,417	-5,808	-4.3
Public service <sup>2, 3</sup>	11,919	12,352	11,483	11,486	11,710	11,521	11,214	10,606	11,432	10,951	10,765	10,145	10,149	10,562	10,697	9,892	6,657	-234	-2.4
Agriculture	10,374	11,037	11,050	10,719	10,177	9,221	9,492	10,061	10,395	10,095	10,974	11,357	11,173	11,133	10,668	10,750	10,594	-156	-1.5
Liberal professions <sup>2</sup>	47,880	44,986	44,228	43,880	45,182	47,173	46,467	43,127	40,669	38,377	36,770	39,018	38,678	37,537	37,418	37,864	38,361	498	1.3
Home economics <sup>2</sup>	3,357	3,333	3,715	3,404	3,405	3,419	3,287	3,188	3,423	2,685	2,775	3,006	2,896	2,942	2,662	2,494	2,143	-351	-14.1
Maritime transport	148	140	142	142	127	131	150	137	185	280	269	328	294	268	224	232	178	-54	-23.3
Total 4	434,649	448,323	468,732	482,214	483,081	480,183	447,426	434,748	448,875	434,163	452,214	500,787	502,605	465,309	468,297	484,884	472,368 -	-12,516	-2.6
								Eas	East Germany										
Industry and commerce	67,131	69,520	76,795	83,006	78,421	78,528	74,024	74,473	75,923	72,070	77,933	78,112	72,261	62,379	57,139	53,354	49,604	-3,750	-7.0
Crafts	980'55	51,815	49,136	48,513	42,998	38,439	34,411	32,247	32,354	29,346	30,944	32,137	27,588	23,740	22,454	20,282	18,910	-1,371	9.9
Public service <sup>2, 3</sup>	3,982	4,168	3,715	3,454	3,867	3,859	3,601	3,216	3,698	3,220	3,317	3,267	3,079	3,162	2,858	2,511	2,446	99-	-2.6
Agriculture	3,928	4,467	4,712	4,935	4,558	4,474	4,499	4,949	4,796	4,690	4,839	4,545	4,155	3,513	3,254	2,733	2,666	99-	-2.5
Liberal professions <sup>2</sup>	8,263	8,089	7,634	7,163	7,311	7,145	6,787	6,281	5,869	5,240	5,340	5,538	5,269	5,138	5,023	4,748	4,653	96-	-2.0
Home economics <sup>2</sup>	1,288	1,127	1,791	1,714	1,443	1,607	1,543	1,711	1,453	1,434	1,545	1,468	1,375	1,055	920	851	621	-231	-27.0
Maritime transport	-	∞	14	17	13	8	32	10	1	18	20	31	1	11	15	16	4	-12	-75.0
Total 1	139,680 139,194	139,194	143,796 148,803	148,803	138,612	134,055	124,896	122,886	124,104	116,019	123,939	125,097	113,739	766'86	91,662	84,495	78,903	-5,592	9.9-

<sup>&</sup>lt;sup>1</sup> The decisive factor in assigning training contracts to areas of responsibility is usually not the training enterprise but the competent body for the training occupation.
<sup>2</sup> Excluding newly concluded training contracts in the responsibility of other competent bodies (Chambers).
<sup>3</sup> Excluding training for a career in the civil service.

Absolute values rounded to multiples of 3 for reasons of data protection; the total value may therefore deviate from the sum of the individual values.

Source: Federal Institute for Vocational Education and Training (BIBB), data collected for the period up to September 30

Figure 1: Company apprenticeships offered per 100 applicants according to extended definition in the employment agency districts in the year 2012



#### **Regional distribution of VET**

The training opportunities for young people and the possibilities of companies to fill training positions may vary significantly by region. This can be represented by a comparison (company supply-demand ratio<sup>1</sup>) based on the development of the supply of training and the demand for training at the level of the employment agency districts. In the 2012 reporting year, there were 89 in-company apprenticeship vacancies for every 100 applicants nationwide. With an increase of 0.4 points, the company supply-demand ratio increased only slightly when compared to the previous year and still remained considerably far removed from a balanced relationship. Although 108 employment agency districts (61.4%) posted a rise in the company supply-demand ratio, in the remaining 68 districts (38.6%) the supply of training places fell in relation to the demand. The company supply-demand ratio varied between 69.1 and 112.2 across all employment agency districts (figure 1).

Although the ratio of apprenticeships provided by companies to the demand for apprenticeships slightly improved mathematically, the number of unplaced applicants increased nationwide by 5.4%. Overall, half of all employment agency districts recorded an increased cohort of unplaced applicants; their numbers increased by more than 50% in almost every fifth district. Strong regional disparities on the training place market are also shown by the development of the number of newly concluded training contracts. While a large majority of the employment agency districts recorded a decline in the number of new contracts, the number of newly concluded training contracts increased in 24 employment agency districts (13.6%), in a further district it remained unchanged. In regions with above-average company supply-demand ratios there were 98.2 company apprenticeship openings per 100 applicants, so that

mathematically there was a nearly balanced training place market. In the regions with below-average company supply-demand ratios there were only 80.9 company training places per 100 applicants, meaning that the situation had worsened compared to the previous year by 1.5 points. The trend in newly concluded training contracts was also negative.

#### **Training occupations**

### Structure and number of recognised training occupations pursuant to BBiG/HwO

The following descriptions refer to the training occupations that are government-recognised under the Vocational Training Act (BBiG) or the Crafts and Trades Regulation Code (HwO) or are considered to be government-recognised<sup>2</sup>. The number of recognised training occupations according to BBiG and HwO has hardly changed in the last 10 years and oscillates relatively constantly around 350.

There have been only few quantitative changes in the past 10 years involving the structural models of the training occupations. The only exception to this are the optional qualifications; the number of mono-occupations remained almost unchanged in the period from 2003 to 2012, and the number of training occupations with internal differentiation (fields of study or specialisations) also remained almost unchanged from 2003 to 2012 (table 2).

As a general rule, the duration of training should be no more than 3 and no less than 2 years (§ 5, paragraph 1, sentence 2 BBiG). Deviations from this rule are possible; there are also regulations for training occupations with a training duration of 3.5 years, for example. In the years 2003 to 2012, the number of training occupations with a training duration of 42 months fell from 58 to 54. The number of training occupations with a training duration of 36 months (253 in 2003 and 250 in 2012) remained relatively

<sup>1</sup> The company supply-demand ratio represents the calculated number of vocational training places offered per 100 apprenticeship applicants. In contrast to the general supply-demand relation, the company supply-demand ratio relates just to company training places and disregards predominantly publicly funded training opportunities. In its extended version, the demand calculation takes also those young people into account who ended up in an alternative to the desired training but are still showing an interest in a company training place. If not indicated otherwise, the following figures regarding the company supply-demand ratio are based on its extended definition.

<sup>2</sup> According to § 104 paragraph 1 BBiG the apprenticeship occupations and semi-skilled occupations or similarly regulated occupations recognised before 1 September 1969 are also considered government-recognised in the meaning of § 4 BBiG, and their job descriptions, vocational education plans, examination prerequisites and examination ordinances are to be applicable until training ordinances are adopted pursuant to § 4 BBiG.

Table 2: Structure of recognised training occupations (2003 to 2012)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Mono-occupations <sup>1</sup>	265	267	259	263	262	270	267	266	262	261
Occupations with fields of study	58	53	50	50	51	51	51	52	53	54
Occupations with specialisations	24	30	30	30	29	30	31	30	29	29
Total	347	350	339	343	342	351	349	348	344	344
Occupations with optional qualifications <sup>2</sup>	8	11	13	15	15	18	20	21	25	25

<sup>1</sup> The mono-occupations include old training occupations (adopted prior to the 1969 BBiG) and a similarly regulated training occupation (pursuant to § 104 paragraph 1 BBiG).

Source: Federal Institute for Vocational Education and Training, directory of recognised training occupations (various years)

constant. The number of recognised training occupations with a training period of 24 months increased from 34 in 2003 to 38 in 2012. In addition, there are two training occupations that have remained constant over the years with an 18-month training period.

The number of training occupations that can be credited towards other courses of vocational training, almost doubled from 2003 (13 training occupations) to 2012 (24 training occupations). In the same period the number of training occupations to

which credit from other training occupations can be assigned rose from 26 (2003) to 65 (2012).

### New and modernised recognised training occupations

In the years from 2003 to 2012 a total 194 training occupations were restructured<sup>3</sup>. Among them were 159 modernized and 35 new training occupations. In 2012, five modernised training occupations came into effect (table 3). A restructuring procedure

Table 3: Modernised training occupations 2012

				Structural ch	aracteristics		Recog	nition	
Designation	Training period (months)	Field of training <sup>1</sup>	mono- occupation	with specialisations	with fields of study	with optional qualifications	training occupation can be credited	training occupation to which credit can be assigned	Examination arrangements <sup>2</sup>
Specialist in labour market services	36	öD	yes	no	no	no	no	no	traditional
Pharmaceutical commercial clerk	36	fB	yes	no	no	no	no	no	traditional
Sign and luminous advertising maker	36	Hw	no	yes	no	no	no	no	GAP
Chimney sweep	36	Hw	yes	no	no	no	no	no	traditional
Process mechanic for plastic and rubber engineering	36	IH	no	no	yes	no	no	yes	GAP

<sup>&</sup>lt;sup>1</sup> Fields of training: IH = industry and commerce; Hw = crafts; öD = public service; fB = liberal professions

Source: Ordinance on vocational education and training in the occupation of specialist in labour market services of 24 May 2012 (BGBI. I of 31 May 2012, p. 1206)

Ordinance on vocational education and training in the occupation of pharmaceutical commercial clerk of 03 July 2012 (BGBI. I of 12 July 2012, p. 1456)

Ordinance on vocational education and training in the occupation of sign and luminous advertising maker (Schilder- und Lichtreklame-Ausbildungsverordnung - SchLichtReklAusbV) of 26 March 2012 (BGBI. I of 05 April 2012, p. 494)

Ordinance on vocational education and training in the occupation of chimney sweep (Schornsteinfeger-Ausbildungsverordnung - SchfAusbV) of 20 June 2012 (BGBI. I of 04 July 2012, p. 1430) Ordinance on vocational education and training in the occupation of process mechanic for plastic and rubber engineering of 21 May 2012 (BGBI. I of 31 May 2012, p. 1168)

<sup>&</sup>lt;sup>2</sup> Optional qualifications are not included in the total number of training occupations.

<sup>&</sup>lt;sup>2</sup> Examination arrangements: traditionall = interim examination and final examination/journeyman examination; GAP = extended final examination/journeyman examination

Table 4: Newly conducted training contracts since 2008 for new and modernised training occupations in Germany

Mouse and mondowning of occurrent		2008			2009			2010			2011			2012			Rate of	change 2	Rate of change 2012 to 2011	111	
New and modernised occupations from 2008 to 2012	male	female	total	male	female	total	male	female	total	male fe	female	total	male fe	female t	total	큠	absolute			% ui	
																male female		total	male fo	female	total
							Modern	ised occu	Modernised occupations 2010	010											
Cooper	m	0	m	0	0	0	m	0	m	0	0	0	m	0	m	m	0	m	200.0	1	200.0
Gunsmith	27	0	27	18	0	18	15	0	15	81	0	18	18	0	18	Ψ	0	0	-10.5	1	-5.3
Precision instrument maker/repairer	3,900	138	4,038	2,670	114	2,787	2,460	93	2,553	2,991	66	3,090	2,922	132	3,054	69-	33	-36	-2.3	32.0	-1.2
Geomatician <sup>1</sup>	12	6	21	18	18	36	24	6	33	06	42	135	06	45	135	Ψ	m	0	-2.2	7.0	0.7
Dairy technologist <sup>2</sup>	201	51	252	195	27	252	186	63	249	195	51	249	192	57	249	Υ	9	m	-2.0	11.5	0.8
Paper technologist	216	27	243	195	18	213	198	21	219	219	12	231	219	24	243	m	12	12	6.0	91.7	5.7
Equine manager	162	861	1,023	159	720	879	111	909	717	138	663	801	111	663	774	-27	0	-27	-18.8	-0.2	-3.4
Hunting ground supervisor	21	0	21	24	0	24	33	0	33	21	0	21	15	0	15	9	0	φ	-25.0	0.0	-23.8
Sail maker	27	9	33	24	9	30	21	6	33	18	М	21	15	12	30	0	6	6	-5.9	225.0	38.1
Technician in heavy-duty fabric goods manufacturing	99	21	84	39	9	45	54	15	69	57	15	75	36	24	09	-21	9	-15	-37.9	43.8	-20.3
Surveying technician <sup>3</sup>	555	231	783	522	198	720	492	177	699	435	135	570	432	117	549	9	1 8	-21	<u></u>	-12.6	-3.9
Modernised occupations 2010 total	5,187	1,344	6,534	3,864	1,140	5,004	3,594	666	4,596	4,185	1,026	5,211	4,053	1,077	5,130	-132	51	-81	-3.2	5.0	-1.6
							New	occupat	New occupations 2011												
Media technologist in print processing	0	0	0	0	0	0	0	0	0	183	84	267	252	72	324	69	-12	57	37.9	-13.1	21.8
New occupations 2011 total	0	0	0	0	0	0	0	0	0	183	84	797	252	72	324	69	-12	57	37.9	-13.1	21.8

Table 4: Newly conducted training contracts since 2008 for new and modernised training occupations in Germany

