

European Commission
Directorate-General for Economic and Financial Affairs
Economic Policy Committee

**Efficiency and effectiveness of public
expenditure
on tertiary education in the EU**

**ANNEX : COUNTRY FICHE
GERMANY**

**Joint Report by the Economic Policy Committee
(Quality of Public Finances)
and the Directorate-General for Economic and Financial Affairs**

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Brief characterization of the tertiary education system

1. Main features

The tertiary education system includes higher education institutions and other establishments that provide vocational qualifications for individuals who have completed upper secondary education and gained a qualification entitling them to enter higher education. A distinction is made between the following types of higher education institution:

- Universities (*Universitäten*), technical universities (*Technische Hochschulen / Technische Universitäten*), teacher-training colleges (*Pädagogische Hochschulen*), colleges of theology (*Theologische Hochschulen*)
- Colleges of music and fine arts (*Kunsthochschulen and Musikhochschulen*)
- Universities of applied sciences (*Fachhochschulen*)

Alongside the state-run higher education institutions named above, certain forms of higher education have developed to which access is restricted (e.g. armed forces colleges (*Hochschulen der Bundeswehr*) and colleges of public administration (*Verwaltungsfachhochschulen*)).

In some of Germany's *Länder*, the country's 16 federal states, individuals entitled to enter higher education have the option of attending a college of advanced vocational studies (*Berufsakademien / Duale Hochschulen*). Students here take classes at state-approved academies and are trained at participating enterprises. Their education is thus academic and practical at the same time. These establishments too fall within the scope of tertiary education.

Under the International Standard Classification of Education (ISCED), trade and technical schools (*Fachschulen*), Bavaria's specialised academies (*Fachakademien*) and the medical sector's two to three year training schools also fall under tertiary education. Trade and technical schools are vocational further education establishments. Entrants must usually have completed a relevant vocational qualification in a recognised occupation requiring an apprenticeship and work in that occupation.

Eurydice: *Organisation of the education system in Germany 2007/08* and Eurydice/KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany) 2009 *Das Bildungswesen in der Bundesrepublik Deutschland 2008* (education in Germany 2008), draft]

Principles of higher education in Germany

Germany's tradition of higher education is shaped by a number of principles that go back to the reform of universities in the early 19th Century, under the particular influence of Wilhelm

von Humboldt. These include the principle that institutions should be autonomous in their internal affairs, yet nonetheless funded by the state, as well as the freedom teaching and research and the unity of teaching and research.

[Eurydice/KMK 2008: *Das Bildungswesen in der Bundesrepublik Deutschland* (education in Germany) 2007]

Germany's higher education system consists overwhelmingly of state institutions for which the *Länder* are responsible. The Basic Law (the *Grundgesetz* – Germany's constitution) does not explicitly deal with the establishment of higher education institutions on a private basis. However, the right to do so can be derived from the general provision of the freedom of arts, sciences, research and teaching in Article 5 paragraph 3 of the Basic Law. The Federation's Framework Act for Higher Education (*Hochschulrahmengesetz*) and the higher education laws of the *Länder* set out minimum requirements that private establishments must fulfil to be recognised by the state as higher education institutions.

The *Länder* are solely responsible for deciding whether to recognise private establishments as higher education institutions. The Federation and *Länder* have agreed that the German Council of Science and Humanities (*Wissenschaftsrat*) will carry out the institutional accreditation of the private establishments within the scope of the recognition procedure. Institutional accreditation is a quality-assurance procedure, which is intended to clarify whether an establishment is in a position to provide courses of study that fall within the scope of higher education under the law. Part of the accreditation process involves verifying whether and to what extent minimum quality standards are met. The standards should be based on the requirements set out in the Framework Act for Higher Education and the higher education laws of the *Länder*, and should also take account of the specific characteristics of the establishment seeking recognition. To receive state accreditation from the *Land* in question, the establishment must show itself to be of an equal standard (even if not equal in nature) to state higher education institutions. Consequently, there are a series of individual points for which the private establishment must demonstrate that it achieves the level and service profile of a comparable state higher education institution and requires the same standards of work. The establishment must also ensure that it offers at least a certain minimum of co-determination to its members in matters of teaching and study. Part of the recognition process involves establishing the name of the higher education institution and how it will be organised, the planned courses of study and examinations, and how academic degrees will be awarded.

The number of state-recognised higher education institutions has risen continuously, as has the number of students. Excluding the so-called Verwaltungsfachhochschulen, there were a total of 381 higher education institutions in Germany in the winter semester of 2009/2010, with more than 2.1 million students in all. In 2008/2009, these included 129 state-accredited establishments run privately or by the church, the vast majority of which were small. For the winter semester of 2009/2010, the German Federal Statistical Office lists 105 universities, 6

higher education institutions (HEI) of pedagogy, 16 theological HEIs, 51 colleges of arts and music (some of which also have university status) and 203 universities of applied sciences.

Universities

Alongside the traditional universities, university status is also held by the technical universities, whose focus is on natural sciences and engineering. Colleges of theology, teacher training colleges and similar institutions offering individual courses only are considered to be of equal standing to universities.

What all of these higher education establishments share, as a rule, is the traditional right to award doctorates. Another particular feature of universities and equivalent establishments is academic research, particularly basic research, and the training of young researchers.

Colleges of music and fine arts

The colleges of music and fine arts offer courses in visual arts, design and performing arts, as well as in the areas of film, television and the media, and music subjects. To some extent, they also teach the corresponding theoretical disciplines (art theory, art history and teaching of art; music theory, music history and teaching of music; media studies, communication studies and, more recently, new media studies). Some higher education institutions teach the whole range of art-related subjects while others only cover individual areas.

Universities of applied sciences

Universities of applied sciences were introduced to Germany's higher education environment in 1970/1971 as a new type of institution. They have an independent educational mandate that is characterised by a practical approach to teaching. This usually involves semesters of work experience and professors who have worked in the relevant profession outside of the university environment as well as having gained their academic qualifications.

Almost half of the universities of applied sciences are not run by the state. These non-state-run establishments are largely subject to the same legal provisions as state universities of applied sciences. Their size, student numbers and the courses they offer can differ considerably. Partly thanks to these differences, some individual universities of applied sciences have established reputations in their subjects and regions.

A special niche is occupied by the colleges of public administration, which train public servants for a higher-intermediate-level career in the civil service. These are run either by the Federal Government or a *Land*. Their students have the status of probationary civil servants. There were 29 of these institutions in the winter semester of 2009/2010. The Federal Ministry of Education and Research has published an overview of universities of applied sciences in German under the title of *Die Fachhochschulen in Deutschland*.

Institutions outside of the sphere of higher education – colleges of advanced vocational studies and trade and technical schools

Colleges of advanced vocational studies are tertiary education institutions that offer an education encompassing both theoretical and practical aspects. Following the logic of this dual system, students receive both classroom teaching and workplace training. The participating businesses bear the costs of the workplace training. They also pay the students an allowance, both during the training and during the theoretical stages of the programme that take place at the academy. The colleges of advanced vocational studies were first established in Baden-Württemberg in 1974 as a pilot project. They still exist in several *Länder* as state-run or state-accredited institutions. Some of the regulations on colleges of advanced vocational studies vary between the *Länder*. While the colleges of advanced vocational studies in Baden-Württemberg, Saxony and Thuringia are run by the state, the laws on such colleges in Hesse, Lower Saxony, Saarland and Schleswig-Holstein provide exclusively for non-state-run colleges of advanced vocational studies, which require accreditation from the responsible ministry. The equivalent law in Hamburg allows colleges of advanced vocational studies to be established on a state-run or non-state-run basis. Those that are not run by the state do not receive funding from their *Land*, unlike their state-run counterparts.

Dual programmes of study (that is, work-study programmes) are also on offer at many universities of applied sciences.

Trade and technical schools are vocational further education establishments in the tertiary sphere, which usually require entrants to have completed a relevant vocational qualification in a recognised occupation requiring an apprenticeship and to work in that occupation.

Medical sector schools provide training for careers in healthcare, such as nursing or physiotherapy. Many of these schools are organisationally and indeed physically attached to hospitals. The theoretical and practical training takes place at the hospitals.

1/ TEACHING	Germany										
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Academic staff per 1000 inhabitants relative to the average (head counts /	2.91	2.92	2.93	2.92	2.97	3.05	3.11	3.00	3.00	3.11	:

population)												
Number of students per 1000 inhabitants	24.2	24	23.6	23.9	24.8	25.7	26.7	25.2	25.3	25.1	:	
Number of students (graduate and post-graduate) per 1000 inhabitants	:	:	:	:	:	:	:	:	:	:	:	
<i>From public institutions</i>	:	:	:	:	:	:	:	:	:	:	:	
<i>From private government-dependent institutions</i>	:	:	:	:	:	:	:	:	:	:	:	
<i>From private independent institutions</i>	:	:	:	:	:	:	:	:	:	:	:	
Ratio of students per academic staff (students FTE / Academic staff FTE)	12.41	12.33	12.06	12.25	12.53	12.6	12.95	12.52	12.6	12.24	:	
Number of graduates per 1000 inhabitants (graduates total (not just public) / population)	3.93	3.84	3.68	3.61	3.57	3.69	3.87	4.17	4.35	4.58	:	
Ratio of graduates per 1000 academic staff (graduates total (not just public) / academic staff FTE)	2.04	1.99	1.90	1.86	1.82	1.83	1.90	2.12	2.22	2.28	:	
Standardized recruiter view indicator (graduates' employability as perceived by recruiters)	:	:	:	:	:	:	:	1	:	:	:	
Standardized peer view country indicator (quality perceptions among peers)	:	:	:	:	:	:	:	1	:	:	:	
PISA scores	:	:	487	:	:	:	:	:	:	:	:	
Average total time spent by students in order to obtain a BA degree	:	:	:	:	:	:	:	:	:	:	:	
Average total time spent by students in order to obtain a MA degree	:	:	:	:	:	:	:	:	:	:	:	
Remuneration of a tenured university professor with 10 year seniority	:	:	:	:	:	:	:	:	:	:	:	

2/ RESEARCH

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Publications per 1000 inhabitants	0.52	0.55	0.54	0.55	0.55	0.56	0.57	0.59	:	:	:
	1998	1999	2000	2001	2002	2003					
	2002	2003	2004	2005	2006	2007					
Quality of research (position in the ISI citation index)	4.27	4.49	4.51	4.86	:	:					
% of research done in cooperation with industry	:	:	:	:	:	:					

3/ EXPLANATORY FACTORS FOUND RELEVANT FOR EFFICIENCY

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Main categories of composite indicator											
Funding Rules Indicator	:	:	:	:	:	:	:	:	:	5.2	:
Evaluation Indicator	:	:	:	:	:	:	:	:	:	6.9	:
Staff Policy Indicator	:	:	:	:	:	:	:	:	:	7.5	:

4/ EXPENDITURE

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total public expenditure on tertiary education institutions as a percentage of GDP	m	m	1.06	m	m	m	m	1.09	1.07	m	:
Total expenditure per student (€)	:	:	:	:	:	:	:	:	:	:	:
Private expenditure on tertiary education institutions as a percentage of GDP	:	:	:	:	:	:	:	:	:	:	:
Total expenditure on education as a	m	m	4.87	m	m	m	m	4.89	4.78	m	:

percentage of GDP											
Private expenditure on education as a percentage of GDP	m	m	0.70	m	m	m	m	0.72	0.71	m	:
Funds from non-public sources as % of total income (fees, earned income, investment, other)	:	:	:	:	:	:	:	:	:	:	:
Tuition fees as average of the cost of tuition	:	:	:	:	:	:	:	:	:	:	:
Percentage of funds received by private government-dependent institutions from public sources	:	:	:	:	:	:	:	:	:	:	:
Total public expenditure on grants, loans, and other programmes to cover education and/or maintenance of students (universal programmes / by categories such as merit or socio-economic status)	:	:	:	:	:	:	:	:	:	:	:

Source: Eurostat, OECD, UOE and Member States.

2. Structure of institutions and funding arrangements

By far the majority of higher education institutions in Germany are state-run. Private (state-accredited) and church (state-accredited) higher education institutions exist alongside these. Of the total of 2,119,500 students enrolled in the winter semester of 2009/2010, only 96,100 were enrolled at state-accredited higher education institutions that are privately run. This is a share of 4.5% (figures from the Germans Federal Statistical Office, preliminary results for 2009/2010). So because the proportion of students attending private and church-run higher education establishments is comparatively small, we will not go into further detail, beyond stating the type of establishment (university, university of applied sciences etc.).

General objectives – universities

The Framework Act for Higher Education describes the purpose of studies at a higher education institution as follows:

The purpose of teaching and study is to prepare students for a field of professional activity and to impart to them the requisite specialized knowledge, skills and methods in a way appropriate to each course so as to enable them to perform scientific or artistic work and to act responsibly in a free, democratic and social state governed by the rule of law (section 7 of the Framework Act for Higher Education).

Following the traditional principle of the unity of teaching and research, the law thus sets out the task of qualifying students for professional activity in a manner that is directly linked to scientific research and artistic development. Although the unity of research and teaching applies to all higher education institutions, it has been traditional for different types of institution to assume different tasks. Studies at university, in particular, are very tightly interwoven with basic research and theoretical knowledge.

General objectives – colleges of music and fine arts

Colleges of music and fine arts pave the way to careers in the arts and art teaching. Teaching and studies are closely connected to these colleges' other tasks, namely serving art through the development of artistic forms and means of expression and through the free practice of art.

General objectives – universities of applied sciences

Course structures and the organisation of teaching and studies at universities of applied sciences are characterised by their emphasis on application and their focus on the requirements of professions. Particular importance is attached to the work-experience semesters spent outside the establishment. In terms of both personnel and content, the teaching at universities of applied sciences is related to the applied research and development projects that are typical for this form of higher education.

General objectives – institutions outside of the sphere of higher education – colleges of advanced vocational studies and trade and technical schools

Education at state-run or state-accredited colleges of advanced vocational studies involves academic courses at state-approved academies as well as practical on-the-job training at enterprises.

Further vocational education at trade and technical schools aims to equip specialist workers, who generally have experience working in their field, to take on leadership roles in businesses, enterprises or administrations, or to carry out tasks bearing responsibility on an independent basis.

Funding tertiary-level institutions

State higher education institutions are run by the *Länder*. Because of this, the *Länder* provide the vast majority of their funding and largely decide on the allocation of resources.

[Eurydice: *Organisation of the education system in Germany 2007/08*]

Working with businesses

Tertiary-level education institutions work together with businesses in a variety of ways. This occurs with a particular view to improving graduate employability, a goal of the Bologna process. The focus is largely on the structure of curricula, the supply of work-experience placements and cooperation on final dissertations. The aim is to provide future employers with the information they lack about degrees under the two-cycle system, to discuss course content and necessary skills with potential employers, and to prepare graduates for the option of self-employment.

3. Governance and regulatory framework

Presentation of significant policy measures, e.g. as regards funding rules and control over distribution of resources, staff policy, study programmes, curriculum content, restrictions to entry into academic fields, student choice, definition of research priorities, creation of new institutions (both public and private), evaluation and accountability.

Specific legal framework

The legal basis for higher education in Germany is found in the Federation's Framework Act for Higher Education as well as the *Länder* laws on higher education institutions, colleges of fine arts and universities of applied sciences.

In accordance with its objective, the Framework Act on Higher Education describes the general aims of higher education institutions as well as the general principles for the organisation of higher education, for teaching and research, for admissions, for membership and participation and for higher-education staffing. The higher education laws of the *Länder* govern the details of these matters within the framework provided. This legislation applies in principle to all higher education institutions including those that are run privately. It ensures that higher education, with its more than 380 establishments (excluding Verwaltungsfachhochschulen), is a coherent system. The *Länder* laws may allow exceptions for privately-run higher education establishments.

In the course of the reform to modernise the Germany's federal system, changes were made in 2006 to the way the Federation and *Länder* interact when legislating on education. One of the changes was the abolition of the Federal Government's right to pass framework legislation for higher education. The Federal Government has initiated legislation to repeal the Framework Act for Higher Education. In the context of concurrent legislative powers (Article 72 of the Basic Law) the Federation remains responsible for admissions to higher education and degree qualifications. However, the *Länder* have been granted the power to pass laws of their own derogating from the relevant Federal-Government Acts.

There have also been changes to the joint tasks (*Gemeinschaftsaufgaben*) of the Federation and *Länder* (under Article 91b of the Basic Law). The Federation and *Länder* may mutually agree to cooperate in cases of supra-regional importance in the promotion of:

- Research facilities and projects outside of institutions of higher education
- Scientific projects and research at institutions of higher education (agreements here require the consent of all of the *Länder*)
- Research buildings at higher education institutions including large-scale equipment

Up to now, work to extend universities was influenced by the provision of the Basic Law stating that the building of universities was a joint task of the Federation and the *Länder*. Until the end of 2006, this constitutional provision was fulfilled by the University Construction Act (*Hochschulbauförderungsgesetz*) of 1969. This joint task has ceased to exist as a result of the reform of the federal system. The *Länder* are now solely responsible for constructing universities. As compensation for the extra burden, the Federation gives them a proportion of the resources it previously allocated to university construction. The Federation will use another share of the resources previously allocated to university construction for the new joint task of promoting research buildings at higher education institutions including large-scale equipment. The existing joint task of promoting research projects at higher education institutions remains largely unchanged. A new addition is the joint task of promoting scientific projects at higher education institutions. This creates the opportunity for Federation and *Länder* to work together to raise the number of higher education places. A Federation-*Länder* administrative agreement of September 2007 governs the content and organisation of the new joint task. Its central point is the establishment of a joint science conference (*Gemeinsame Wissenschaftskonferenz*).