		2008			2009			2010			2011			2012			Rate of	change	Rate of change 2012 to 2011	111	
New and modernised occupations from 2008 to 2012	-		-			į			-			Ī			į	G	absolute			% ui	
	male remale		total	шаје	remaie	total	шане	remale	total	шаје	тета	total	шаје	тета	total	male	female	total	male	female	total
							Modern	ised occ	Modernised occupations 2011	2011											
Optician	543	1,845	2,385	594	1,836	2,430	675	1,848	2,520	618	1,803	2,421	615	1,764	2,379	0	-39	-39	-0.2	-2.2	-1.7
Boatbuilder	168	12	180	129	15	144	114	6	123	135	15	150	156	24	180	18	6	30	14.0	71.4	19.3
Bookbinder	399	192	591	309	144	453	267	144	411	81	54	138	45	63	105	-39	9	-33	-47.6	12.7	-23.4
Bookseller	120	699	786	06	489	579	108	558	663	66	258	657	72	384	456	-27	-174	-198	-26.5	-31.0	-30.3
Stitching leather specialist <sup>4</sup>	0	12	12	0	12	12	0	6	6	0	15	15	0	6	6	0	9-	9	1	-42.9	-42.9
Specialist in fumiture, kitchen and removal services	630	6	642	540	9	546	519	m	522	525	9	528	498	6	202	-27	М	-21	-5.0	80.0	-4.2
Mechatronics fitter	7,668	435	8,100	6,657	420	7,077	6,384	399	6,783	7,242	462	7,704	7,458	540	7,998	219	78	294	3.0	16.6	3.8
Media designer for flexography⁵	0	0	m	0	0	0	0	0	m	m	m	m	0	m	m	٣	0	Υ	-100.0	0.0	-50.0
Print media technologist <sup>6</sup>	1,350	129	1,476	1,014	111	1,125	942	102	1,044	066	11	1,101	879	66	186	-111	6-	-120	-11.1	-9.1	-10.9
Screen print media technologist <sup>7</sup>	159	63	219	102	54	159	108	36	144	108	36	144	102	45	147	9-	6	m	7.4-	24.3	2.8
Packaging materials technologist <sup>8</sup>	459	33	489	396	33	429	417	51	468	432	51	483	399	42	444	-33	6-	-42	9.7-	-15.7	-8.5
Technical product designer	1,620	1,092	2,712	1,215	870	2,085	1,245	759	2,004	1,500	948	2,448	1,749	1,062	2,811	249	114	363	16.7	12.0	14.9
Technical system planner <sup>10</sup>	576	345	921	483	351	834	528	276	804	552	318	870	189	339	1,020	129	21	150	23.4	6.9	17.4
Textile artisan <sup>11</sup>	6	0	18	6	თ	8	0	9	6	0	m	9	0	m	m	0	0	0	-100.0	0.0	-20.0
Tourism services management clerk (management clerk for individual holidays and business trips) <sup>12</sup>	369	2,094	2,463	300	1,596	1,896	330	1,632	1,959	342	1,797	2,139	342	1,773	2,115	0	-24	-24	0.0	-1.4	-1.2
Modernised occupations 2011 total	14,064	926'9	21,000	11,838	5,946	17,784	11,637	5,835	17,469	12,624	6,177 1	18,804	12,999	6,159	19,158	372	-18	354	3.0	-0.3	1.9

# Explanations

- Geomatician incl. predecessor: Cartographer
- Dairy technologist incl. predecessor: Dairy specialist
- Surveying technician incl. predecessor: Surface mining surveying technician Stitching leather specialist incl. predecessor: Shoe and leather goods stitcher Media designer for flexography incl. predecessor: Flexographer
- Print media technologist incl. predecessors: Printer, Printer, Printer, Perialising in digital printing, Printer specialising in planographic printing, Printer specialising in hitsaglio printing. Screen print media technologist incl. predecessor: Screen printer
- Packing materials technologist incl. predecessor: Packing materials mechanic
- 10 Technical system planner incl. predecessors: Draughtsman specialising in electrical engineering, Draughtsman specialising in heating, air conditioning and sanitary engineering, Draughtsman specialising in steel and metal engineering Technical product designer incl. predecessors: Draughtsman specialising in wood engineering, Draughtsman specialising in mechanical and plant engineering
  - 11 Textile artisan incl. predecessors: Embroiderer, Knitter, Weaver
- 12 Tourism services management clerk (management clerk for individual holidays and business trips) incl. predecessor: Travel agent

Predecessors are only listed if they have been reported in the time period shown.

Absolute values are rounded to multiples of 3 for reasons of data protection; the total value may therefore deviate from the sum of the individual values.

Source: Federal Institute for Vocational Education and Training, data collected for the period up to September 30

(for the modernization of an existing training occupation or for a new training occupation) currently takes 10 months on the average.

A total of 5,595 new training contracts were concluded in the five training occupations modernised in the year 2012 (training contracts that may have been concluded in the relevant previous occupations are included in that figure). Compared to the previous year, this meant a decrease of 470 contracts (–7.7%), but that decrease cannot be directly linked to the restructuring process. Instead, structural changes and adaptation problems may have led to this development (table 4).

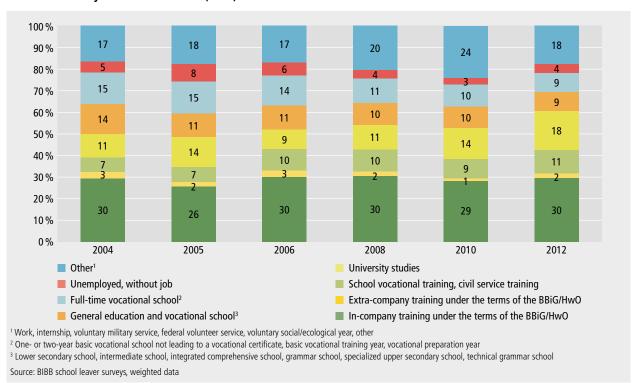
#### **Development of number of apprentices**

### Expectations and destination of school leavers

The BIBB regularly conducts surveys of school leavers to determine their professional orientation and

career choice behaviour (destination). The school leavers were polled retrospectively about what career plans they had had in the spring of 2012. It turned out that just under half (47%) of those polled had aspired to in-company vocational education and training at the end of the 2011/2012 school year. A comparison with the previous year showed that affinity to the dual system had decreased in all groups of persons and all categories: Two-thirds (66%) of young men were interested in in-company vocational education and training directly after leaving school or later. Among young women, the proportion was slightly more than a half (55%). The proportion of young people interested in dual training is higher in West Germany (61%) than in East Germany (56%). There is no difference in this respect between young people with and those without a migration background (both 61%). Graduates of lower secondary schools (86%) and full-time vocational schools (69%) show much greater interest than those from other types of schools.

Figure 2: Implemented educational and career paths of school leavers in the autumn of the years 2004 to 2012 (in %)



The majority of the young people who had obtained a company vocational training place were able to realise their occupational objectives in choosing a career. Four-fifths (81%) of all school leavers with training contracts indicated that the training occupation corresponded to their career wishes. 30% of all school leavers started in-company and 2% extra-company training under the terms of the BBiG/HwO in autumn 2012 or will begin such training in the course of the current training year (Figure 2). Although the proportion of school leavers who wanted to take on a dual vocational training directly after leaving school decreased, there was little change in the proportion of school leavers who made the

transition to dual vocational training in 2012 (30%) as compared to 2008 (30%) and 2010 (29%).

#### **Apprentices in Germany**

On December 31, 2011, 1,460,658 persons nationwide were reported as trainees in dual vocational training courses pursuant to BBiG and/or HwO. The majority of them were being trained in the Western federal territory (84.5%), while the Eastern federal territory accounted for 15.5%. The figures since the 2000 reporting year (1,702,017) have mostly indicated a downward trend. In 2011, the decline compared with the previous year was -3.2% (47,670 trainees).

Table 5: Development of number of apprentices as of 31.12 by area of responsibility<sup>1</sup>, in East and West Germany and in Germany

Year	Trainees, total	Industry and commerce	Crafts	Public service	Agriculture	Liberal professions	Home economics	Maritime transport <sup>2</sup>
				West German	у			
1992	1,345,305	670,959	445,761	58,371	23,904	138,201	7,713	399
1995	1,194,042	536,532	448,635	40,551	22,725	137,175	8,136	291
2000	1,297,203	653,001	448,560	34,482	26,025	125,802	8,988	345
2005	1,210,179	649,818	377,124	32,964	27,456	114,483	7,734	600
2010	1,252,665	718,059	368,829	28,950	29,193	100,530	7,104	-
2011	1,233,819	713,091	356,610	29,655	28,563	99,195	6,705	-
				East Germany	I			
1992	320,904	170,646	107,688	12,984	8,700	16,359	4,359	171
1995	385,296	166,332	166,716	16,173	8,532	23,172	4,350	18
2000	404,814	207,813	147,603	11,838	12,897	20,445	4,179	42
2005	343,260	198,399	100,059	10,401	13,857	15,936	4,566	42
2010	255,663	155,340	66,078	8,637	9,474	13,152	2,979	-
2011	226,839	137,595	57,597	8,343	8,064	12,666	2,571	-
				Federal territo	ry			
1992	1,666,209	841,605	553,449	71,355	32,604	154,560	12,072	570
1995	1,579,338	702,867	615,351	56,721	31,257	160,350	12,486	309
2000	1,702,017	860,811	596,163	46,320	38,922	146,247	13,170	387
2005	1,553,436	848,217	477,183	43,365	41,313	130,419	12,300	639
2010	1,508,328	873,402	434,907	37,587	38,667	113,682	10,086	-
2011	1,460,658	850,689	414,207	37,998	36,624	111,861	9,276	-

<sup>&</sup>lt;sup>1</sup> The decisive factor in assigning trainees to areas of responsibility is usually not the training enterprise but the competent body for the training occupation. For example, trainees trained in enterprises of the public service or liberal professions sector for industrial or crafts occupations are assigned to the areas of responsibility of industry and commerce or the crafts.

Source: "Trainee Database" of the Federal Institute for Vocational Education and Training, based on data from the Vocational Education and Training Statistics of the Federal and Länder statistical offices (survey for the period up to December 31), 1992 to 2011 reporting years. Absolute values rounded to multiples of 3 for reasons of data protection; the rounded total number may deviate from the sum of the rounded individual values because of the rounding.

Starting in 2008, the area of responsibility of maritime transport no longer participates in the Vocational Education and Training Statistics.

Changeable phases are becoming apparent in the long-term development of the number of trainees in the old federal states (including Berlin) since 1977. Initially it was mainly the demographic development that determined the number of trainees in the dual system. The development of the number of trainees paralleled that of the number of graduates of general education schools. In the mid-1970s the baby boomers born in the 1960s flooded the market demanding vocational training places. The number of training places increased substantially in response. Then from the mid-1980s until the early 1990s they declined sharply again. The development in the dual system increasingly detached itself from the demographic situation and was influenced more by economic effects. From the mid-1990s to the year 2000, the number of trainees rose again. But it did not increase to the same extent as the number of graduates from general education schools. While the number of school leavers, in particular in the old federal states, increased further after 2001, the number of trainees decreased. In recent years, however, demographic change has become increasingly dynamic. Hence the decrease in the trainee population that has been increasingly noticeable since the year 2009 can be attributed not just to the economic and financial crisis but also to the sharp demographic decline in the youth population. This is particularly true for East Germany, where the trainee population has been declining since the late 1990s (table 5)4.

Vocational structure analyses are also carried out in the context of the BIBB's ongoing observations. They shed light on development prospects in the dual system and make it possible among other things to assess the opportunities offered for different groups of young people.

The growing importance of the service occupations can be observed in the dual system of vocational education and training just as in the employment system. However, the proportion of service occupations in the dual system of vocational education and training is still significantly below the corresponding figure of

70% in the employment system. The total number of new contracts in the service professions in 2011 was about 334,965. It has always been subject to fluctuations in the course of time, but the percentage has increased since 1995 from 50.1% to 59.2%. This increase was absent for the first time in 2011 (2010: 59.4%). Among the ten most frequently chosen training occupations in the dual system there are six primary service occupations, two secondary service occupations and two production occupations<sup>5</sup>.

There has been a long-term decline, however, in the number of new contracts concluded in the production occupations. In 1995, they still made up half of all new contracts (49.9%). After that, their share in the total dropped steadily. In 2011, it stood at just 40.8%. Only 230,856 contracts were concluded.

In the following the occupations of the dual system newly created since 1996 (a total of 82 training occupations) shall be considered new dual training occupations. In these occupations 65,676 training contracts were newly concluded in 2011. This corresponds to a percentage of 11.6% of all new contracts. The proportion increased steadily until 2008. With the current value the increase, interrupted only in 2009 and 2010, is now continuing.

In the last 10 years the goal has increasingly been pursued of creating two-year ("theory mitigated") training occupations specifically for disadvantaged young people. However, the potential of these occupations to improve the opportunities of young people is controversial. Since 2003, 12 new training ordinances for two-year training occupations have entered into force, and 6 more have been modernised. Government-recognised training occupations or training occupations currently being tested for which the training ordinance stipulates a two-year training period accounted for 51,660 new contracts in 2011, or 9.3% of the total. The vast majority (about 97%) of young people who concluded an apprenticeship contract in a two-year training occupation in 2011 were in occupations with

<sup>4</sup> The yearly data is available in the German version of the data report.

Retail sales clerk, salesperson, office clerk, industrial clerk, clerk in wholesale and foreign trade, hairdresser are primary service occupations; medical assistant and bank clerk are assigned to the secondary service occupations; industrial mechanic and motor vehicle mechatronics technician count as production professions.

training ordinances allowing the accreditation of their training towards a usually three-year or three-and-a-half-year training occupation.

In 2011, 11,625 training contracts were newly concluded in occupations for persons with disabilities (§ 66 BBiG and § 42m HwO) (total as of December 31, 2011: 32,031 trainees). They accounted for 2.1% of all new contracts.

#### **Gender distribution**

On the whole, there is significant gender segregation among the training occupations in the dual system. The differences in occupational structure between men and women have remained virtually unchanged since the mid-1980s. On 31 December 2011, 574,671 women were trainees in the dual system; they comprised 39.3% of all trainees. This was virtually the same proportion as in the previous year (39.8%). In any case it has fluctuated only slightly since 1992, between 39% and 41%. In Western Germany it was 39.5%, in Eastern Germany 38.6%. Overall, women are under-represented in the dual system compared with their proportion of the population in the relevant age group (48.8%).

The ratio of training contracts newly concluded by men and women changed only slightly compared to the previous year. In 2011, 59.3% of the training contracts were concluded with men, in 2012 it was 59.4% (women 2011: 40.7% and 2012: 40.6%).

Training contracts concluded predominantly by men are found in the areas of responsibility of the crafts (75.3%), agriculture (77%) and maritime transport (91.8%). In the field of industry and commerce as well, more new contracts were concluded with men than with women (59.7%). Women, however, make up the larger proportion (64.8%) in the public service. The liberal professions (women: 93.7%) and home economics (women: 91.5%) are areas of responsibility that are dominated even more conspicuously by women.