Rules on training at colleges of advanced vocational studies are set out in the laws of the individual *Länder* on these institutions, as well as in the training and examination regulations of the ministry responsible for science in each *Land*.

Further vocational education at trade and technical schools is mainly regulated by the training and examination regulations of the individual *Länder* on the basis of education laws. In accordance with the Vocational Training Act (*Berufsbildungsgesetz*), there are provisions of federal law that apply to training in some medical professions at medical sector schools. However, the *Länder* health or education ministries are responsible for the regulations on training and examinations for most medical-sector professions.

[Eurydice: *Organisation of the education system in Germany 2007/08* and Eurydice/KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany) 2009 *Das Bildungswesen in der Bundesrepublik Deutschland 2008* (the education system in Germany 2008), draft]

Deregulation and autonomy

Since the early 1990s and partly against the background of insufficient financial and human resources at higher education institutions, the *Länder* and Federation have increased their efforts to modernise and internationalise higher education in Germany. The reforms aim to allow institutions to set themselves apart. The mechanism for this is deregulating, increasing institutions' autonomy, focussing on performance and creating incentives for achievement. The international competitiveness of Germany's higher education institutions should improve as a result.

Course structures and the internal organisation of higher education institutions have been reformed to achieve these goals. Where the state used to assume control at a micro level, higher education institutions are now increasingly taking responsibility and acting independently. Deregulation has given the institutions much more room to make their own organisational and staffing decisions. The higher education institutions are demonstrating their ability to compete, both nationally and internationally. The state and the higher education institutions produce joint service agreements giving performance targets. These do not, however, stipulate specific measures. The agreements are also used as a tool for the institution's internal management. One example of higher education institutions' increased autonomy is their right to select their own students.

[*Bildungsbericht* (national report on education) 2008]

4. System's strengths and weaknesses

The Council of Science and Humanities has provided some pointers in its recommendations for improving the quality of teaching and studies (*Empfehlungen zur Qualitätsverbesserung von Lehre und Studium*, Berlin, 4 July 2008, p. 93-102; available in German for download at <http://www.wissenschaftsrat.de/texte/8639-08.pdf>):

“In the assessment of the Council of Science and Humanities, Germany has a strong higher education system and some excellent options for study. There is a strong research base which allows a high degree of proximity between training and research in international comparison. Spending on higher education constitutes necessary investment in Germany's social, cultural and economic development. The main reason behind the Bologna Process and the related reform of study programmes is the aim of systematically improving courses of study in Germany. To improve the quality of teaching and research noticeably without impinging on higher education institutions' ability to conduct research, while simultaneously increasing student numbers, resources must be used effectively and efficiently. Furthermore, higher education institutions need to establish a 'culture of teaching' that recognises and commends achievement in teaching. Teaching staff should promote independent learning and structure courses in a manner that fosters the acquisition of both specialist and transferable skills. In order to improve teaching quality, higher education institutions require suitable and internationally competitive staff and equipment. The Council of Science and Humanities and the German Rectors' Conference (*Hochschulrektorenkonferenz*) estimate that further funding of around €1bn a year is needed. The Council of Science and Humanities also recommends employing additional staff whose primary activity is teaching, improving tutoring, establishing a systematic and integrated internal quality management programme and developing a comprehensive culture of accountability and transparency as regards performance in the field of studies and teaching. Furthermore, it recommends further work to make teaching and studying conditions more conducive to learning.

For more information about the short and long-term challenges in higher education, please refer to the national report for 2007 to 2009 on the realisation of the objectives of the Bologna Process (*Nationaler Bericht 2007 bis 2009 zur Realisierung der Ziele des Bologna-Prozesses*), issued by the Federation and *Länder*. Some main points worthy of particular attention here are the increased application of the two-cycle study system, quality-assurance requirements, promotion of mobility and employability, consideration of the social dimension and the promotion of life-long learning.

When it comes to the issue of quality control for private higher education institutions, we refer to the institutional accreditation by the Council of Science and Humanities.”

Explanatory factors for efficiency

1. Staff Policy

1.1. Hiring/Firing

Teaching staff at higher education institutions and colleges of advanced vocational studies

Higher education institutions have the following main categories of staff who are engaged in scientific or artistic work as their core occupation:

- Higher-education teachers (Hochschullehrer)
- Junior scientific and artistic staff (wissenschaftliche und künstlerische Mitarbeiterinnen und Mitarbeiter)
- Teaching staff performing special duties (Lehrkräfte für besondere Aufgaben)

The higher-education teachers (professors and junior professors) work independently to carry out the tasks assigned to their particular higher education institution in the fields of science and art, research, teaching and further training in their subjects, depending on the detailed structure of their employment.

Junior scientific and artistic staff are responsible for providing academic services. These include teaching specialised knowledge and practical skills to students, as well as instructing them in the application of scientific and academic methods. Junior scientific and artistic staff may also be given responsibility to carry out research and teaching tasks independently where this is particularly justified.

Tasks that mainly require teaching of practical skills and knowledge may be assigned to teaching staff performing special duties provided this is their primary occupation.

The teaching personnel providing training at the academies attached to colleges of advanced vocational education do so as either their primary or secondary occupation. In accordance with the Länder laws on colleges of advanced vocational studies, staff working there as their secondary occupation should be recruited from higher education, schools, businesses, liberal professions, social welfare institutions and the administration.

Conditions for hiring

The main requirements for appointment as a professor at a higher education institution are:

- Hold a degree
- Be suited to teaching
- Be specially qualified for academic work, as usually demonstrated by the quality of a doctoral thesis, or specially qualified for artistic work
- In addition, the following may apply, depending on the requirements of the position:
- Additional academic or artistic achievements
- Exceptional achievements in the application or development of scientific knowledge and methods over the course of a number of years working in a profession
- The main requirements for appointment as a junior professor are as follows:
- Hold a degree
- Be suited to teaching
- Be particularly qualified for academic work, as generally demonstrated by a doctoral thesis of outstanding quality

Where candidates have worked as junior scientific staff before or after their doctoral degree, the period spent in such employment and working on the degree should not exceed a combined total of six years, or nine years in the field of medicine.

In principle, to be hired as a member of junior scientific staff, an individual needs to hold an academic degree from a higher education institution.

Teaching staff performing special duties are not obliged to fulfil the recruitment requirements for higher education teachers.

Staff members whose primary occupation is teaching at the state-run colleges of advanced vocational studies in Baden-Württemberg, Thuringia and Saxony are subject to the same requirements in terms of qualifications as professors at universities of applied sciences. At least 40% of teaching is to be conducted by staff members who teach as their primary occupation. Classes that serve almost entirely to convey practical skills and knowledge may be taught by teaching staff performing special duties.

The following provisions apply to the **professional status** of higher education teachers (professors and junior professors):

As a rule, professors are appointed as temporary or permanent civil servants by the Land ministry responsible for the scientific and academic sphere. However, they may alternatively be hired as non-tenured employees.

Junior professors are expected to pass through two phases in their service within the space of six years or less. The first phase can last anything up to six years, depending on the regulations in the Land in question. If the junior professor applies to be a higher-education teacher, the working relationship is extended into the second phase. The working relationship may otherwise be extended for up to one year. Junior professors are either appointed probationary civil servants or hired as non-tenured employees.

Junior scientific and artistic staff may also be hired temporarily or permanently, and as civil servants or non-tenured employees.

The Act on fixed-term contracts in science (Wissenschaftszeitvertragsgesetz) of April 2007 gave higher education institutions the option of employing sciences and arts staff, excluding higher-education teachers, for periods limited to the length of a project financed primarily by third-party funding.

The reform of the federal system that came into force in 2006 transferred **responsibility** for Land civil servants' (higher-education teachers') careers, remuneration and benefits to the **Länder**. Since then, most Länder have enacted legislation. Provisions on teaching staff's salaries and pensions are found in the Länder Acts on civil servants' remuneration and on their benefits. A few provisions are still found in the Federation's Acts on civil service pay and benefits. The reform of the federal system gave the Federation the power to standardise the rights and duties accompanying the status of local or Land civil servants. This also led the Civil Servants Framework Act (Beamtenrechtsrahmengesetz) to be replaced in 2008 by the Act on the Status of Civil Servants (Beamtenstatusgesetz), which entered into force in April 2009.

The Federation and Länder may issue ordinances to create rules on levels of performance and performance-related pay for staff under their responsibility. Rules on specific parts of the employment or service relationship of teaching staff, as well as matters relating to their careers (hiring, transfer, secondment, promotion) are issued at Länder level by the ministries of education and cultural affairs in the form of ordinances or administrative provisions. A summary of the Länder regulations, in German, is available from the website of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (Kultusministerkonferenz), at www.kmk.org.