#### Learning trajectories

#### Age structure of beginners and graduates

The average age of trainees with new contracts was 20.0 years in 2011, the year under review, and thus remained unchanged compared to the previous year. There were regional differences in age distribution. For example, the average age was slightly higher overall in East Germany at 20.6 years (West: 19.9 years). Seen over a longer term, the average age of the trainees in the dual system has steadily grown for as long as this factor has been recorded. The average in 19936 was 18.5 years; more than half of the trainees were 16 or 17 years old. The extended schooling at secondary level I, the increasingly higher school leaving qualifications of the trainees and the difficulty in entering initial vocational education and training in the past years have had a significant impact on the age distribution among trainees. Trainees with new contracts are not necessarily to be equated with training beginners. The average age of training beginners was 19.8 years in 2011, the same as in the previous year. The largest age groups were the 17- and 18-year olds. Together with the 19-yearolds they accounted for almost half the training beginners. Only 11.9% were 16 years old or younger, while 38.9 % had reached at least the age of 20. The training graduates, i.e. trainees who had passed the final exams, averaged 22.0 years of age in 2011. This was a slight increase in their age compared to the previous year (2010: 21.9 years). More than half the trainees were 20 to 22 years old at the time of successful completion of their training. Only 11.0% were 19 years old or younger, while 34.2 % had reached at least the age of 23.

#### Beginners and participation rates

For the year under review, 2011, the calculated proportion of the resident population that had begun dual vocational education and training at some point in the course of their lives was 56.9%. The first-year trainee rate is the most suitable indicator for measuring the proportion of all young people who begin

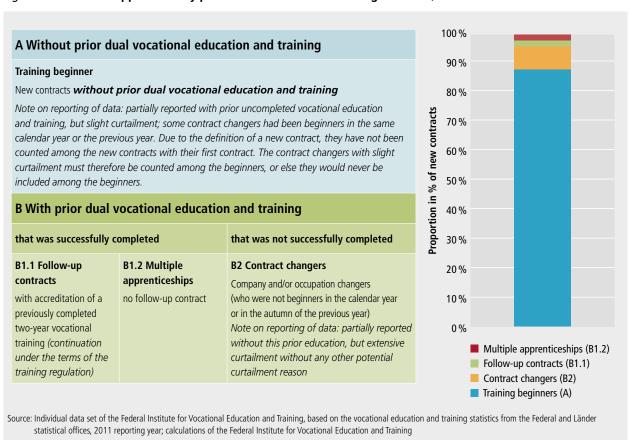
<sup>6</sup> The age of trainees concluding new training contracts has been recorded since 1993.

dual vocational education and training. There was a further increase in that rate in 2011 (2010: 54.9%). This was mainly due to countervailing trends in the number of training beginners (+1.2%) and the resident population in the relevant age group (-1.5%). It is not only the transfer into initial vocational education and training and the conclusion of the contract that is crucial for the individual and, in view of the looming skilled manpower shortage, for the labour market and society as well, but also its successful completion and the acquisition of a recognised vocational qualification. In the 2011 reporting year, 476,580 trainees in the dual system passed their final examinations. About 95 % of them were successfully completing dual training for the first time. That meant a training graduation rate of 46.5% for the 2011 reporting year. There was very little change in the graduation rate compared to the previous year (46.3%).

### Profiles of apprentices by previous education and training activities

If we use not only the details of previous dual vocational education and training to define the training beginners but also the agreed contract period, we can identify almost 88% of the new contract signers as training beginners (a total of 496,593 for 2011). The other 12% are divided into those who had already successfully completed dual vocational education and training (approx. 4%; 22,690) and those who had changed contracts (approx. 8%; 46,641). The 4% of new contracts that were signed by persons who had previously completed dual vocational education and training can be subdivided into multiple apprenticeships in the dual system and socalled follow-up contracts. According to the differentiation used here, less than 2% of the new contracts are follow-up contracts, that is, the continuation

Figure 3: Profiles of apprentices by previous education and training activities, 2011



of previously completed two-year initial vocational education and training arrangements in the dual system. Slightly over 2% of the new contracts are therefore multiple apprenticeships within the dual system (figure 3)

Of the trainees with new contracts in 2011, 11.0% (62,382) had earlier completed a vocational preparation qualification course or basic vocational education. Most commonly reported at the federal level was full-time vocational school not leading to full vocational qualifications, with a total of 24,618 contracts (4.4%). The highest proportions by far of trainees with new contracts with basic vocational education or vocational preparation qualifications were to be found in the area of home economics at 40.8%.

Lower values were recorded in the areas of the crafts (18.4%) and agriculture (15.4%).

There is a connection between attendance at vocational preparation qualification or basic vocational education schemes and the general education school certificates obtained: For trainees with new contracts having low general education qualifications, previous vocational preparation or basic vocational education is reported more frequently (table 6). For example, 26.1% of the trainees without lower secondary school leaving certificates (2010: 28.3%) have vocational preparation qualifications or basic vocational education. Even among those with lower secondary school leaving certificates, 16.6% (2010: 16.3%) are in those categories (table 7).

Table 6: Previous participation in vocational preparation qualification or basic vocational education by area of responsibility<sup>1</sup>, federal territory 2011 (more than one answer possible)

			Previo	us particip	ation in v	ocational	preparat	tion qualific	ation or	basic voca	tional ed	ucation	
	New con-							includ	ding:				
Area of responsibility	tracts, total absolute	Tot	al	In-com qualific meas	cation	Vocat prepai meas	ation	In-sci vocati preparati	ional	In-schoo vocat trainin	ional	Basic voo school v fully-qua vocat certif	vithout alifying ional
	absolute	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %
Industry and commerce	342,912	25,614 7.5 2	2,982	0.9	4,239	1.2	3,753	1.1	1,860	0.5	13,872	4.0	
Crafts	152,838	28,158	18.4	4,773	3.1	6,570	4.3	3,903	2.6	5,121	3.4	9,075	5.9
Public service	12,195	1,455	11.9	1,134	9.3	60	0.5	33	0.3	36	0.3	207	1.7
Agriculture	13,602	2,091	15.4	150	1.1	606	4.5	360	2.6	645	4.7	369	2.7
Liberal professions	41,031	3,741	9.1	1,773	4.3	768	1.9	414	1.0	300	0.7	867	2.1
Home economics	3,246	1,323	40.8	36	1.1	630	19.4	432	13.3	72	2.2	228	7.0
Total	565,824	62,382	11.0	10,851	1.9	12,876	2.3	8,898	1.6	8,034	1.4	24,618	4.4

<sup>&</sup>lt;sup>1</sup> The decisive factor in assigning trainees to areas of responsibility is usually not the training enterprise but the competent body for the training occupation. For example, trainees trained in enterprises of the public service or liberal professions sector for industrial or crafts occupations are assigned to the areas of responsibility of industry and commerce or the crafts.

Table 7: Trainees with newly concluded training contracts by highest general education school leaving certificate (N = 565,824; 2011; in %)

Highest general education school leaving certificate							
Without lower secondary school leaving certificate	,		University entrance certificate				
2.9	31.9	42.1	23.1				

Source: "Trainee Database" of the Federal Institute for Vocational Education and Training, based on data from the Vocational Education and Training Statistics of the Federal and Länder statistical offices (survey for the period up to December 31), 2011 reporting year. Absolute values rounded to multiples of 3 for reasons of data protection; the total value may therefore deviate from the sum of the individual values.

The development of the trainees with new contracts from 2008 to 2011 shows a tendency towards higher general education school leaving certificates. While the number of those who have no more than lower secondary school leaving certificates had continually shrunk since 2008 (-4.4%), there had been a parallel increase in the number of those eligible to study under the new contracts (+12.1%). However, in interpreting these data it is important to note that there were two school years taking the Abitur examinations in 2011 in the populous federal states of Bavaria and Lower Saxony. The higher proportion of persons eligible for university studies among the trainees with new contracts can thus be at least partly explained by the increase in the number of graduates of general education schools entitled to go to university – as applicants for dual apprenticeships.

#### **Dissolution of training contracts**

Apprenticeships that have been started are not always continued up to their successful completion. Failed final examinations or the premature dissolution of contracts can lead to an end of the training relationship without the acquisition of qualifications. The reasons

for dissolving contracts range from plant closures or health factors and revised occupational career choices to conflicts between trainers and trainees.

The contract dissolution rate has varied between 20% and 25% since the beginning of the 1990s. The trend that was already observed in the previous year was confirmed in 2011. During the 2011 reporting year, 149,760 training contracts were prematurely dissolved nationwide. If we look at the period of time between the start of apprenticeship contracts and their premature dissolution in 2011, we see that most of the training contract dissolutions took place within the first year after the start of the training contract (table 8). A special analysis of the 2011 BIBB Transition Study came to the conclusion that an estimated 12% of the trainees end their first dual vocational education and training within 36 months without a certificate.

The dissolution rate varies significantly from one area of responsibility and one federal state to the next. The highest national average dissolution rates are in the craft occupations, 31.1 %, followed by home economics occupations with 25.3 %. The

Table 8: Premature dissolution of contracts according to areas of respnsibility<sup>1</sup> and time of dissolution<sup>2</sup> (absolute and in %<sup>3</sup>), federal territory 2011

Area of responsibility	Premature dissolution of contracts, total		of which dissolved:									
			during trial period		after 5 to 12 months		after 13 to 24 months		after 25 to 36 months		after more than 36 months	
	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %	absolute	in %
Industry and commerce	80,772	100.0	28,287	35.0	26,157	32.4	19,218	23.8	5,946	7.4	1,164	1.4
Crafts	52,980	100.0	16,029	30.3	16,035	30.3	14,127	26.7	5,835	11.0	954	1.8
Public service	798	100.0	255	32.0	204	25.6	222	27.8	102	12.8	15	1.9
Agriculture	3,378	100.0	945	28.0	996	29.5	951	28.2	414	12.3	72	2.1
Liberal professions	10,860	100.0	4,782	44.0	2,922	26.9	2,130	19.6	876	8.1	147	1.4
Home economics	972	100.0	183	18.8	300	30.9	279	28.7	171	17.6	39	4.0
Federal territory, total	149,760	100.0	50,484	33.7	46,614	31.1	36,927	24.7	13,344	8.9	2,394	1.6

Assigned by responsibility for the respective training occupations.

Source: "Trainee Database" of the Federal Institute for Vocational Education and Training, based on data from the Vocational Education and Training Statistics of the Federal and Länder statistical offices (survey for the period up to December 31), 2011 reporting year. Absolute values rounded to multiples of 3 for reasons of data protection; the total value may therefore deviate from the sum of the individual values.

<sup>&</sup>lt;sup>2</sup> Time between start of contract and dissolution (in months).

<sup>&</sup>lt;sup>3</sup> Proportion of dissolutions in which the start of training was the respective number of months ago in the total number of dissolutions (this is neither the rate of dissolution nor actual progression data).

Table 9: Contract dissolution rates (in %)<sup>1</sup> in the 20 most frequently chosen dual education and training occupations, federal territory, 2011

Dual training occupations	Area of		Dissolution rates (LQ <sub>new</sub> )						
(BBiG/HwO)	responsibility <sup>2</sup>	New contracts	Total	Female	Male	Foreigners	German citizens		
Retail sales clerk	IH/HwEx	33,192	22.0	20.8	23.6	23.8	21.8		
Salesperson	IH/HwEx	27,543	31.1	29.7	33.4	32.9	31.0		
Office clerk	IH/HwEx	20,646	23.6	22.9	25.2	28.1	23.3		
Motor vehicle mechatronics technician	Hw/IH	20,328	21.6	27.3	21.4	25.5	21.4		
Industrial clerk	IH/HwEx	20,253	8.0	7.6	8.6	14.7	7.8		
Clerk in wholesale and foreign trade	IH/HwEx	15,906	13.6	12.4	14.4	20.2	13.3		
Medical assistant	FB	14,532	21.7	21.7	27.1	24.5	21.5		
Industrial mechanic	IH/HwEx	14,151	7.7	8.7	7.6	12.3	7.5		
Bank clerk	IH	13,662	6.1	5.8	6.6	6.8	6.1		
Hairdresser	Hw	12,462	44.2	43.2	52.0	44.3	44.3		
Office communication clerk	IH/HwEx	12,258	23.2	21.8	28.1	27.8	22.9		
Cook	IH/HwEx	12,201	49.4	48.1	49.8	58.9	48.9		
Electronics technician in the crafts	Hw	11,346	28.4	40.3	28.2	33.1	28.1		
Dental assistant	FB	10,815	25.6	25.5	41.3	26.0	25.6		
Warehouse logistics specialist	IH/HwEx	10,749	20.4	14.3	21.2	26.5	20.1		
Hotel specialist	IH/HwEx	10,587	39.2	38.5	40.9	44.5	38.9		
Food trades salesperson	IH/HwEx	10,269	39.7	38.9	47.3	38.4	39.8		
Plant mechanic for sanitary, heating and air conditioning systems	Hw/IH	10,092	31.2	44.3	31.1	35.4	30.9		
IT specialist	IH/HwEx	9,843	14.0	19.3	13.6	22.9	13.8		
Painter and varnisher	Hw	8,487	37.0	36.1	37.2	40.4	36.8		
Dual training occupations, total		565,824	24.4	24.9	24.1	30.9	24.0		

<sup>1</sup> BIBB layer model according to new calculation algorithm; in % of training contracts commenced; data from the last 4 reporting years are used in calculating the proportion.

occupations in the area of responsibility of the public service are the only ones where the average rate of dissolution is extremely low, only 6.1%. In the training occupations of the liberal professions it is close to the average value at 23.7%, and in two other areas of responsibility, industry and commerce

and agriculture, it is slightly below the average at  $22.1\,\%$ .

If we consider the 20 most occupied occupations of the dual system (table 9), which together comprise more than half of all newly concluded training con-

 $<sup>^2</sup>$  IH = industry and commerce; Hw = crafts; HwEx = industry and commerce occupation trained in the crafts; FB = liberal professions

Source: "Trainee Database" of the Federal Institute for Vocational Education and Training, based on data from the Vocational Education and Training Statistics of the Federal and Länder statistical offices (survey for the period up to December 31), 2008 to 2011 reporting years. Absolute values rounded to multiples of 3 for reasons of data protection; the total value may therefore deviate from the sum of the individual values. Calculations of the Federal Institute for Vocational Education and Training.

tracts, we see here as well the wide range of dissolution rates, from 6% (bank clerk) to 49% (cook). The rate of dissolution of contracts is lower for women than for men in these training occupations. We also see significant differences in the rates of dissolution for contracts with trainees of German and of foreign nationality.

#### Access to labour market

According to projections based on information from the Federal Employment Agency (BA), 138,000 people registered as unemployed after completing in-company or extra-company training in 2011. In relation to the total number of graduates of a dual education and training programme (477,000 persons) this yields an unemployment rate of 28.9 %. This is a significant decrease of 5.0 percentage points compared to the previous year (33.9 %). A year earlier, the unemployment rate fell slightly, by 0.6 percentage points.

Analogous to the results available up to now, low-wage earners<sup>7</sup> make up the highest proportion among the workers without initial vocational education and training at 40.7 %. Employees with university or technical college degrees (4.5%) and employees with upgrading training (4.8%) have the lowest risk of being in the low-wage category. People with dual vocational education and training are slightly above the overall average at the medium skills level (16.9%) at 17.6%. The chance of earning a gross hourly wage above the low wage threshold is three times higher for persons with dual vocational education and training than for those without formal qualifications. Thus completed initial vocational education and training reduces the risk of low wages immensely. If we change the perspective and ask who is affected by low wages, we find that people with dual vocational education and training comprise the majority of the workers in the low-wage sector: About 1.7 million women and one million men with dual vocational education and training receive low wages.

#### 7 A low wage, according to the OECD definition, is a gross income that is less than two-thirds of the average gross wage (median).

### Companies in vocational education and training

### Structural patterns of companies offering apprenticeships

For years, enterprises have been reporting increasing problems in recruiting young people for training in their own company. Demographic change in particular, with its falling numbers of school graduates, and the professional and regional imbalance between supply and demand that this causes in the training place market are referred to as central reasons. On the basis of the first and second survey waves of the BIBB Qualification Panel from the years 2011 and 2012<sup>8</sup> it is possible to examine the general participation by enterprises in the training of young people and the extent to which the needs of enterprises for young employees are covered for the 2010/2011 and 2011/2012 training years.

Of the enterprises providing training that were polled, a total of 53.1% offered apprenticeships according to BBiG or HwO for the 2010/2011 training year. The proportion of enterprises offering training places for the 2011/2012 year thus increased by 9.7 percentage points to 62.8%. This increase corresponds to the general trend in the training place market. Despite the decline in the number of enterprises offering training, the total supply of apprenticeships could therefore be increased by the remaining training enterprises. Compared to the previous year, the differences in the supply of apprenticeships between the old and the new federal states were more pronounced. Considered from the point of view of sectors of the economy, it is especially enterprises in the field of miscellaneous services with 69.4%, public administration, child care and education with 76.4% and manufacturing with 66.3% that offer apprenticeships more frequently than the average. In contrast, the percentages in the processing sector and in the commerce and repairs business are relatively close to the average. For enterprises with company-related services, we have company quotas of 40.1% (figure 4)).

<sup>8 2000</sup> enterprises took part in each of the first and second survey waves in the spring of 2011 and the spring of 2012. 75 % of the enterprises and companies polled in 2011 also participated in the survey in 2012 (panel quota).

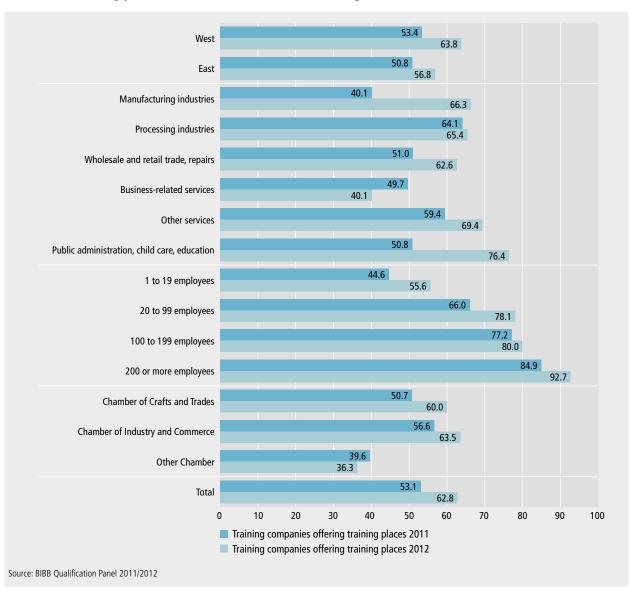


Figure 4: Change in the proportion of all enterprises providing training that had apprenticeship vacancies for the training years 2010/2011 and 2011/2012 according to selected structural characteristics (in %)

### Enterprise participation in training and training rate

As in the two previous years, the participation of enterprises in training declined sharply in 2011. Of the 2.094 million companies nationwide with at least one employment relationship subject to social insurance, 455,100 were engaging in vocational training at the end of the reporting year, 13,700 less (-2.9%)

than in 2010. The number of enterprises providing training thus fell to the lowest level since 1999 (figure 5). The total number of enterprises, however, increased for the fifth year in a row and rose by 13,600 (+0.7%) in the year under review. The training enterprise ratio continued to drop as a result and fell by 0.8 percentage points to 21.7%.

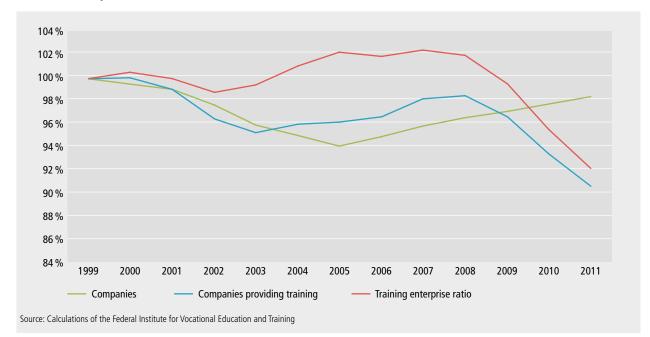


Figure 5: Development of participation of companies in providing training in Germany between 1999 and 2011 (base year 1999 = 100 %)

The coincidence of growth in the number of enterprises and the shrinking number of enterprises providing training observed since 2010 continued in 2011 and the training enterprise ratio dropped to a new low. Also, the proportion of trainees in the total number of employees subject to social insurance contributions decreased further in 2011. While the number of trainees nationwide declined by 51,900 to about 1.642 million (-3.1%), the number of employees subject to social insurance contributions increased by 754,100 to 28.787 million. With a growth rate of +2.7 %, that is the largest employment increase within a calendar year since 1999. Losses in the micro-enterprise segment were solely responsible for the reduced number of enterprises providing training in 2011, when 6% fewer enterprises participated in training than in 2010. The number of enterprises providing training among the small enterprises, however, remained almost constant; among the medium-sized and large enterprises it even rose, by 1.8% and 2.3% respectively. Given the sharply increased total number of enterprises, however, these increases could not prevent a further reduction in the training enterprise ratio in all enterprise size classes. The amount of loss ranged from

−0.5 percentage points for the large enterprises to
−1.2 percentage points for the small enterprises.

The unequal development of trainee numbers in enterprises of different size categories suggest a structural change in participation in in-company training. For several years, we have seen an increasing proportion of the total number of apprentices being trained in small and medium-sized enterprises, while micro-enterprises and large enterprises have been contributing to an ever-diminishing extent to the total training capacity (figure 6 XX). This trend continued in 2011.

There were declines in the numbers of companies providing training in 2011 in almost all segments of the economy. It was only in the area of water supply and sewage and waste disposal that the number of enterprises providing training increased slightly, rising by 0.3% compared with the previous year. The number of enterprises providing training decreased in all other segments of the economy. The greatest percentage losses were recorded in the hospitality industry and miscellaneous services, with decreases of 7.1% and 8.5%. As in the previous year, the

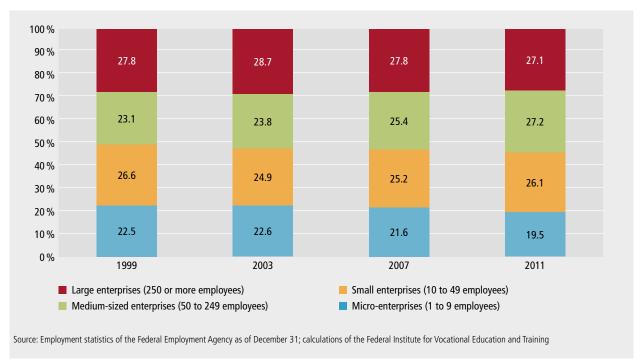


Figure 6: Distribution in percent of apprentices according to enterprise size classes between 1999 and 2011 in Germany

processing sector recorded the highest proportion of enterprises providing training, with a training enterprise ratio of 34.4%. Well above average proportional values were found also in the construction industry (29.2%), in the health and social services sector (27.9%), in public administration, defence and social security (26.9%), and in the commerce and automotive repairs sector (24.9%). The lowest training enterprise ratios were in the economic sectors real estate (7.6%), child care and education (9.7%) and transportation and storage (9.7%).

#### Hiring of successful graduates

When a company hires the specialists it has itself trained, a significant part of the transition from the training market to the labour market can be mapped with the data of the IAB Establishment Panel. Two out of three persons who had successfully completed their training were given jobs in their companies in 2011. In enterprises with fewer than 50 employees it was around 60%, in medium-sized enterprises (50–499 employees) 68% and in large enterprises

80% of the training graduates. The take-up rates thus rose significantly compared to the previous year – in particular, enterprises with less than 10 employees recorded an increase of 12 percentage points in 2011. In the other enterprise size classes a relative growth of 3 to 4 percentage points was achieved.

#### Training personnel in in-company training

Providing training in the dual system calls for personal aptitude in addition to professional aptitude on the part of the training staff. In the year 2011 there were a total of 665,508 persons registered with the competent bodies as trainers in the training sectors of industry and commerce, the crafts, agriculture, the public service, the liberal professions and home economics in Germany. The majority of the registered trainers perform this activity on a part-time basis. Only a minority are full-time trainers.

A total of 85,392 persons in the industry and commerce, crafts, agriculture, public service, and home economics training sectors took trainer aptitude ex-

aminations in 2011. Of these, 64.6% were men and 35.4% were women. The examinations were passed by 80,280 persons. This was a success rate of 94%, with the new federal states accounting for 15,888 of the exams passed.

According to the Federal Statistical Office, the number of trainers in the industry and commerce training sector who were exempted from the trainer aptitude examination was 40,341. Master's examinations were attended by a total of 38,748 persons (84.6 % men; 15.4 % women) in 2011 in the fields of industry and commerce, crafts, agriculture, public service and home economics. Of those, 35,247 persons passed the examination, corresponding to a success rate of 91 %.

#### Financing and costs of training

#### **Training allowance**

Any company in Germany providing training is obliged by law to pay its trainees an adequate compensation that increases with each year of training (§ 17 BBiG). The training allowances are the biggest cost factor for the companies in providing vocational education and training, since they account for 46 % of the gross training costs.

In the old federal states in 2012 the agreed training allowances based on collective agreements amounted to on average €737 per month. That was an increase of 4.1% compared to the previous year. In the new federal states the average monthly remuneration rose to €674, up 5.0% from the previous year. While in the old federal states the percentage increase in remuneration in 2012 was thus much higher than in the previous year (2.9%), in the new federal states there had already been an almost equally sharp increase in the year before (4.9%). According to the 2007 BIBB Cost-Benefit Survey the level of remuneration was determined by collective agreement in 81% of the enterprises providing training - with 87% of the trainees. Considerable remuneration differences existed in 2012 between the individual training occupations. In 2012 there were also clear differences in remuneration between male and female trainees. The average monthly amount

for male trainees was  $\in$  751 and for female trainees  $\in$  715 in the old federal states. The following average values were calculated in 2012 for each training year: The monthly remuneration in the old federal states amounted to  $\in$  664 in the first year of training,  $\in$   $\in$  731 in the 2nd year,  $\in$  812 in the 3rd year and  $\in$  851 in the 4th year. In the new federal states, the average amount per month was  $\in$  606 in the 1st year of training,  $\in$  670 in the 2nd year,  $\in$  736 in the 3rd year and  $\in$  827 in the 4th year.

#### **Public expenditure**

Total public expenditure for vocational education and training in 2010 amounted to approx.  $\in$  13 billion, although this figure included some support for continuing education and training as well. Part-time vocational schools received  $\in$  3.1 billion, full-time vocational schools providing full initial vocational training approx.  $\in$  2.25 billion.

#### Contributions by training enterprises

The in-company part of the dual system of vocational education and training is funded by contributions from the training enterprises in the private sector and public service. According to calculations based on a representative survey for the year 2007, the gross costs, that are the costs of training without consideration of the training yields, amounted to approx.  $\[ \in \] 23.8 \]$  billion, or approx.  $\[ \in \] 15,300 \]$  per trainee and year. The net costs amounted to  $\[ \in \] 5.6 \]$  billion, at approx.  $\[ \in \] 3,600 \]$  per trainee and year, although the net costs too are counterbalanced by returns that are difficult to quantify, such as savings on recruitment costs or image improvement. The more productive deployment of the trainees in enterprises sharply reduced the net costs in recent years.

# 2. Continuing vocational education and training indicators

Continuing education is understood to be the continuation or resumption of organised learning following completion of an initial phase of education of varying scope. In addition to continuing vocational education and training (CVET), this includes continuing general and political education, which is subsumed under the heading of 'adult education'. The field of CVET in Germany is characterised by a pluralism of providers, a largely market character, and a comparatively minimal degree of regulation. CVET is divided in three parts: regulated continuing education, in-company training and individual continuing training. Only a small part of provision leads to a formal vocational qualification.

Publicly promoted CVET is targeted at various groups, from unemployed people with no school leaving certificate or without vocational qualifications to executives. Only some of the courses are designed to lead to qualifications which are recognised by law or awarded by industry's self-governing organisations (Chambers). Courses leading to advanced vocational qualifications, i.e. Meisterbrief or another diploma, e.g. from a Fachschule (trade and technical schools and master's schools) are classified as ISCED 5B or EQF level 6 respectively.

#### Key facts in brief

According to the results of the 2012 Adult Education Survey (AES), the continuing education and training rate for the population aged 18 to 64 years in Germany was 49%. The participation rate was 5 percentage points higher than in the 2007 AES.

An evaluation of the participation of the working population in continuing vocational education and training (micro-census over the period 2005 to 2010) shows that the rates of participation in continuing vocational education and training increased in that period by 2 percentage points to 20.1%. The participation in continuing vocational education and training first increases slightly with increasing age and then decreases for persons aged 40 and above. The

level of education has a major impact on participation in continuing vocational education and training.