1.2. Wages

Salaries in higher education

As part of the general reform of employment law in higher education, which aimed to improve the performance, innovativeness and international competitiveness of Germany's academic and research system, the Act to Reform Professors' Pay (*Gesetz zur Reform der Professorenbesoldung*) was passed in 2002. This law introduced a system of remuneration that was more closely performance-oriented and promoted competitiveness.

In the course of the reform of the federal system, which took effect in 2006, responsibility for the remuneration of Land civil servants, a category which includes most teaching staff, was transferred to the *Länder*. Since then, most *Länder* have enacted legislation. The provisions on higher education teaching staff's salaries and pensions are found in the *Länder* Acts on civil servants' remuneration and on their benefits. A few provisions are still found in the Federation's Acts on civil service pay and benefits.

Under these provisions, professors receive a basic salary and are also paid on a performance-related basis. The pay grades W 2 and W 3 apply to professors at every higher education institution. The pay grade W 1 accompanies the new status of junior professor. All three pay grades provide fixed basic salaries. These vary from *Land* to *Land* within the following ranges:

Pay grade W 1	
Junior professor	between €3,405.34 and €3,507.50
Pay grade W 2	
Professor	between €3,890.03 and €4,006.73
Pay grade W 3	
Professor	between €4,723.61 and €4,865.32

Because of the economic and financial situation in Germany's eastern *Länder*, the fixed basic salary for pay grades W 1 to W 3 there stands at 92.5% of the amount in the western *Länder*.

The basic salary of professors in pay grades W 2 and W 3 is not the same as their starting salary. Their salary consists of the basic salary and a variable component agreed with the higher education institution. The variable component may be awarded on the basis of negotiations to appoint or retain a professor, for particular achievements in research, teaching, art, further training and fostering young talent, and for performing functions related to self-governance at an institution. Professorial posts are allocated to the pay grades W 2 and W 3 in accordance with the laws of the *Länder*. Junior professors who have proved themselves as higher-education teachers receive a supplement of €260 a month, on which no pension contribution is payable, starting when their status as probationary civil servants is first extended.

Those already working as professors may decide to change over to the new system or remain in the old system of remuneration.

2. Output flexibility

2.1. Course content and exams

Higher education institutions have the autonomy to decide on course structure and to choose methods of teaching course content. They also play the central role in quality assurance. The system of quality control in Germany is particularly based on the European Standards and Guidelines for Quality Assurance (ESG).

2.2. Offer of short studies and other diversifies studies

Germany is a member of the Bologna Process and is pursuing the objective of moving its programmes of study over to the two-cycle structure. The National Qualification Framework (*Nationale Qualifikationsrahmen*) for higher education qualifications provides an overview of the courses of study available in Germany and their duration. Germany's National Report on the Bologna Process for the period from 2007 to 2009 gives details of how the introduction of these programmes of study is progressing. By the winter semester of 2008/2009, 75% of all courses of study had moved over to the two-cycle structure.

Subjects and specialisation at universities

The subjects on offer at universities and equivalent higher education institutions generally include languages and cultural studies, sport, law, economics and business, social sciences, mathematics, natural sciences, medicine, agriculture, forestry, nutritional science and engineering. Within these subject groupings, a total of more than 6,000 undergraduate courses are on offer, varying from one higher education institution to another. An overview of first degree courses comes out annually in German in the informational publication entitled *Studien- und Berufswahl* (study and career choices). This can be ordered at www.studienwahl.de. The German Rectors' Conference also publishes a summary of courses on offer at German universities each semester. This is available as an online database at www.higher-education-compass.de.

International courses, which have a special focus on other countries, are also offered in the subjects mentioned above. Most of these courses at universities and equivalent higher education institutions focus on languages and cultural studies, followed by law, economics, social sciences and engineering.

Standard duration of courses in the first and second cycle

Every course has a standard duration, which is set out in its examination regulations. It determines how much time students have to complete their studies by passing the examination for their degree. The standard duration for one of the traditional *Diplom*, *Magister* or *Staatsexamen* degrees was generally eight to ten semesters. A degree in medicine has a standard duration of six years and three months. In reality, however, students require an average of one or two years longer than the standard duration. This means that many only pass their degree after studying for five years or more. The maximum combined standard duration for a bachelor's degree followed by a master's degree is five years. This consists of at least three and no more than four years for the bachelor's degree and at least one but no more than two years for the master's degree. Universities usually have a standard duration of six semesters for bachelor's courses and four for master's programmes. Initial experience of the new course structures has shown that bachelor's students take an average of just half a semester longer than the mean standard duration. This means that the actual time taken to complete courses can be expected to fall in future.

Graduate courses offering specialised and in-depth studies

Besides master's programmes, there are other advanced courses (postgraduate, supplementary and complementary study programmes) that build on undergraduate degrees. These follow on from the first degree and provide either a further vocational qualification, or more in-depth specialisation, or are taken at the same time as another degree. Unlike courses in continuing education, there is no gap in time between the undergraduate degree and these courses. The German Rectors' Conference website, at www.higher-education-compass.de, provides an overview of such graduate courses.

Doctoral degrees to produce qualified young academics

Particularly well-qualified graduates may also be given the option of taking a doctorate. There are currently more than 80,000 doctoral students in Germany. Around 20,000 complete their doctorate every year. To support young academics, almost 270 graduate colleges financed by the research funding organisation DFG (*Deutsche Forschungsgemeinschaft*) have been set up at higher education institutions since 1990. These provide a systematically organised programme of studies within which students can work on their doctorates. There has also been an increase in the provision of other structured, cooperative forms of training for doctoral students since 1998. These include international doctoral programmes, International Max Planck Research Schools and graduate schools, including those sponsored as part of the German Government's excellence initiative.

The subjects in which a doctoral degree can be taken at universities and equivalent higher education institutions are also listed online at www.higher-education-compass.de.

Subjects and specialisation at colleges of music and fine arts

The courses themselves are considerably diversified and vary from college to college. Most of them fit into the following categories:

- Music, involving courses such as training as a soloist or orchestral musician with various instruments, as a singer, conductor, composer or church musician, as a music teacher at schools providing general education or for technical professions related to music (such as sound engineering)
- Visual arts, including courses such as art, design and photography
- Performing arts, including courses such as drama, opera, musical theatre, dance, directing and film-making
- Applied arts including courses in architecture, design or the media
- Art education, history of art and art theory as well as courses in teaching art
- The media including courses in film, television, media studies, media art, animation and media management

An exception for colleges of music and fine arts is that they may offer two-cycle bachelor's and master's courses with a total standard duration of six years in their core artistic subjects.

Subjects and specialisation at universities of applied sciences

Universities of applied sciences offer courses in the following areas in particular:

- Engineering
- Business and economics / business and economic law
- Social work
- Public administration, administration of justice
- Information technology
- Design
- Information and communication studies
- Healthcare

International courses, which have a special focus on other countries, are also offered in the areas of study mentioned above. The field of law, economics and social sciences accounts for most international courses at universities of applied sciences, followed by engineering. Many universities of applied sciences also offer what are known as dual courses, combining academic content with practical experience.

Standard duration of courses in the first and second cycle

Every course has a standard duration, which is set out in its examination regulations. This determines how much time students have to complete their studies by passing the degree examination. For courses leading to a *Diplom* degree at universities of applied sciences, the standard duration is eight semesters, including work-experience semesters. In reality, however, students take an average of one to two semesters longer than this. The standard duration for bachelor's courses at universities of applied sciences is generally six or seven semesters including work-experience semesters. For master's courses, it is usually three to four semesters. Initial experience of the new course structures has shown that bachelor's students take an average of just half a semester longer than the mean standard duration.

Graduate courses offering specialised and in-depth studies

Besides master's programmes, there are other advanced courses (postgraduate, supplementary and complementary study programmes) that build on undergraduate degrees. These follow on from the first degree and provide either a further vocational qualification, or more in-depth specialisation, or are taken at the same time as another degree. Unlike courses for continuing education, there is usually no time gap between these formal special graduate courses and the undergraduate degree. An overview of the range of graduate courses available at German higher education institutions is available online at www.higher-education-compass.de.

Subjects and specialisation at institutions outside of the sphere of higher education – colleges of advanced vocational studies and trade and technical schools

Courses offered at colleges of advanced vocational studies include, in particular, business and economics, technology and social work. The length of study at a college of advanced vocational studies is set out in the laws of its *Land* and usually fixed at three years. In the case of state-run colleges of advanced vocational studies, the *Land* ministry responsible for the relevant field determines the scope of studies for each semester by issuing study and examination programmes for each course. Courses at colleges of advanced vocational education that lead to a bachelor's degree must be accredited and last at least three years.

Trade and technical schools offer two-year courses in agriculture, design, technology, business and economics, and social work, with more than 160 specialisations. The final examinations are run by the state. Each wider area of study is divided into specialist subjects. The subjects most commonly studied include electrical engineering, mechanical engineering, business management, construction engineering and chemical engineering. There are also other two-year trade and technical schools for home economics and for curative education, as well as one-year trade and technical schools (e.g. for training as a state-certified farm manager). Trade and technical schools for social education provide two-to-three-year courses to train state-certified staff for the socio-educational field, such as nursery and kindergarten teachers and youth workers.

2.3. Student choice

Curricula in tertiary education are structured in a manner that leads up to the final qualification. They include classes that are compulsory for all, classes that must be taken as one of a number of options, and purely voluntary classes. It is possible to switch courses.

Universities

Students at higher education institutions are not grouped by semester but categorised by the lectures, seminars etc. they attend, which belong to either the first or the second stage of the course. Students who fail a class are only obliged to retake that one class and can progress in the rest of the course alongside their colleagues in the same semester. In modular courses, the module that has been failed must be retaken. In practice, however, failing classes tends to lead to students studying for longer overall. The study regulations and examination regulations set out the requirements that must be met to progress to the next stage of a course. Intermediate and final examinations may generally be retaken once. This rule has been modified in some cases with the aim of shortening the actual period of study. The modified rule allows a failed first attempt at an examination within the standard duration of study to go uncounted.

In principle, it is also possible to switch courses at a more advanced stage. Where courses with entry restrictions are involved, however, a student must gain a place on such a course before he or she can choose to change over to it. Time spent, work completed and examinations taken as part of the old course are counted towards the new course to the extent that they are determined to be equivalent.

Colleges of music and fine arts

Students who do not pass a class at the first attempt are required to retake that class only, rather than the entire semester. Intermediate and final examinations may generally be retaken once. This rule has been modified in some cases with the aim of shortening the actual period of study. The modified rule allows a failed first attempt at an examination within the standard duration of study to go uncounted.

Universities of applied sciences

Students who do not pass a class required for a particular course at the first attempt have to retake that class only rather than the entire semester. In modular courses, the module that has been failed must be retaken. The study regulations and examination regulations set out the requirements that must be met to progress to the next stage of a course. Intermediate and final examinations may generally be retaken once. This rule has been modified in some cases with the aim of shortening the actual period of study. The modified rule allows a failed first attempt at an examination within the standard duration of study to go uncounted.

Institutions outside of the sphere of higher education – colleges of advanced vocational studies and trade and technical schools

As a rule, candidates seeking admission to final examinations at colleges of advanced vocational studies must hold certificates demonstrating that they have successfully taken the classes required, have passed the intermediate examination that rounds off the first stage of studies and have completed their training at the participating company as planned. Failed tests and examinations may be retaken once or twice, while the dissertation may be attempted only twice. *Länder* provisions determine how an examination or dissertation may be retaken.

Other organisational models and alternative structures

Distance learning is an alternative to on-campus study. It allows students to organise their studies independently and flexibly in terms of time and place. As such, it can be adapted to suit their individual needs. Distance learning offers many people who wish to study but are unable to attend conventional on-site courses the opportunity to achieve the educational objectives associated with higher education.

The *Fernuniversität Hagen* (University of Hagen) was founded in 1974 as a comprehensive university under the aegis of the Land of North Rhine-Westphalia. It is the only distance-learning university in a German-speaking country and the largest provider of distance university courses in Germany. Most of the *Fernuniversität's* 55,000 students (as of winter semester 2008/2009) opt to study part-time in parallel to their jobs. The *Fernuniversität* offers first and second cycle courses in six subject areas, leading to *Diplom*, bachelor's and master's degrees. It has a network of study centres in various German towns and cities as well as in Austria, Switzerland and some central and eastern European countries. The study centres provide on-site advice and support for students and provide for the parts of the courses that require students to be physically present.

Besides the *Fernuniversität Hagen*, there are private distance-learning universities of applied sciences throughout Germany offering distance courses. The courses available at these establishments are in the field of business, as well as relevant further training for engineers and computer sciences.

Even higher education establishments that have traditionally relied on physical attendance (universities and universities of applied sciences) are increasingly getting involved in distance learning. Up to 2007, the Federation and *Länder* supported this trend within the framework of the Bund-Länder Commission for Educational Planning and Research Promotion (*Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung*). This commission set up a programme to promote distance learning in 1993. Since then, new options for distance learning have become available at on-campus higher education institutions. These provide

both first-cycle higher education and continuing academic education with a vocational emphasis.

The development and deployment of multimedia learning systems and suitable cooperative networks on the part of the higher education institutions offering the courses is highly important for the further structural development of distance learning and for connecting distance and on-site teaching. The Federation and most of the *Länder* are promoting initiatives along these lines. Multimedia study and teaching have achieved particular significance in the area of continuing academic learning.

Several higher education institutions are working together in distance-learning consortia to develop courses. These distance-learning courses may then be implemented within the consortium framework or by individual higher education institutions. In recent years, distance-learning consortia have been set up at higher education institutions in the eastern German *Länder*, including Berlin, in Bavaria and in North Rhine-Westphalia. Rhineland-Palatinate has also set up such a consortium, in a network with Hesse and Saarland.

As an alternative to colleges of advanced vocational studies, dual courses in forms that integrate vocational training or practical placements can also be taken at universities of applied sciences, particularly in the fields of engineering and business. The courses that integrate vocational training combine studying with training in a business or an occupation. There are different models (sandwich and consecutive models) set out in the study regulations that determine how the periods spent studying and working at the company are timed. Two qualifications enabling graduates to enter professions are awarded at the end of dual courses at higher education establishments. Graduates receive either a *Diplom* followed by the letters FH or *Fachhochschule* (university of applied sciences), or a bachelor's degree; at the same time, they receive a certificate for having completed the training for a profession. In study courses which integrate practical placements, more time is devoted to gaining practical experience than the usual work-experience semesters allow.

Individuals in employment who do not hold a traditional qualification entitling them to attend higher education also have the opportunity to complete higher education studies. Anyone who has proved their ability as a master craftsman, engineering technician or a similar position involving management responsibility has already acquired important skills needed to succeed in higher education. There has been a sharp increase in the number of individuals with vocational qualifications enrolling on courses since 2000. The figure rose from 1,200 in the year 2000 to more than 3,000 in 2007. They made up around 1% of all higher education entries. It should be noted that this statistic represents a lower limit. Up to now, different *Länder* have established different higher education entry requirements for holders of vocational qualifications. For this reason, it is reasonable to assume that some of the individuals involved do not appear in the vocational category, but instead gain entry via other routes, such as examinations for external candidates or the highly gifted. The measures

adopted under the qualification initiative for Germany – for example, the *Aufstiegsstipendium* scholarship – should bring about a considerable increase in the number of new students who hold vocational qualifications in future. In March 2009, the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany agreed to adopt the same entry requirements for holders of vocational qualifications throughout the *Länder*. This has created a further basis for an increase in numbers.

Please refer to the answers to 2.4 and 2.6 for more information about entry into higher education.

2.4. Numerus clausus

There are no limits on entry to many courses of study in Germany. The higher education institutions register all applicants on their chosen courses without conducting any particular admissions procedure, provided the applicants meet the entry requirements.

For courses where the number of applicants exceeds the number of places available at all universities, restrictions are imposed throughout Germany. The courses included in the overall selection procedure (*allgemeine Auswahlverfahren*) can vary from semester to semester. North Rhine-Westphalia carries out a *Land*-wide selection procedure for a range of courses at universities and equivalent higher education institutions. A number of higher education institutions have local entry restrictions for courses that do not come under the admissions procedure for all of Germany. In such cases it is the institutions themselves that decide on the admission of candidates.

The Federation and *Länder* are engaged in joint efforts, in the form of the Higher Education Pact for 2020 (*Hochschulpakt 2020*), to provide capacity for additional students entering higher education. A further focus of the *Länder* within the scope of the Higher Education Pact is to expand universities of applied sciences. Capacities have been increased, new courses introduced and one completely new university of applied sciences opened. This has already considerably increased the number of places available. The initiative has given particular support to dual courses of study, including some at universities, as well as to the establishment of centres providing links between courses at different higher education institutions. As part of providing additional capacity for students, some *Länder* have reduced the number of courses with entry restrictions, or plan to do so. Other *Länder* are concentrating on using up existing capacity in subjects with entry restrictions.

In recent years, the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany, in particular, has taken a range of measures to improve the accessibility of the education system, especially in terms of making it easier for candidates with vocational qualifications to gain entry to higher education. A resolution of 6 March 2009 opened access to higher education for holders of advanced vocational qualifications (master craftsmen, certified engineering technicians and middle-level

commercial clerks, as well as equivalent qualifications). It also defined the conditions under which the holders of lower vocational qualifications could be granted entry to higher education, limited to specific courses.

Entry requirements

Universities

Candidates to study at a university or equivalent higher education institution must have a certificate of their general or subject-restricted higher education entrance qualification. The certificate of a general higher education entrance qualification entitles candidates to study any subject or field at any higher education institution. The certificate of a subject-restricted higher education entrance qualification entitles them to study on specific courses.