Analyses of the 2012 BIBB/BAuA Career Survey show that the continuing vocational education and training activities of older workers increased over 2006. The extension and the expansion of professional knowledge are particularly important for this target group.

According to data from the IAB Establishment Panel, 53% of enterprises participated in the financing of continuing vocational education and training courses in 2011. Compared to 2010 (44%), the participation of enterprises in continuing training thus increased significantly (by 9 percentage points).

The increase in the participation of enterprises in continuing vocational education and training can also be seen from the results of the fourth European Continuing Vocational Training Survey (CVTS4). The development in Germany is positive for almost all indicators. Compared to other European countries, however, Germany still holds only a middle-ranking position.

According to data from the BIBB Qualification Panel, the participation in continuing education and training is considerably greater in companies providing training than in companies not providing training.

The continuing vocational education and training courses offered by the adult education centres amounted to 67,570 events nationwide in 2011, less than in the previous year.

A total of 181,677 instances of participation in state-approved distance learning courses were recorded for 2011. This is a decrease of 10.5 % compared to the previous year.

In the year 2010 there were approximately 304,900 admissions to measures to promote continuing vocational education and training pursuant to SGB III and SGB II. This is a decrease of 37.3% compared

to the previous year. The total annual number of participants fell from about 188,700 in 2010 to about 161,500 in 2011.

In 2011, 166,467 people received support within the framework of the Upgrading Training Assistance Act, which is roughly the same as the attendance figures for the previous year.

In the first funding phase of the Continuing Education Grant, almost 166,000 grant vouchers were given out. Around 80% of those vouchers were actually redeemed. Three quarters of the Continuing Education Grant users are female.

Overall, there are currently 223 federal regulations covering continuing vocational training and retraining. Of these statutory instruments, 92 apply to master's examinations in the crafts.

In the 2011/2012 school year there were 56,462 graduates who had passed their final examination at trade and technical schools.

The number of further education and training examinations in 2011 was around 118,000, an increase of more than 8,000.

### Occupation-related continuing education and training

#### **General trend**

Owing to the demographic development in Germany, the number of gainfully employed persons will decrease in the future and their average age will increase. The demand for continuing vocational education and training will increase as a result. According to the results of the 2012 Adult Education Survey

Table 10: Rates of participation in occupation-related continuing education and training of employed persons by qualifications and gender, 2005 to 2010 (in %)

		Reporting year							
		2005	2006	2007	2008	2009	2010	Total	
Semi-skilled training	Male	7.8	8.0	8.4	8.6	11.5	11.0	9.1	
	Female	8.7	9.9	9.6	10.9	11.5	12.1	10.3	
	Total	8.2	9.0	9.0	9.8	11.5	11.6	9.7	
Dual vocational education and training	Male	13.3	13.3	14.4	15.2	15.3	15.2	14.5	
	Female	13.9	14.5	16.2	16.9	16.5	16.3	15.8	
	Total	13.6	13.9	15.3	16.0	15.9	15.7	15.1	
Basic vocational school training	Male	20.4	21.8	22.4	26.8	27.9	25.8	23.4	
	Female	25.5	27.2	29.0	32.5	31.4	31.7	29.1	
	Total	23.5	25.1	26.7	30.7	30.3	29.8	27.1	
Master craftsman/technician/technical school certificate	Male	26.3	26.3	29.0	29.9	29.1	27.6	28.0	
	Female	34.0	34.9	38.5	39.0	38.4	35.8	36.8	
	Total	29.3	29.7	32.8	33.5	33.0	30.9	31.5	
University/technical college	Male	32.4	32.9	34.9	36.0	35.0	33.5	34.2	
	Female	36.9	37.2	38.4	39.8	38.6	37.7	38.1	
	Total	34.2	34.6	36.3	37.6	36.5	35.3	35.8	
No training	Male	6.2	6.0	6.1	6.1	6.0	6.2	6.1	
	Female	5.2	5.6	5.4	5.8	5.9	5.5	5.6	
	Total	5.7	5.8	5.8	6.0	5.9	5.8	5.8	

Source: Micro-census 2005 to 2010, calculations of the Federal Institute for Vocational Education and Training

(AES), almost half the 18 to 64 year old population in Germany (49%) had taken continuing education and training courses in the 12 months preceding the interview. The increase in in-company continuing vocational education and training was especially pronounced; the latest figures of the Continuing Vocational Training Survey (CVTS4) also show an increase in the participation of employees in continuing in-company training. Since 2005 the rates of participation in continuing vocational education and training have increased overall by more than 2 percentage points to 20.1 %. Not only age, but also and particularly the level of education affects continuing vocational education and training behaviour. The close relationship between the level of vocational training and continuing vocational education and training behaviour is shown in table 10.

# Willingness to engage in continuing education and continuing education activities among older workers

Demographic change is increasingly altering the composition of the potential working population by age groups. The 2012 BIBB/BAuA Career Survey<sup>9</sup> confirmed that in the year 2012 13.3% of those 45 to 65 years of age had participated in a continuing training course in the preceding 2 years (2006: 12.1%) (figure 7).

50.9% of respondents between 45 and 65 years of age plan to engage in continuing training for their occupations in the next 2 years. Differentiated by age groups, we see that the proportion with plans for continuing vocational education and training is significantly higher among those 45 to 55 years of age

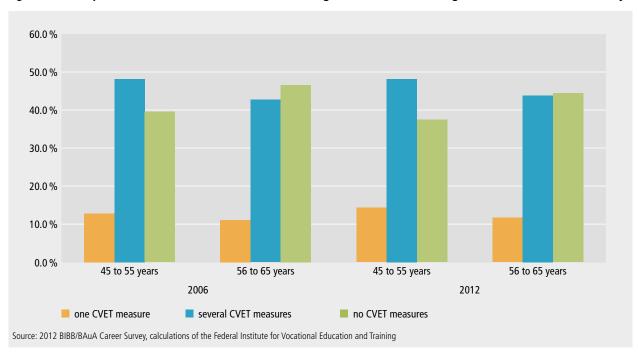


Figure 7: Participation rates of older workers in continuing education and training in 2006 and 2012 in Germany

<sup>9</sup> In the representative 2012 BIBB/BAuA Career Survey, carried out jointly by the Federal Institute for Vocational Education and Training (BIBB) and the Federal Institute for Occupational Safety and Health (BAuA), approximately 20,000 gainfully employed persons aged 15 and over in Germany working at least 10 hours per week were interviewed, gainfully employed meaning engaged in an activity associated with an income. The following results are based on the evaluations of the 11,523 respondents aged 45 to 65 years on the topic of continuing vocational education and training.

(58.3%) than among the 56- to 65-year-olds (36.3%). 66.2% of those above 45 and below 65 years of age consider the extension and expansion of professional knowledge to be particularly important. Those 45 to 55 years of age consider communication and personality training especially important (45.6%); of those 56 to 65 years of age, 40.7% agree that such training is essential. The main purpose of the planned continuing education and training is for the respondents to keep up with developments in their occupations. This is important especially for the 56 to 65-year-olds (96.1%), but 91.4% of those 45 to 55 years of age also say they have such plans. 8.6% of those 45 to 55 years of age and 3.9% of those between 56 and 65 contemplate taking on new functions.

### Company provision for continuing education and training<sup>10</sup>

In 2011 every second enterprise (53%) participated in the continuing vocational education and training of its employees (+9% compared to 2010). The growth is seen in enterprises of almost all sizes - apart from the large enterprises, whose CVET commitment was already almost 100% in the previous year. While the proportion of enterprises with less than 10 employees providing CVET increased by 9 and 10 percentage points and in 2011 stood at 43% in the old and 48% in the new federal States, a significant increase could be seen in small (10 to 49 employees: +7 and +9 percentage points) and medium-sized enterprises (50 to 499 employees: +8 and +6 percentage points) as well. While the rate of continuing vocational education and training had developed positively since 2001, it stood at about 26% from 2008 to 2010 and increased by 5 percentage points in 2011. Thus almost every third employee was participating in continuing vocational education and training in 2011.

### In-company continuing education and training in European comparison

Enterprise-funded continuing education and training is an important part of lifelong learning. The fourth European Continuing Vocational Training Survey (CVTS4<sup>11</sup>), conducted in 2011, provides European comparative data on in-company continuing vocational education and training activities for 2010. According to the results of CVTS4, progress has been made in in-company continuing vocational education and training activities in many countries. Increases were achieved in particular in the inclusion of as many employees as possible and the intensity of continuing vocational education and training in almost all countries. However, this does not necessarily mean that the expenditures of the companies were greater.

The development in Germany is positive for almost all indicators: In 2010, more companies than 5 years earlier offered continuing training in the form of courses or in other forms to their employees (70% of the companies in the year 2010). With a participation rate of 39%, substantially more employees attended continuing vocational education and training courses, and company expenditure for CVET was increased as well. However, these developments were not coupled with an expansion of learning time. In terms of hours of continuing vocational education and training courses per 1000 work hours there was stagnation in Germany, and there was even a significant drop in terms of CVET hours spent per participant. Overall, the proportion of companies providing CVET in the 25 countries for which results are available range from 87% in Austria and Sweden to 22% in Poland (figure 8). Germany is in the midfield of the countries as it was in 2005.

<sup>10</sup> For many years in-company continuing training activities have been assessed on the basis of data from the IAB Establishment Panel and the CVTS (Continuing Vocational Training Survey) studies.

<sup>11</sup> The results for the countries concerned are published in the Eurostat database. Results were available for 25 countries as of March 2013. The data is provisional. Cf. http://epp.eurostat.ec.europa.eu/portal/page/portal/education/data/database (access date: 20.02.2013).



Figure 8: Percentage of enterprises offering CVET in 2010 and 2005 (in %)

Country codes: AT: Austria; BE: Belgium; BG: Bulgaria; CY: Cyprus; CZ: Czech Republic; DE: Germany; EE: Estonia; ES: Spain; FI: Finland; FR: France; HR: Croatia; HU: Hungary; IT: Italy; LT: Lithuania; LU: Luxembourg; LV: Latvia; MT: Malta; NL: Netherlands; PL: Poland; PT: Portugal; RO: Romania; SE: Sweden; SI: Slovenia; SK: Slovakia; UK: United Kingdom Source: Eurostat, CVTS3/4 (access date: 11.03.2013). HR did not participate in CVTS3. UK (2005) not taken into account due to limited comparability.

If we differentiate between courses and other forms offered in the year 2010, a heterogeneous picture emerges: In 13 countries, courses predominated; in 12 countries it was the other forms offered. In Germany, the percentage of enterprises with other forms is higher than the percentage of enterprises with courses. However, the gap has been reduced significantly: Both in 2005 and in 2010 the percentage of companies that offered other forms was 66%. The percentage of companies offering courses surged, however, from 54% to 61%. Nevertheless, other forms of continuing in-company vocational education and training in Germany will continue to be of great importance.

Participation in in-company continuing vocational education and training courses, measured as the proportion of employees in all companies participating, has increased in almost all countries. In Germany, 39% of employees participated in continuing in-company vocational education and training courses (+9% between 2005 and 2010). Not only the participation rate but also the intensity has increased

in many countries. The corresponding number of course hours is 6 in Germany. There were no changes in comparison to 2005. If the number of hours in CVET courses is put in relation to all employees in all enterprises, the figure for Germany for 2010 as for 2005 turns out to be 9 hours. If the number of course hours is related to the number of participants in CVET courses, the trend in Germany is seen to be negative. The average number of hours per participant dropped from 30 hours in 2005 to 23 hours in 2010. This puts Germany at the rear of the field. Overall, this suggests that while more employees were included in continuing vocational education and training courses, the duration of the courses was significantly shorter in 2010 than in 2005.

### In-company CVET, initial training participation and external recruitment

According to the findings of the BIBB Qualification Panel, almost three quarters (72.3%) of the 2 million or so enterprises in Germany with insurable employment relationships funded continuing education and

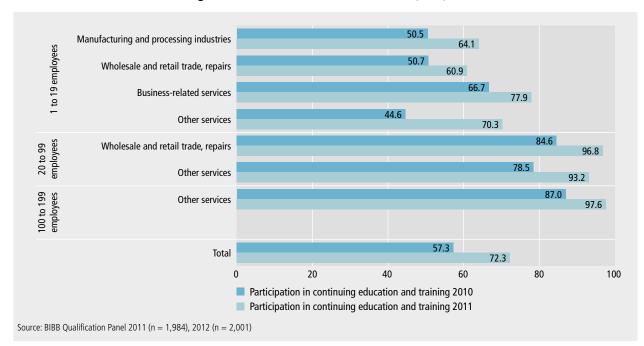


Figure 9: Comparison of enterprises' participation in in-company continuing education and training in the years 2011 and 2010 according to selected structural characteristics (in %)

training for their employees in 2011. The participation in continuing vocational education and training had thus significantly increased compared to the previous year and was 15 percentage points higher than in the year 2010. Figure 9 shows the change in the participation of enterprises in continuing vocational education and training activities in 2011 compared to 2010 for selected structural characteristics of the enterprises.

The findings of the BIBB Qualification Panel confirm that initial in-company VET and continuing in-company VET are deployed as complementary strategies for meeting the skilled manpower requirements of the enterprises. A clear majority of the enterprises engaging in in-company initial training in the year 2011 (86.4%) also carried out continuing vocational education and training measures for their employees.

In 2011 almost every second company (43.7%) with insurable employees in Germany was looking for new manpower, including skilled workers, and offering the corresponding positions. The findings show that enterprises which had openings offered continuing vocational education and training more often than enterprises that had no need for new staff

in the year 2011. All in all, 83.0% of the enterprises with vacancies funded the continuing education and training of their employees, whereas the proportion of enterprises without recruitment intentions was almost 20 percentage points lower at 64.8%. However, these differences vary depending on the business sector and the company size class. The greater the number of employees, the smaller the differences between enterprises with and those without the intention of recruiting.

### Provision of continuing education and training

### Providers of continuing education and training

The following section relies on the results of the 2012 wbmonitor survey<sup>12</sup>. At +25, the wbmonitor climate value for all providers is positive and stable com-

<sup>12</sup> wbmonitor is a collaborative effort of the Federal Institute for Vocational Education and Training (BIBB) and the German Institute for Adult Education – Leibniz Centre for Lifelong Learning e. V. (DIE). In May every year, all the providers of vocational and/or general continuing education known to the wbmonitor (2012: 14,500 providers) are called on to participate in the survey.