Just under half of all courses have no entry restrictions. The higher education institutions register all applicants on their chosen courses without conducting any sort of admissions procedure, provided the applicants meet the entry requirements.

For courses where the number of applicants exceeds the number of places available at all universities, restrictions are imposed throughout Germany. In the winter semester of 2008/2009, the courses were as follows: medicine, veterinary medicine, dentistry, pharmacy, biology (*Diplom* courses) and psychology (*Diplom* courses). Places on these courses are awarded by the Central Admissions Office (*Zentralstelle für die Vergabe von Studienplätzen – ZVS*) and the universities, by means of an overall selection procedure. The legal basis for this is the agreement between the *Länder* on the allocation of higher education places (*Staatsvertrag der Länder über die Vergabe von Studienplätzen*) of June 2006.

The courses included in the overall selection procedure can vary from semester to semester. It is also quite possible for restricted-entry courses to take all their applicants, if there are more places available than applications.

Some of the places on courses subject to the overall selection procedure are awarded in advance (for example, to non-EU citizens, candidates seeking to study for a second time and hardship cases). Candidates for the remaining places are selected on the basis of the following principles: the degree of qualification for the chosen course of studies, usually indicated by the candidate's average mark in the higher education entry qualification (worth 20%), the period spent waiting between gaining that qualification and applying for higher education (20%) and the outcome of a selection procedure conducted by the higher education institution itself (60%). This institution-specific selection procedure awards places either on the basis of the levels attained in qualifications, on the basis of the weighted individual marks in the qualifications for the chosen course, which indicate candidates' suitability in a specific field, on the basis of the results of a subject-specific scholastic aptitude test, on the basis of the type of vocational qualification or occupation, on the basis of the outcome of a selection interview,

or using a combination of these five criteria. The level of qualification achieved is of central importance to selection. The *Länder* issue Ordinances to determine the details of the procedure and the specific criteria used.

North Rhine-Westphalia carries out a *Land*-wide selection procedure for a range of courses at universities and equivalent higher education institutions. In awarding places, the level of qualification for the chosen course is weighted at 60% and the waiting period between attaining the qualification and applying for the course counts for 40%.

The universities and universities of applied sciences in North Rhine-Westphalia, as well as several other higher education establishments, enlist the services of the Central Admissions Office to organise the allocation of places on some courses, in accordance with criteria they set out.

More than half of the courses that do not come under the admissions procedure for all of Germany are subject to local restrictions on admission. In such cases it is the institutions that decide on the admission of candidates. Examples of the criteria for admission include candidates' average marks in the higher education entry qualification, the time they have spent waiting for a place, the outcome of a subject-specific scholastic aptitude test or selection interview, vocational qualifications or occupation. The higher education institutions can contract the Central Admissions Office to conduct an allocation procedure for the courses in question.

In future, the Central Admissions Office will be developed to function as a service provider for higher education admissions, used by both the higher education institutions and their potential students. It will have the new name of *Stiftung für Hochschulzulassung* (foundation for higher education admissions) and the task of supporting applicants in choosing a course and completing the admissions procedure. The foundation is to set up an applications portal. This portal will be used to give applicants information and advice, prepare their application data, allow the problem of multiple offers to be sorted out and help allocate remaining places on courses. It is up to the higher education institutions to decide whether they wish to make use of the service offered by the foundation. The establishment of the foundation for higher education admissions is intended to simplify and speed up the application and admissions procedure.

Colleges of music and fine arts

Colleges of music and fine arts require evidence of artistic aptitude alongside the general or subject-restricted higher education entrance qualification.

Universities of applied sciences

The prerequisite for admission to a university of applied sciences is either the general or subject-specific higher education qualification, on the one hand, or alternatively the entrance qualification for studies at a university of applied sciences, which is generally obtained from a specialised upper secondary school after twelve years in education. The entrance qualification for studies at a university of applied sciences can also be obtained by taking additional lessons at a vocational school. On top of this, certain courses require potential students to have completed work experience relevant to the field of study before enrolling. More than half of students starting courses at universities of applied sciences have a higher education entrance qualification that would entitle them to study at a university.

For certain subjects, such as design, evidence of artistic aptitude must be provided in addition to the entrance qualification.

As capacity is limited, almost all universities of applied sciences impose restrictions on entry in various subjects. They generally allocate places on the basis of average marks, the time spent waiting for a place, the outcome of an aptitude test or selection interview, an applicant's vocational training or occupation. Universities of applied sciences in North Rhine-Westphalia appoint the Central Admissions Service to carry out an allocation procedure for places on some of their courses.

Institutions outside of the sphere of higher education – colleges of advanced vocational studies and trade and technical schools

To start at a college of advanced vocational studies, candidates must hold a general or subject-restricted higher education entrance qualification or the entrance qualification for studies at a university of applied sciences, depending on the law of the particular *Land*. In addition to this, they need a training contract with a suitable company. *Land* law may provide vocationally qualified candidates who do not hold an entrance qualification with the option of taking an entrance examination. Alternatively, the regulations on higher education admissions for individuals in work apply. Once the training contracts have been signed, the training company registers candidates at the college's academy.

The entry requirements for trade and technical colleges vary from one subject area to another. Admission to a trade and technical college for agriculture, design, technology or business generally requires either a qualification in a recognised occupation requiring an apprenticeship followed by at least one year working in that occupation and, where appropriate, a qualification from a vocational school or, alternatively, a qualification from a vocational school followed by at least five years spent working in a relevant occupation. Admission to a trade and technical school for social work generally requires a lower secondary school-leaving certificate and completed vocational training in a relevant occupation.

Candidates for entry to a medical sector school must have a school leaving certificate and are often also required to have reached a certain age (usually 17 or 18) and have relevant

occupational experience or have completed a vocational qualification over the course of at least two years.

[Eurydice/KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany) 2009 *Das Bildungswesen in der Bundesrepublik Deutschland 2008* (education in Germany 2008), draft]

2.5. Regional/ European/ global mobility

Regional mobility: The extent to which individuals entitled to enter higher education in Germany demonstrate mobility between the *Länder* varies from *Land* to *Land*. The exact figures are shown in a table which was provided by the Federal Statistical Office and is enclosed as a separate document.

Accommodation occupied by students in Germany: Around 37% of students rented an apartment or house of their own in 2009, with about 17% living alone and 20% with their partner. 26% of students lived in shared housing – only slightly more than the number living with their parents (23%). Halls of residence accounted for 12% of students, while fewer than 2% live as subtenants (cf. 19th Social Survey (*Sozialerhebung*) of the *Deutsches Studentenwerk*, carried out by HIS, 2010).

Switching courses: Students are deemed to have changed courses if they alter the qualification they are studying for, or the subject, or both. The proportion of students who change courses has remained constant over the years, at around 20% (19% in 2009). There are clear differences here between types of higher education establishments. While around 20% of university students have switched to another course, the figure for universities of applied sciences is just 16% (cf. 19th Social Survey (*Sozialerhebung*) of the *Deutsches Studentenwerk*, carried out by HIS, 2010).

Moving to a different higher education institution: The share of students who switch to a different higher education institution has remained quite constant in recent years. It stood at 14% in 2009 (cf. 19th Social Survey of the *Deutsches Studentenwerk*, carried out by HIS, 2010).

International students in Germany: As the data delivered for the UOE statistics (ISCED 5A) demonstrates, around 10.6% of students in Germany in 2007 were international students (3.5% from EU countries and 7.1% from non-EU countries).

German students abroad: In 2007, 23% of all students had spent time abroad as part of their first degree. Half of them studied abroad and 41% went on work experience.

Recognition of classes etc. taken abroad: In principle, the implementation of the Lisbon Convention means that achievements in higher education abroad are recognised. The higher education institutions are responsible for recognition.

Joint degrees and integrated studies

Integrated courses of study, which are provided jointly by higher educational institutions from various different countries, are available in Germany. So too are joint degree courses. The German Academic Exchange Service (*Deutscher Akademischer Austauschdienst – DAAD*) supports around 100 courses under its joint degree programme. Most of the courses are in the field of law, economics and the social sciences, followed by engineering, as well as languages and cultural studies. German higher education institutions have a greater-than-average level of involvement in the Erasmus Mundus programme, which promotes master's courses leading to joint degrees. German institutions were involved as co-ordinators or partners in 50 of 103 master's programmes selected for the programme in Europe between 2004 and 2008. Engineering and natural sciences are the most frequent subjects for Erasmus Mundus courses.

An estimated 7,000 students are currently on joint degree courses. The Franco-German University (*Deutsch-Französische Hochschule / Université franco-allemande*), alone accounts for 4,600 students within the scope of its 145 courses.