Table 11: Climate value, business situation and expectations for selected categories of CVET providers 2011

		Climate value	Assessment of situation	Expectations within one year	Number of providers (situation)
		averaged from situation and expectation	Balance <sup>1</sup> positive/ negative	Balance <sup>1</sup> better/worse	(extrapolated)
All providers		25	34	17	12,960
Type of establishment	commercial and private	34	32	37	3,810
	non-profit and private	10	10	10	1,899
	educational establishment of a company	24	31	17	549
	adult education centre	22	38	8	2,162
	vocational school, university/ technical college, academy	37	51	24	1,189
	industry-oriented (Chamber, Guild, Trade Association etc.)	43	60	28	1,205
	establishment of a church, party, trade union, foundation, association	11	24	-2	1,954
Type of establishment,	private/industry-oriented	36	40	31	5,564
summarised <sup>2</sup>	(predominantly) non-profit	11	17	4	3,853
	school/public	26	41	12	3,350
Location	old federal states	27	35	19	10,554
	new federal states incl. Berlin	19	28	10	2,406
Workers/civil servants	0 to 9	29	36	21	8,282
in CVET	10 to 49	25	35	15	3,522
	50 or more	14	19	10	875
Share of funding	none	11	17	5	2,008
received from	1 to 25 %	22	26	18	4,565
participants	26 % to 49 %	20	34	7	2,196
	50 % or more	37	49	25	3,868
Share of funding	none	15	26	4	4,230
received from	1 to 25 %	17	28	7	4,904
enterprises	26 % to 49 %	37	42	31	814
ā) (( ''	50 % or more	62	60	64	2,689
Share of funding	none	32	41	23	6,693
received from	1 to 25 %	44	53	35	3,533
employment agencies	26 % to 49 %	8	27	_9 22	715
Chamada and the second	50 % or more	-20 -22	-18 27	-23	1,696
Share of funding received		33	37	30	5,062
from municipalities, federal states, federal	1 to 25 %	18	27	10	3,230
•	26 % to 49 %	23	36	11	1,756
government, EU	50 % or more	23	35	12	2,589
In comparison	ifo service sector	25	34	16	=

 $<sup>^{1}</sup>$  The balance is the difference of positive and negative proportional values with a theoretical range from +100 to -100.

Source: BIBB/DIE wbmonitor survey 2012, extrapolated values on the basis of n=1,094 valid data.

pared with the previous two years; the climate value is a reflection of the assessment of the economic situation by the continuing vocational education and training providers (table 11). In the German CVET landscape, private commercial providers are the most common with a share of 29 %, followed by private but non-profit-making providers with 16 %. Mixed financing is a central structural characteristic. The primary

funding sources are the participants who pay their own way;  $83\,\%$  of the providers have revenues from that source. They are followed by enterprises and the public funding sources: municipalities, the federal states, the federal government and/or the EU, cited as a source of funding by  $67\,\%$  and  $60\,\%$  of the providers respectively.  $48\,\%$  of the providers obtain revenues from employment agencies, and  $14\,\%$  of the providers

<sup>&</sup>lt;sup>2</sup> 1: private and commercially active, industry-oriented or in-company educational establishment; 2: private non-profit or establishment of a large social group (church, party etc.); 3: vocational school, university/technical college or adult education centre.

receive funding from (non-public) institutions. Other funding sources not named here contribute to revenues for 28% of the providers. Most of the providers report stable revenues from participants paying their own way, enterprises and public funding sources for the continuing vocational education and training sector in the course of time (60 to 62% of the providers in each case). Roughly one-fifth reported revenue gains, and about one-sixth of the providers had to resign themselves to declining revenues from those funding sources. There were hardly any changes in this distribution, as is evident from the wbmonitor surveys for 2009 to 2012.

#### **Provision for persons with disabilities**

In ratifying the UN Convention on the Rights of Persons with Disabilities (CRPD) the Federal Republic of Germany undertook to ensure that persons with disabilities were able to access, among other things, "adult education and lifelong learning" on an equal basis and to ensure that "reasonable accommoda-

tion" was provided (CRPD Article 24 paragraph 5). The results of the 2012 survey of the wb**monitor** give an insight into how the providers already accommodate persons with disabilities and how they see persons with disabilities represented in their classes and seminars.

Almost 80% of the continuing education and training institutions indicate that their facilities (rooms and sanitary facilities) are at least partially wheelchair accessible. No fewer than 35% of all education and training providing institutions see spatial accessibility as fully and completely guaranteed. At first glance, this seems to be a situation largely tailored to the needs of persons with disabilities and a good basis for further inclusive measures. But closer inspection reveals a more nuanced picture that no longer seems quite so favourable.

Lack of accessibility is encountered proportionally more often in small continuing education and training facilities than in facilities with more than 1,000

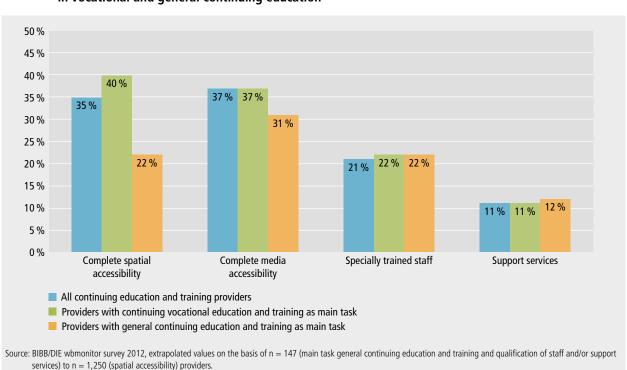


Figure 10: Facilities suitable for persons with disabilities (rooms, media, staff and support services) in vocational and general continuing education

instructor hours. In the wbmonitor, a distinction is drawn between vocational and general continuing education as the main task of the provider. If we consider spatial accessibility in terms of these two categories, we find that providers whose main task is continuing vocational education and training describe themselves as "completely physically accessible" almost twice as often as providers whose main task is general continuing education (40 % to 22 %) (figure 10).

According to the data, 44% of all continuing education and training providers have an accessible web presence. In asking about offers of support for persons with disabilities and the specific initial and continuing education and training of employees for educational work with persons with disabilities, the wbmonitor raised the issue of additional features regarded as prerequisites for successful education and training activities with people with disabilities. The facilities are much worse overall in both categories.

## Publicly funded continuing education and training

# Continuing education and training supported by the Federal Employment Agency (SGB II and SGB III)

Qualification acquisition in the context of labour market policy instruments is supported by the Employment Agency under Book Three of the Social Code (SGB III). Support by the job centres for employable persons requiring assistance is provided under Book Two of the Social Code (SGB II). Among the labour market policy instruments that make qualification possible for people within the jurisdiction of SGB II and SGB III are continuing vocational education and training, continuing vocational education and training for persons with disabilities and ESF-financed qualification programmes while on short-time work.

The promotion of measures for continuing vocational education and training pursuant to SGB III (employment promotion) and since 2005 pursuant to SGB II as well (basic income support for job-seekers) is one of the essential elements of active employment

promotion. It aims to improve the individual opportunities of people in the labour market and at the same time the competitiveness of the enterprises. In the last few years, initially between 2000 and 2005, support for continuing vocational education and training has been curtailed through redirection of funds in the context of the regional labour market programmes. Within the scope of services to improve skills, training activities pursuant to § 48 SGB III were increasingly used as well. The decline in funding for continuing vocational education and training activities continued to a lesser extent until 2005. Starting in 2006, funding for continuing vocational education and training was increased temporarily; it reached its high point in 2009. The support diminished again in 2010. A renewed decline of 37.3% occurred in 2011 with 304,991 admissions to continuing vocational education and training measures recorded (figure 11).

The percentage of measures leading to a certificate in a recognised training occupation continued to rise: Of the 304,991 admissions in 2011, 34,779 were for activities leading to certificates in a recognised training occupation; that is equivalent to 11.4% of the total (2010: 10.7%; 2009: 7.3%; 2008: 6.9%). Many people who have not completed initial vocational education and training, however, take part in continuing training activities that do not lead to a certificate. Of the people who have taken up continuing education and training, one third had no vocational certificate in 2011 (2010: 30.7%).

As the number of participants decreased, so did the funding. The total expenditure under SGB III for supporting participation in continuing vocational education and training activities in 2011 amounted to  $\epsilon$ 1.7 billion compared with  $\epsilon$ 1.92 billion in the previous year. This expenditure is made up of the continuing education and training costs under the heading of integration (course costs, travel expenses, child care expenses, accommodation away from home and subsistence costs) and the expenditure for the granting of unemployment benefits during continuing education and training. The total expenditure for the promotion of continuing vocational education and training in the basic allowance also decreased, amounting to  $\epsilon$ 645 million in 2011 (2010:  $\epsilon$ 827 million).

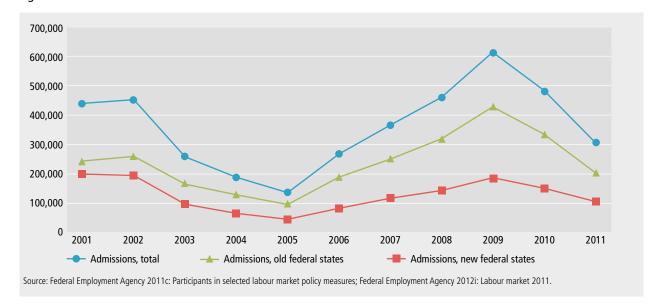


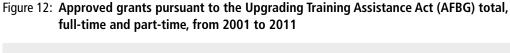
Figure 11: Admissions to courses of CVET under SGB II and SGB III between 2001 and 2011

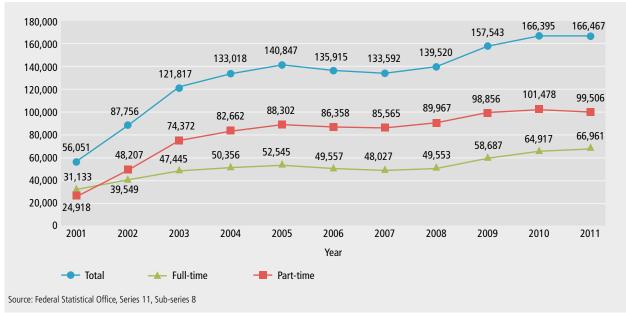
#### **Upgrading Training Assistance Act -**

The Upgrading Training Assistance Act (AFBG), funded jointly by the federal and state governments since 1996 – the so-called "Meister-BAföG" – establishes an individual legal claim to support for upgrading vocational training, that is, master's courses

or other training leading to the acquisition of an equivalent further training certificate.

The number of persons supported in 2011 was 166,467. A full time activity was completed by 66,961 (40.2%), a part-time activity by 99,506 persons (59.8%) (figure 12). Compared to the previous





year, the rate of change was +3.1% for persons sponsored full-time and -1.9% for part-time supported persons. The proportion of women in the total number of supported programme participants amounted to 31.6% (52,634). As in previous years, the majority of those funded (82.6%) were between 20 and under 35 years of age.

### Continuing education and training scholarship programme

The continuing education and training scholarship programme of the Federal Ministry of Education and Research (BMBF) supports the further qualification of talented entry-level workers following successfully completed initial vocational education and training. Scholarship holders can apply for grants totalling  $\epsilon$ 6,000 for any number of eligible continuing training activities within the three-year eligibility period. More than 6,500 scholarship holders were admitted to the funding programme by almost 300 Chambers and other competent bodies in 2012.

#### Upgrading scholarship programme

The BMBF's "Upgrading scholarship" funding programme provides study incentives for experienced workers with and without formal higher education entrance qualifications. Full-time students receive monthly grants to the amount of  $\in$  670 plus  $\in$  80 book money and possibly a care package for any children of their own. An annual support of  $\in$  2,000 is provided for a part-time on-the-job course of study. The upgrading scholarship was launched in 2008. Since then, 4,935 scholarship holders – an average of just under 1,100 persons per year in the past four years – have been admitted. At the end of 2012, 701 beneficiaries successfully completed their studies.

#### **Continuing Education Grant programme**

The Federal Ministry of Education and Research (BMBF) introduced the Continuing Education Grant (grant voucher and savings voucher) programme in December 2008. The demand was already great in the first funding phase (December 1, 2008 until November 30, 2011). A total of 165,894 grant vouchers and 19,753 savings vouchers were issued; nearly

80% of the grant vouchers were redeemed. The average total cost of the funded continuing education and training measures was  $\in 1.084$ , and the average amount of funding amounted to  $\in 344$ . The total cost of the funded continuing education and training activities thus amounted to about  $\in 140$  million. Due to the positive results of the first funding phase, the programme was extended for another 2 years (until November 30, 2013).

## Regulated further training qualifications

#### Regulations of the federal and state governments and competent bodies for further vocational training and retraining

"Advanced vocational training should make it possible to preserve and expand vocational knowledge and skills, to adapt to technological development or to advance in one's career. Vocational retraining is meant to enable one to practice another vocational activity" (§ 1 paragraph 3, 4 BBiG).

There are 223 ordinances and regulations of the federal government for continuing vocational training and retraining 13: Eight federal ordinances for further vocational education and training were issued in the years 2011 and 2012. They covered the following occupations, in chronological order: master cutting tool mechanic, certified marketing specialist for office and project organization, certified consultant for financial services, certified specialist for financial advice, certified master craftsman for road transport, certified tourism specialist, certified master craftsman for image and sound media production, certified site foreman and certified master craftsman for wood and building protection.

<sup>92</sup> legal ordinances on master's examinations in the crafts, 14 regulations remaining in force for master's examinations in the crafts, 48 legal ordinances on the requirements for master's examinations, 67 legal ordinances for further vocational training, 1 legal ordinance regulating vocational retraining and 1 legal ordinance on the aptitude of instructors.

### Continuing vocational education and training in trade and technical schools

According to the ISCED (International Standard Classification of Education), trade and technical schools as institutions of continuing vocational education and training and upgrading training outside the sphere of higher education belong to the tertiary sector.

During the school year 2011/2012 there were a total of 1,390 trade and technical schools in the whole of Germany (+2.0% over the previous year) with a total of 180,612 students (+2.9% over the previous year). In total there were 56,462 graduates in the 2010/2011 school year who had passed their final exams at trade and technical schools (+8.8% over the previous year). The number of graduates varies greatly from one occupational sector to the next. In the school year 2010/2011, 54.7% of those who passed their final exams (30,865 graduates) were in the service occupations field. In the field of the technical occupations the figure was 33.5% or 18,897 graduates.

### Further education and training examinations and retraining examinations

Vocational education and training within the meaning of the BBiG includes both further vocational training and vocational retraining. A total of 118,335 instances of participation in further vocational training examinations and master's examinations were counted in the 2011 reporting year, about 8,000 more than in the previous year 2010. This was almost the same level as in the year 2006. The number of male examinees was 76,884 (65%), that of women 41,451 (35%). A total of 102,159 persons (86.3%) succeeded in passing the examination. Most of these examinations were held as in previous years in the two training fields of industry and commerce (60,033) and the crafts (49,029). In the crafts, the number of further training examinations increased once again over the previous year by about 4,400. The increase over 2010 was similarly high in the field of industry and commerce at approximately 3,600 participants; between 2009 and 2010, the number of further education and training examinations in this field had even receded by about 5,300.

In the field of the liberal professions, 4,941 persons took examinations. The fields of agriculture with 2,274 further training examinations and the public service with 1,896 followed. The lowest number for 2011 was reported by the relevant authorities in home economics, namely 162 persons examined, compared to 405 in 2010.

Under the terms of § 1 paragraph 5 BBiG, retraining measures are supposed to enable already working adults to re-orient themselves vocationally and make it possible for them to make the transition to or advance to another occupation. In the 2011 reporting year, approximately 31,200 people took examinations within the framework of retraining measures. Just under 23,000 retraining examinations were recorded for the year 2010. Examinations were taken by 21,816 persons in the old federal states in 2011; in the new federal states it was about 9,400. As had been the case for many years, women made up more than a third of all examinees (10,671 or 34.2%). With 27,048 or 86.7% of all reported retraining examinations, the industry and commerce training sector retained its leading position.

### 3. In focus: Digital media

Information and communication technologies (ICT) are one of the constituent features of modern economies. To a large extent, work processes can now only be mastered on the basis of an ICT-based infrastructure. Technological innovations are based on the increasing networking of mechanical, electronic and IT components. Digital media are an indispensable tool for organising these work processes, and their performance and application possibilities are steadily increasing and expanding at an unprecedented rate. They are not just means of production but have evolved within a very short time into a powerful teaching and learning tool.

### Mega-trend 'Computerization of skilled labour'

The BIBB's analyses in the context of the Career Survey (2006, 2012) document the high rate of IT penetration of workplaces in Germany. 80.9% of the core working population (about 29.2 million persons) was working with computers in 2012 (2006: 76.6%). Two out of three even do so frequently (2006: 61.3%). The majority of the working population (71%) in the year 2012 use the computer purely for applications, while every tenth working person uses it for other purposes as well. The proportion of application users increased from 67.4% to 71.0% between 2006 and 2012.

The structure within professional IT activities has not changed in the course of time: Approximately 3% work in core IT occupations such as software development, computer science and system administration, and approximately 7%, although entrusted with specific computer activities, work outside the core IT occupations (hybrid IT occupations). Almost all persons with university degrees (97.3%) worked with computers in the year 2012, while for non-graduates the figure was 59.4% and for persons with completed initial vocational education and training 77%. Here it is primarily people in production occupations or simple service occupations that do not use computers. The computer is more widely used as a

working tool in the public service (87%), in industry (86.6%) and in commerce (78.7%) than in the crafts (62.3%). The intensity of computer use can vary. In 2006, 44% of working time was spent at the computer, while the proportion in 2012 was already 48%; the increase is not significant, however. Significantly, women work relatively longer (53% of their working hours) at the computer than men (44%).

## Use of digital media in initial and continuing education and training

Learning in the process of work as one of the constituent elements of vocational education and training acquires new possibilities of visualization, documentation and reflection in the context of daily work through the use of the "social web". Sustained by the various formats of ICT, it is possible to use digital media to simulate technical and operational processes and thus design particularly realistic learning situations and tasks. On-the-job learning, meaning "lifelong learning" as a precondition for the performance of competitive skilled work, receives the necessary infrastructure, which has established itself alongside formal, more course-oriented continuing education and training opportunities.

A comparison of the "landscape" of digital media between 2008 and 2012 based on the time-series study (Goertz 2012<sup>14</sup>) shows that since then many new formats have emerged, including interactive whiteboards, serious games, webinars and micro-blogging services (figure 13). It can also be stated with the help of the time-series study that, despite all the optimistic forecasts, only about 21% of the craft enterprises and medium-sized enterprises use digital media in their in-company initial and continuing vocational education and training. Approximately 35% are considering introducing and using digital media at the moment. More than 30% of the larger enterprises (500 to 1,000 employees) employ

<sup>14</sup> http://datenreport.bibb.de/media2013/expertise\_goertz.pdf

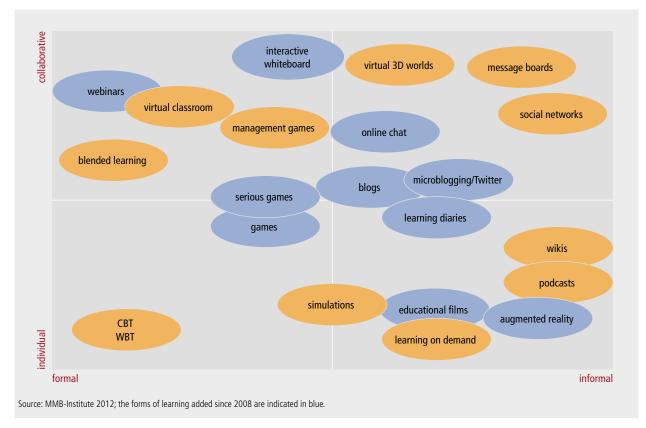
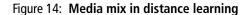
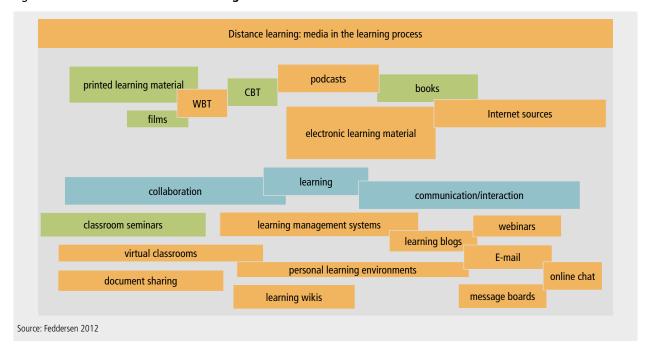


Figure 13: Variety of digital media formats (comparison between 2008 and 2012)





digital media. 55% of the large enterprises with over 1,000 employees use digital media specifically in their initial and continuing vocational education and training. Digital media are used in initial and continuing education and training to a significantly greater extent (31%) in the service provider sector than in the industrial and technical sector (16%). The rate of use in commerce is 8%.

Although there has so far been no systematic research on the degree of use of digital media in initial and continuing vocational education and training, the 2012 wb ${\bf monitor}$  survey of the BIBB/DIE found that 34.3% of continuing education and training providers in Germany offered CVET opportunities in the form of E-learning. This new teaching/learning method is used by 44.5% of the large continuing education and training providers, while the figure for small providers is of the order of magnitude of 22.0%. The impact of technological change on "traditional" continuing education and training opportunities is clearly seen as well in the increasing digitization of distance learning, available now at any time as extensive course material on mobile devices as well. On the basis of the Distance Learning Protection Act, the BIBB examines the conceptual construction of vocational distance learning courses. the content and didactic orientation of which is the subject of a technical opinion. The variety of teaching/learning opportunities acquired through the use of digital media demands of the distance learning institutions and those interested in this form of continuing education and training new forms of orientation and guidance (figure 14).

#### **Recommendations for action**

Already in early 2012, the BIBB submitted to the Commission of Inquiry dealing with the Internet and Digital Society an overview of the continuous need for action in vocational education and training with regard to the comprehensive use of digital media. It is documented below:

Exchange of knowledge and sharing of knowledge in expert or professional communities
is becoming a feature of modern work. The
dynamics of technological developments and

- of international competition will maintain the pressure on enterprises to continuously adapt their initial and continuing education and training quality to these developments with the help of digital media. In this connection there is to a considerable extent a lack of integrated concepts for sustainably achieving an efficient and methodologically consolidated extension of in-company learning using digital media.
- 2. Since mobile-learning concepts for the crafts and SMEs are hardly available while at the same time this infrastructure is increasingly required by the technicians for the flawless performance of installation and maintenance work, thematic structures for model learning content in selected trades need to be identified and developed. The didactisation of learning content and its adaptation require a research, development and testing effort that is impossible without public support.
- 3. The majority of SMEs in particular find themselves unable to master the overarching processes of technological, organisational, methodological and didactic change for the necessary complex solutions in (IT-induced) knowledge-based teaching and learning environments without support. The addressee-adequate designing, testing and dissemination of exemplary education management and comprehensive organisation development processes, especially for small and medium-sized enterprises, should be the focus of targeted research and development work.
- 4. Targeted efforts must be focused especially on comprehensive media literacy (media use, design, criticism) on the part of training staff. Accompanying and exemplary project plans for the targeted expansion of digital teaching/learning cultures and environments should help support this modernisation process in initial and continuing vocational education and training. That could be a direct contribution to strengthening the competitiveness of enterprises and continuously drive their transformation into "learning companies".
- 5. The discontinued pilot schemes of the Federal Government/Federal States Commission on Educational Planning (BLK) for modernising the

vocational school as a learning venue and for continuing teacher training should be resumed against the background of the experience gained at the time. Concepts for "virtual vocational schools", which have already been the subject of pilot projects, should be investigated for their transfer potential, and the requirements for continuing teacher training should be examined analogously. The overall goal of the bundle of measures to be initiated here must be to make vocational schools a strong partner for cooperation between learning venues in the context of the described processes of technological and social change.

- 6. The contribution of digital media to the integration of specific target groups has to be examined and promoted much more energetically than has been done up to now in view of the demographic development and the debate on the participation of all possible groups of persons in personal and vocational development.
- 7. Systematically reviewing whether the introduction of digital media is "worth it" has up to now often still been uncharted territory for the enterprises. There is a direct need for research here so that opportunities for optimisation and reliable concepts for application scenarios with a lasting impact can be developed in this segment.
- 8. The design of processes of teaching and learning with digital media in initial and continuing vocational education and training calls for a fundamentally new form of information gathering, information processing and information distribution on the part of all those involved. Too often, what is called "computer-aided instruction" is seen as an adjunct in the context of models of analogue in-company (and vocational school) realities, and the power of the possible applications of digital media with their possible linkages is not addressed.
- 9. The needed research mentioned in point 8 should be flanked by systematic ancillary research into the various initiatives at the national and EU level to quantify and qualify the contribution and the returns of digital media in initial and continuing vocational education and training.

# 4. International issues: Youth unemployment, recognition and mobility

The selected issues have been high on the agenda of the EU Member States in the year 2013. The following insights highlight the differences between various Member States and depict a major German initiative to support recognition of foreign professional qualifications.

#### Youth unemployment

Impacted by the economic crisis, the "Europe 2020" strategy aims to develop with the Member States, among other things, labour market-oriented educational policy measures to fight youth unemployment. In the 4th quarter of 2012 the youth unemployment

Table 12: Youth unemployment rates in EU Member States (in %)

		Youth unemployment rate			
	2009	2010	2011 (Q4) <sup>1</sup>	Nov. 2012 <sup>1</sup>	
EU-27	20.1	21.1	22.1	23.7	
Euro zone	20.2	20.9	21.4	24.4	
Belgium	21.9	22.4	17.5	19.7	
Bulgaria	16.2	23.2	28.2	27.4	
Denmark	11.8	14.0	14.3	14.2	
Germany	11.2	9.9	8.3	8.1	
Estonia	27.5	32.9	25.1	17.5³	
Finland	21.5	21.4	19.9	19.0	
France	23.9	23.6	22.7	27.0	
Greece	25.7	32.8	49.3	57.6 <sup>2</sup>	
Ireland	24.4	27.8	30.5	29.7	
Italy	25.4	27.8	30.5	37.1	
Latvia	33.6	34.5	27.4	31.9 <sup>2</sup>	
Lithuania	29.2	35.1	34.3	24.2	
Luxembourg	16.5	15.8	16.0	18.6	
Malta	14.4	13.1	14.0	16.4	
The Netherlands	7.7	8.7	8.5	9.7	
Austria	10.0	8.8	8.7	9.0	
Poland	20.6	23.7	26.9	28.4	
Portugal	24.8 (g)	27.7 (g)	34.1	38.7	
Romania	20.8	22.1	24.8	23.0 <sup>2</sup>	
Sweden	25.0	25.2	22.8	24.8	
Slovakia	27.3	33.6	33.8	35.8	
Slovenia	13.6	14.7	16.4	23.52	
Spain	37.8	41.6	48.9	56.5	
Czech Republic	16.6	18.3	18.3	21.3	
Hungary	26.5	26.6	26.7	29.3³	
United Kingdom	19.1	19.6	22.0	20.24	
Cyprus	13.8	16.7	26.8	27.0 <sup>2</sup>	

g-estimated

Source: Eurostat

<sup>&</sup>lt;sup>1</sup> The youth unemployment rate is seasonally adjusted.

 $<sup>^{2}</sup>$  As of: September 2012.

<sup>&</sup>lt;sup>3</sup> As of: October 2012.

<sup>&</sup>lt;sup>4</sup> Youth unemployment rate, Great Britain only (as of: September 2012).

rate in the European Union stood at 23.7% (Table 12). In its provisional Joint Employment Report, the European Commission estimates that more than one in five young people in Europe was unemployed at the end of 2012, and speaks of the danger of a "lost generation". Accordingly, the fight against unemployment is a priority target of economic, employment, education and social policy.

Vocational education and training has a special role to play in this for young people. The countries with the lowest youth unemployment rates are those with dual systems of initial vocational education and training (cf. 2012 BIBB Data Report). For that reason, many Member States are taking dual vocational education and training as a model. Portugal and Bulgaria, for example, are working on the development of company-integrated forms of training, Spain on the introduction of dual structures, Sweden on promoting the participation of enterprises in training and Lithuania on the promotion of learning in the work process. Thus the employment policy dimension of vocational education and training has been increasingly accentuated in the last years of the crisis.