Mechanisms to foster student participation and thus promote cooperation in joint degree courses: Alongside scholarships, there are a range of options designed to enable students to gain initial experience of a potential host country and encourage them to choose to study there (summer schools, language courses, courses on specific subjects and study trips). Another factor that helps build bilateral relationships and programmes, as well as motivate students, is Germany's efforts to encourage secondments of lecturers from foreign universities.

Integrated studies

In the summer semester of 2008, there were 250 programmes for dual, multiple or joint degrees. National subsidies are provided for the implementation of a very wide range of course types. These include the Franco-German University's courses, the joint degree programme, the international study and training partnerships and the German Academic Exchange Service's PHD programmes, as well as a large number of bilateral and international courses of study offered in a specific region or *Land*. Measures to promote such courses within the Erasmus Mundus framework are also worthy of note here.

Measures to promote student mobility

Aside of the quality and transparency of the courses on offer and the compatibility and international recognition of degrees, the main factors that influence students' mobility are the institutional and social framework, and financial considerations.

All in all, German students have become more mobile. In 2006, a total of 83,000 German students spent time abroad (as against 34,000 in 1991). Around 80% of them went to other countries in the European Higher Education Area. It is a policy target for 50% of Germany's students to go abroad in connection with their studies and 20% of them to spend at least one semester at a foreign higher education institution at some point during their degree courses. The mobility of German and foreign students is supported in all three cycles, in particular via financial support under the Federal Training Assistance Act (*Bundesausbildungsförderungsgesetz*), individual scholarships and mobility allowances, through German higher education institutions' structural and partnership programmes, through comprehensive information about Germany as a location for study and research, through financial support for higher education institutions supervising foreign students (in the form of the STIBET scholarship and guidance programme) and through the promotion of local student Erasmus initiatives. Since 2006, the German Academic Exchange Service's programme to promote structures for internationalisation at higher education institutions in Germany (*Programm zur Förderung der Internationalisierungsstrukturen an den deutschen Hochschulen*) has helped improve institutional conditions. The Federal Ministry of Education and Research has also initiated a campaign, in cooperation with the German Academic Exchange Service, under the name of "Go out!" which is designed to raise the number of German students studying abroad. One important incentive for students to spend time abroad while in higher education is appropriate financial support.

The Federal Ministry of Education and Research has asked the German Academic Exchange Service to monitor the development of international mobility, particularly in bachelor's courses, and, within the scope of this project, to develop measures to assure student mobility. Furthermore, as mobility is still influenced by social conditions, protecting and raising mobility will remain among the key challenges to be addressed in the Bologna Process in the years to come.

To raise students' mobility, the requirements for issuing visas, residence permits and work permits have been amended. The provisions of residence and labour law were made more flexible in respect of foreign students as of 19 August 2007.

- Foreign students from non-EU countries who are entitled to residence in one EU Member State for the purpose of attending higher education and wish to study in another EU Member State now have to meet less stringent requirements.
- Where a German higher education institution has tested an individual's language skills as part of its admissions procedure, the authority in Germany responsible for foreign nationals does not require further proof of these skills. There are now 460 different bachelor's and master's courses on offer at German higher education institutions.
- Non-EU foreigners who graduate may stay in Germany for up to one year after completing their degree in order to seek employment. During this time, they are now allowed to work for 90 whole days or 180 half-days without obtaining a specific

permit. While at a higher education or academic institution they may work any hours they choose in a part-time student job.

Financial and other support for students

By far the majority of students finance their studies and periods spent away from their own university by means of their own earnings or money they are given by their parents or partners.

The amendments made to the Federal Training Assistance Act mean that since 1 January 2008, support has been available for the entire length of a person's studies conducted within the Member States of the EU and Switzerland, including the final phase. Support is available for up to one year spent outside of the EU as part of a course being taken in Germany. In some such cases, support is available for up to five semesters. Students can apply for support for course-related work experience in any country, provided the study regulations require such work experience.

This means that the financing of periods spent abroad has been improved considerably. However, some of the changes to the Federal Training Assistance Act have been criticised, particularly by students. These include the change that brought assistance for students abroad into line with the normal support (consisting of 50% loan and 50% grant funding) available under the Federal Training Assistance Act, with the exception of tuition fees, for which a full grant remains available for up to one year. The supplementary funding that had been available for work experience abroad was abolished.

Since 1 April 2001, it has been possible to apply to the Federal Office of Administration (*Bundesverwaltungsamt*) for a student loan for periods abroad in addition to the support provided under the Federal Training Assistance Act.

The German Academic Exchange Service offers support in various forms and is the largest provider of scholarships in Germany. It acts as a national agency for the EU's Erasmus, Erasmus Mundus and Tempus programmes, as well as other EU programmes for third countries. The range of support on offer from the German Academic Exchange Service also includes annual scholarships in all subjects, scholarships for semesters combining studies and work experience, and its *Free Mover* scholarship programme. In 2007 alone, support was provided to 56,000 individuals plus a further 29,000 in EU programmes. In all, this represents a total of around €300 million. Among these individuals were around 15,700 Germans studying for first, graduate or doctoral degrees throughout the world, as well as just under 24,000 Erasmus students from Germany. Germany is Europe's number one source country in the Erasmus student exchange.

Besides this, there are numerous smaller assistance programmes focussed on specific subjects or countries, such as the European Excellence Programme (EEP). As part of the Erasmus

programme, additional support is also provided to meet the special needs of students with children or disabilities for whom no other cost-bearing mechanism is available.

The student welfare services provide a total of 180,000 places in student residences throughout Germany, including accessible rooms and family apartments. The accommodation provided also includes international halls of residence and guest housing for international academics. The student welfare services and the higher education establishments generally agree on quotas of rooms for foreign students (those on study programmes and sometimes also the *Free Mover* programme). Foreign students occupy 36% of the places in halls of residence.

The German Academic Exchange Service has various programmes that support the higher education institutions in this area.

3. Evaluation

3.1. Institutional evaluation

Supervision of higher education institutions

Under the Framework Act for Higher Education (section 59) and the higher education laws of the *Länder*, higher education institutions are subject to state supervision by the *Länder*. The legal supervision extends to all of the institutions' activities. Checks are carried out to establish whether the higher education institutions have infringed laws or other legal provisions by action or inaction. Where the institutions carry out duties on behalf of the government as opposed to dealing with academic matters, supervision is more thorough. The following are some areas where this is the case: personnel administration; economic, budgetary and financial management, i.e. cooperation in preparing and executing the budget of the *Land* minister of science; the organisational structure of the higher education institution and its affiliate establishments; and management of budgetary funds. The checks carried out by the higher-education supervisor at the science ministry responsible evaluate the appropriateness and economic efficiency of the action taken, as well as whether targets have been met. The court of audit of the *Land* in question also carries out an economic efficiency check.

The procedures by which training capacities are calculated and admissions figures established also come under higher education supervision. The higher education institutions or the relevant *Land* ministry issue statutes or Ordinances on admissions numbers, which regulate the number of places available. The idea here is to make full use of educational capacities, while following the requirements of budgetary legislation and paying due consideration to spatial and subject-specific factors. The quality of research and teaching must be assured, as

must the orderly fulfilment of the higher education institution's tasks, particularly in research, teaching and studies.

Legal obligations to submit regular reports on teaching and studies already exist in most of the *Länder*. These reports are generally produced by the faculties or subject areas and published by the institution's management. The indicators considered in the teaching report include the following: the share of students commencing and completing a course, the proportion who finish within the standard duration of studies, the exam pass rate and graduates' destinations. Several *Länder* have brought in requirements as to the content and form of the teaching reports to be produced.

Quality assurance in higher education

The quality assurance system in Germany is both internal and external. External quality assurance for studies and teaching at higher education institutions in Germany mainly takes place by means of the procedure for the external evaluation of teaching, which was introduced in 1995, as well as through the accreditation of courses, which has been in place since 1998.

Accreditation

An accreditation procedure for courses on the two-cycle system was introduced in 1998. This accreditation is an external quality-control procedure based on the principle of peer review. Academics, students, representatives of employees and employers, and international experts are all involved in the procedure.

The Act establishing a foundation for the accreditation of study programmes in Germany (*Gesetz zur Errichtung einer „Stiftung zur Akkreditierung von Studiengängen in Deutschland“*), passed on 15 February 2005, provided a new legal basis for accreditation. The function of accreditation is to ensure that course content meets certain standards. This includes examining the concept behind the course, verifying whether the content on offer is pitched correctly for students, putting teaching quality to the test, determining how relevant the course is for subsequent employment, and promoting gender equality. Accreditation and re-accreditation are generally required before bachelor's and master's degrees can be introduced and allowed to continue.

In 2007, systemic accreditation was introduced to complement programme accreditation. Systemic accreditation examines the internal quality-assurance systems higher education institutions have in place. If a higher education institution receives a positive system accreditation, this certifies that its quality-assurance system for teaching and studies is apt to ensure that courses are of high quality and targets in terms of qualification are met. The European standards and guidelines on quality assurance, the requirements specified by the Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the

Federal Republic of Germany and the criteria set out by the Accreditation Council (*Akkreditierungsrat*) are all applied here.