#### Mobility

The topic of mobility has gained importance again within the framework of the "Europe 2020" strategy. The goal Member States have set themselves at the EU level is that by 2020 6.0% of 18- to 34-year-olds with vocational training certificates should spend at least 2 weeks abroad during their training. Germany is committed to the goal of reaching a value of 10% in vocational education and training. The "mobility" benchmark is thus concretised for vocational education and training, although there are still no exact figures available for this. An indicator for comparison is still in development. In 2012, nearly 30,000 trainees and vocational school students in Germany spent time abroad during their initial vocational education and training. That amounts to approx. 4% of those who complete initial vocational education and training.

The European Union's LEONARDO DA VINCI programme, coordinated in Germany by the National Agency *Education for Europe* at the BIBB, promotes, among others, mobility projects that make foreign stays for learning purposes possible for young adults in initial training, employed workers and education staff, as well as innovation transfer projects and partnerships.

Funding was approved in 2012 for over 18,000 scholarship holders in 700 projects. Thus the sharp increase in the number of opportunities to study abroad continued in the year 2012. The number of participants in the field of initial training doubled between 2007 and 2012 (2007: 6,421; 2012: 14,358). The national mobility benchmark, defined by the Innovation Circle on Vocational Education and Training to double the stays abroad in vocational education and training up to 2015 was thus already achieved in the year 2012 in the LEONARDO DA VINCI mobility action. Overall, about 30,000 young people spent time abroad during their initial vocational education and training in the year 2012. In the LEONARDO DA VINCI programme, the average duration of those stays abroad in initial vocational training was over 5 weeks. Twothirds of the scholarships were awarded to trainees and one-third to vocational school students.

The National Agency at the BIBB published the results of the "Mobility – increased competence for the disadvantaged" study in 2012. The study examined the effect of mobility on the skills acquisition and employability of disadvantaged young people. The framework conditions for the successful implementation of mobility projects with disadvantaged persons were also researched and recommendations for action were developed. The study identified a specific learning process situated particularly in the field of social skills which also leads to greater employability. On the basis of the study results, mobility projects which are based on an inclusive project concept or are addressed specifically to persons with special educational needs will receive particular support in the year 2013.

### Recognition of foreign professional qualifications

What is known as the Federal Recognition Act, an act to improve the assessment and recognition of foreign professional qualifications, entered into force on April 1, 2012. The act expands the claims to assessment of foreign professional qualifications in the area of responsibility of the Federal Government and helps ensure that the procedure is made simpler and more transparent. The demand for information about professional recognition procedures is great.

That is why the "Recognition in Germany" portal was brought online on April 1, 2012 as a part of the Federal Government measures accompanying the Act.

Without prior knowledge of the German system of vocational education and training, people who were interested in a recognition of their foreign qualifications found it quite difficult in the past to compile the necessary information on the procedures and competent bodies. It was for that target group that the online "recognition finder<sup>15</sup>" tool was developed.

Table 13: Usage of the German occupation profiles

Occupation	Responsibility federal government/ state government	Regulation	Unique page impressions	Page impressions
Medical doctor	Federal government	regulated	7,319	10,891
Teacher	Federal state	regulated	6,794	9,167
Engineer	Federal state	regulated	6,440	9,384
Registered nurse	Federal government	regulated	4,754	6,306
Nursery teacher	Federal state	regulated	3,888	5,407
Business administrator		not regulated	2,449	3,432
IT specialist		not regulated	1,911	2,636
Social education worker, welfare worker	Federal state	not regulated	1,761	2,281
Dentist (granting of licence)	Federal government	regulated	1,748	2,583
Office clerk	Federal government	dual education and training occupation	975	1,270
Lawyer	Federal government	regulated	784	1,061

The usage statistics of the web portal were determined using the web statistics tool PIWIK. Source: Federal Institute for Vocational Education and Training, Recognition in Germany

<sup>15</sup> The recognition finder was developed by the BIBB in cooperation with the Federal Employment Agency (many occupation profiles in the finder come from the Federal Employment Agency's "berufenet" database) and is continuously being extended and improved. Website

It facilitates the search for the German reference occupation, provides occupation-specific information about the recognition process and cites the legal bases, and – depending on the desired place of work – indicates the nearest authority responsible for recognition. This complex service is the unique selling point of the recognition finder, whose database currently contains over 500 occupation profiles (including 151 regulated occupations) and over 1,400 records with the addresses of the competent authorities. The home page of the recognition finder was accessed by 201,337 people. Nearly half of them, 99,026 visitors, viewed the results page with the address of the competent authority (Table 13)

The portal has been available in English since July 1, 2012. Since then the numbers of users from abroad have been steadily rising. Whereas in April only 38 % of the visitors came from abroad, in December 2012 the proportion was already 45 %. 78 % of the foreign visitors were from countries of the EU or the European Economic Area, and only 22 % were from a so-called third country. One probable factor in this relative lack of interest so far on the part of persons in third countries is that the possibilities of immigrating to Germany are limited for third-country nationals.

### **Annex: List of abbreviations**

AFBG Aufstiegsfortbildungsförderungsgesetz BA Bundesagentur für Arbeit Federal Employment Agency BA66 Bundesausbildungsförderungsgesetz BAUA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin BBIG Berufsbildungsgesetz BIBB Bundesinstitut für Berufsbildung BMBF Bundesinisterium für Bildung Education and Training Act BUNDES	Abbreviation	German	English
BA Bundesagentur für Arbeit BAföG Bundesausbildungsförderungsgesetz BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin BBiG Berufsbildungsgesetz BURDE BUNDESINGERUNG	AES		Adult Education Survey
BAIGG Bundesausbildungsförderungsgesetz BAUA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin BBIG Berufsbildungsgesetz BIBB Bundesinstitut für Berufsbildung BIBB Bundesinstitut für Berufsbildung BIBB Bundesministerium für Bildung International Federal Institute for Vocational Education and Training BMBF Bundesministerium für Bildung International Education and Training CVET Weiterbildung CVET Weiterbildung CVET Weiterbildung CVET Weiterbildung CVTS4 Erhebung zur beruflichen Weiterbildung Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V. EQF Europäischer Qualifikationsrahmen HWO Craftssordnung Institut für Arbeitsmarkt- und Berufsforschung Integrierte Ausbildungsberichterstattung Integrierte Ausbildungsberichterstattung Integrated training Assistance Act Federal Institute for Occupational Federal Institute for Vocational Federal Institute for Vocational Federal Institute for Vocational Federal Institute for Vocational Federal Institute for Education and training Federal Ministry of Education and Research Continuing vocational education and training Continuing Vocational Training Survey German Institute for Adult Education – Leibniz Centre for Lifelong Learning European Qualifications Framework Crafts and Trades Regulation Code Institute for Employment Research Integrated training reporting International Standard Classification of Education SGB II (Wissenschaftsdaten- bank) Grundsicherung für Arbeitssuchende Basic income support for job-seekers SGB III (Wissenschaftsdaten- bank) UN-Behindertenrechtskonvention UN-Convention on the Rights of Persons with Disabilities	AFBG	$Aufstiegs fortbildungs f\"orderungsgesetz$	Upgrading Training Assistance Act
BAUA  Bundesanstalt für Arbeitsschutz und Arbeitsmedizin  BBIG  Berufsbildungsgesetz  Vocational Training Act  Federal Institute for Occupational Safety and Health  Vocational Training Act  Federal Institute for Vocational Education and Training  BBIBB  Bundesinstitut für Berufsbildung  BBIBF  Bundesministerium für Bildung und Forschung  CVET  Weiterbildung  CVTS4  Erhebung zur beruflichen Weiterbildung  Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V.  EQF  Europäischer Qualifikationsrahmen  EQF  Europäischer Qualifikationsrahmen  European Qualifications Framework  Crafts and Trades Regulation Code  Institut für Arbeitsmarkt- und Berufsforschung  Institut für Arbeitsmarkt- und Berufsforschung  Integrated training reporting  Integrated training reporting  International Standard Classification of Education  SGB II  (Wissenschaftsdatenbank)  SGB III  (Wissenschaftsdatenbank)  SGB III  (Wissenschaftsdatenbank)  UN-Behindertenrechtskonvention  UN Convention on the Rights of Persons with Disabilities	BA	Bundesagentur für Arbeit	Federal Employment Agency
BBIG Berufsbildungsgesetz Vocational Training Act BIBB Bundesinstitut für Berufsbildung Federal Institute for Vocational Education and Training BMBF Bundesministerium für Bildung und Forschung Federal Ministry of Education and Research CVET Weiterbildung Continuing vocational education and Research CVTS4 Erhebung zur beruflichen Weiterbildung Continuing Vocational Training Survey Deutsches Institut für Erwachsenenbildung — Leibniz-Zentrum für Lebenslanges Lernen e. V. EGF Europäischer Qualifikationsrahmen European Qualifications Framework HWO Craftssordnung Crafts and Trades Regulation Code IAB Institut für Arbeitsmarkt- und Berufsforschung Integrated training reporting ISCED Integrierte Ausbildungsberichterstattung International Standard Classification of Education SGB II (Wissenschaftsdatenbank) SGB III (Wissenschaftsdatenbank) UN-Behindertenrechtskonvention UN Convention on the Rights of Persons with Disabilities	BAföG	$Bundes aus bildungs f\"{o}rder ungsgesetz$	Federal Training Assistance Act
BIBB Bundesinstitut für Berufsbildung Education and Training BMBF Bundesministerium für Bildung und Forschung Federal Ministry of Education and Research CVET Weiterbildung Continuing vocational education and training CVTS4 Erhebung zur beruflichen Weiterbildung Continuing Vocational education and training CVTS4 Erhebung zur beruflichen Weiterbildung Continuing Vocational Training Survey DIE Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V. EQF Europäischer Qualifikationsrahmen European Qualifications Framework HWO Craftssordnung Crafts and Trades Regulation Code IAB Institut für Arbeitsmarkt- und Berufsforschung Integrierte Ausbildungsberichterstattung INCED Integrierte Ausbildungsberichterstattung INCED Grundsicherung für Arbeitssuchende Basic income support for job-seekers bank) SGB II (Wissenschaftsdatenbank) Arbeitsförderung bank) UN-Behindertenrechtskonvention UN Convention on the Rights of Persons with Disabilities	BAuA		
BMBF Bundesinstitut für Berulsbildung Education and Training BMBF Bundesministerium für Bildung und Forschung Federal Ministry of Education and Research  CVET Weiterbildung Continuing vocational education and training  CVTS4 Erhebung zur beruflichen Weiterbildung Continuing Vocational Training Survey bildung Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V. German Institute for Adult Education – Leibniz Centre for Lifelong Learning EQF  Europäischer Qualifikationsrahmen European Qualifications Framework  HWO Craftssordnung Crafts and Trades Regulation Code Institut für Arbeitsmarkt- und Berufsforschung Institute for Employment Research  iABE Integrierte Ausbildungsberichterstattung Integrated training reporting  ISCED Integrated training reporting International Standard Classification of Education  SGB II  (Wissenschaftsdatenbank) Grundsicherung für Arbeitssuchende Basic income support for job-seekers  SGB III  (Wissenschaftsdatenbank) UN-Behindertenrechtskonvention UN Convention on the Rights of Persons with Disabilities	BBiG	Berufsbildungsgesetz	Vocational Training Act
CVET Weiterbildung and Research  CVET Weiterbildung Continuing vocational education and training  CVTS4 Erhebung zur beruflichen Weiterbildung  Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V.  EQF Europäischer Qualifikationsrahmen European Qualifications Framework  HWO Craftssordnung Crafts and Trades Regulation Code  IAB Institut für Arbeitsmarkt- und Berufsforschung Integrierte Ausbildungsberichterstattung  Integrierte Ausbildungsberichterstattung  International Standard Classification of Education  SGB II (Wissenschaftsdatenbank)  SGB III (Wissenschaftsdatenbank)  WN-Behindertenrechtskonvention UN Convention on the Rights of Persons with Disabilities	BIBB	Bundesinstitut für Berufsbildung	
CVTS4 Erhebung zur beruflichen Weiterbildung  Deutsches Institut für Erwachsenenbildung – Leibniz-Zentrum für Lebenslanges Lernen e. V.  EUF Europäischer Qualifikationsrahmen European Qualifications Framework  HwO Craftssordnung Crafts and Trades Regulation Code  IAB Institut für Arbeitsmarkt- und Berufsforschung Integrierte Ausbildungsberichterstattung Integrierte Ausbildungsberichterstattung  INTEGRAD I	BMBF	_	
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HwO Craftssordnung Crafts and Trades Regulation Code IAB Institut für Arbeitsmarkt- und Berufsforschung Institute for Employment Research IABE Integrierte Ausbildungsberichter- stattung Integrated training reporting ISCED International Standard Classification of Education  SGB II (Wissenschaftsdaten- bank) Basic income support for job-seekers  Employment promotion  Employment promotion  UN Convention on the Rights of Persons with Disabilities	DIE	bildung – Leibniz-Zentrum für	
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Berufsforschung  Integrierte Ausbildungsberichter- stattung  Integrated training reporting  International Standard Classification of Education  SGB II (Wissenschaftsdaten- bank)  SGB III (Wissenschaftsdaten- bank)  Arbeitsförderung  Employment Research  Integrated training reporting  International Standard Classification of Education  Basic income support for job-seekers  Employment promotion  UN Convention on the Rights of Persons with Disabilities	HwO	Craftssordnung	Crafts and Trades Regulation Code
Integrated training reporting  Integrated training reporting  International Standard Classification of Education  SGB II (Wissenschaftsdatenbank)  SGB III (Wissenschaftsdatenbank)  Arbeitsförderung  Employment promotion  UN Convention on the Rights of Persons with Disabilities	IAB		Institute for Employment Research
of Education  SGB II (Wissenschaftsdatenbank)  SGB III (Wissenschaftsdatenbank)  SGB III (Wissenschaftsdatenbank)  Arbeitsförderung  Employment promotion  UN Convention on the Rights of Persons with Disabilities	iABE		Integrated training reporting
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(Wissenschaftsdaten- bank)  UN-BRK  Arbeitsförderung  Employment promotion  UN Convention on the Rights of Persons with Disabilities	(Wissenschaftsdatenbank)	Grundsicherung für Arbeitssuchende	Basic income support for job-seekers
UN-Benindertenrechtskonvention with Disabilities	SGB III (Wissenschaftsdaten- bank)	Arbeitsförderung	Employment promotion
VET Berufsbildung Vocational Education and Training	UN-BRK	UN-Behindertenrechtskonvention	UN Convention on the Rights of Persons with Disabilities
	VET	Berufsbildung	Vocational Education and Training

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