In Germany's accreditation system, it is decentralised agencies that accredit the courses. A central accreditation establishment, the Accreditation Council, in turn accredits the agencies. It also defines basic procedural requirements which ensure that reliable, transparent standards are used for accreditation. At the same time, the Accreditation Council makes sure that the *Länder*, working together, devote sufficient attention within the scope of accreditation to their responsibilities for the needs of the system as a whole. The state does not have a direct hand in the accreditation procedure.

The foundation for the accreditation of study programmes in Germany (*Stiftung Akkreditierung von Studiengängen in Deutschland*) also acts as a documentation centre for accreditation in general and administers the database of accredited courses in Germany.

The Council of Science and Humanities has introduced an institutional procedure for accrediting non-state higher education institutions. This is used to assess whether the institution in question meets the required standards of academic teaching and research. On 16 July 2004, the Council of Science and Humanities issued a set of principles and criteria to be used in this procedure.

Evaluation

Evaluation has been a general responsibility of higher education institutions under the law since 1998. There is no national institution to co-ordinate evaluation in Germany. However, an infrastructure has developed consisting of establishments at *Länder* level (agencies), or at regional and supra-regional level (networks and associations).

The evaluation procedures largely reflect the requirements of the Bologna Process. These include internal evaluation, external peer review, often with international participants, inclusion of students' evaluations, and publication of the results in a suitable form.

The Standing Conference of the Ministers of Education and Cultural Affairs of the *Länder* in the Federal Republic of Germany passed a resolution on quality assurance in September 2005. This defined the essential core components of a quality management system that is coherent and covers the entirety of a given higher education institution, bringing together various measures and procedures for quality assurance. Among these measures and procedures is a type of evaluation that makes reference to specific indicators and uses instruments that have been defined in detail (e.g. a combination of internal and external evaluation, or measures to involve students and graduates). In June 2007, the *Länder* initiated a 'quality offensive for excellence in teaching' (*Qualitätsoffensive exzellente Lehre*). This aims to work on concrete proposals to improve teaching, while taking account of the incentives already put in place by

the *Länder*. In October 2008, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany, together with the Donors' association for the promotion of sciences and humanities in Germany (*Stifterverband*), launched a competition designed to encourage universities and equivalent higher education institutions, as well as universities of applied sciences, to put forward compelling ideas for the development of teaching and study strategies, and to commend those that do so.

4. Funding rules

4.1. Public funding

4.2. Impact of quality assessments on funding

The system for funding higher education in Germany is currently in a phase of upheaval. The primary targets for reform are the methods of allocating funds. Performance criteria are increasingly being used in the allocation of public money. This involves considering such figures as the number of students completing courses within the standard duration, the total number of graduates, the volume of third-party funding obtained for research and the number of doctoral degrees awarded. The state and the higher education institutions produce joint service agreements setting out performance targets. These do not, however, stipulate specific measures. Such agreements are also seeing increasing use as a tool for the institution's internal management. Ever more attention is being paid in the *Länder* to the results of the evaluations when it comes to calculating the higher education institutions' budgets.

Funding tertiary-level institutions

***Länder* funding of higher education institutions**

State higher education institutions are run by the *Länder*. Because of this, the *Länder* provide the vast majority of their funding and largely decide on the allocation of resources. The funding the higher education institutions need to fulfil their tasks is provided from the budget of the *Land* ministry for education and cultural affairs, or the *Land* ministry for science. Expenditure on higher education by the *Länder* amounted to €17.9bn in 2008 (€16.6bn in 2005).

The *Länder* are increasingly moving away from micro-management and giving the institutions more responsibility to act for themselves. Initially, the primary targets for reform are the methods of allocation. Performance criteria are increasingly being used in the allocation of public money. This involves considering such criteria as the number of students completing courses within the standard duration, the total number of graduates, the volume of third-party funding obtained for research and the number of doctoral degrees awarded. Awarding funds on the basis of performance is most likely to prove successful if the higher education institutions are given more control over their own finances and their management structures

are strengthened. More and more of the *Länder* are incorporating just such changes in amendments to their higher education laws. The state and the higher education institutions produce joint service agreements setting out performance targets. These do not, however, stipulate specific measures. Such agreements are also seeing increasing use as a tool for the institution's internal management. Ever more attention is being paid in the *Länder* to the results of the evaluations when it comes to calculating the higher education institutions' budgets.

Shared funding of higher education institutions by the Federation and *Länder*

Funds from *Länder* budgets cover staff and non-staff expenditure. They are also used for investments, that is, spending on land, buildings and setting up facilities, as well as large-scale equipment. Where the total cost of a project to construct or expand a higher education institution exceeds a certain amount (€1.5m for construction work, €25,000 for large-scale equipment at universities and €75,000 for such equipment at other institutions) and the Council of Science and Humanities had made a recommendation in respect of the project, the Federation used to bear 50% of the costs, under the joint task of extending and constructing institutions of higher learning, including teaching hospitals. This was the case until 2006. Total public spending on higher education stood at €20.3bn in 2008 (€18.4bn in 2005). The Federation contributed €2.4bn (nearly 12%) of this amount and the *Länder* provided €17.9bn (i.e. 88%).

As a consequence of the reform of Germany's federal system, the joint task of extending and constructing institutions of higher education, including teaching hospitals, has been abolished. The *Länder* are now solely responsible for the construction of higher education institutions. Until at least 2013, however, an annual amount of €695.3m from the Federation budget is available to the *Länder* for the extension of higher education institutions including teaching hospitals.

Under the new article 91b paragraph 1 of the Basic Law, the Federation and *Länder* may in future mutually agree to cooperate in cases of supra-regional importance in the promotion of:

- Research facilities and projects outside of institutions of higher education
- Scientific projects and research at institutions of higher education (agreements here require the consent of all of the *Länder*)
- Research buildings at higher education institutions including large-scale equipment

Under the excellence initiative to promote science and research at German universities, which they agreed on in 2005, the Federation and the *Länder* will support the academic activities of universities and their cooperation partners within higher education, in the sphere of non-university research and in business. There are individual lines of funding for the following:

- Graduate schools to promote young academics

- Excellence clusters to promote top-class research
- Forward-looking concepts to expand top-class research at universities on a project-by-project basis

A total of €1.9bn is to be provided under these lines between 2006 and 2011. 75% of the funding will come from the Federation and 25% from the *Land* in which the institution is based.

To keep higher education accessible to an increased number of new students, and to safeguard the institutions' ability to conduct research, the Federation and *Länder* agreed the higher education pact for 2020 in June 2007. The pact's first sub-programme is intended to meet the challenges caused by the increased demand for higher education places. The higher education pact enables the institutions to admit more than 91,000 extra students by 2010, compared with the figure from 2005. This first sub-programme has a total volume of €1.13bn. The Federation and *Länder* will fund half of this each.

Third-party funding of research at higher education institutions

Higher education institutions' basic financing comes from the budget resources of the responsible *Land* ministry. In addition to this, however, members of the institution's research staff are entitled within the scope of their duties to carry out research projects funded by third parties, such as organisations for the promotion of research, rather than budget resources. Third-party funding currently makes up around 8.4% of institutions' revenues.

The most significant body for the promotion of research, in particular basic research, at higher education institutions is the German research foundation DFG (*Deutsche Forschungsgemeinschaft*). The DFG promotes research via such avenues as grants to individual researchers or institutions. The Federation and *Länder* provided more than €1.4bn in funding towards these grants in 2006. The higher education pact for 2020 has a sub-programme for the introduction of DFG overhead funding allowances. These are available for projects supported by the DFG and amount to 20% of the project funds that have been approved and disbursed by the DFG. This has applied to collaborative research centres, research centres and graduate colleges since 1 January 2007 and was extended to cover other DFG projects as well from 2008 onwards. The Federation is providing around €703m until 2010 to finance these overhead funding allowances. Higher education institutions also receive third-party funding from companies that contract them to carry out specific research and development work.

Funding colleges of advanced vocational studies

State-run colleges of advanced vocational studies are funded partly by their *Land* and partly by the companies providing the practical training. The company bears the costs of on-site training. The state-run academies that provide the theoretical teaching are financed entirely by the *Land*. [Eurydice: *Organisation of the education system in Germany 2007/08*]

4.3. Private funding

4.3.1. Tuition fees and/or households

Fees for attending educational establishments

It is up to the *Länder* to decide whether or not to charge students tuition fees or contributions. To ensure that equal opportunities in education are maintained, sufficient action must be taken to account for the needs of low-income groups within the population. Tuition fees of up to €500 per semester are currently charged in six *Länder*. The higher education institutions in the individual *Länder* are responsible for deciding whether to impose fees and, if so, how much to charge. Parallel to this, systems of loans have been developed. These create a legal entitlement to a loan to cover the tuition fees and provide for the loan to be repaid on an income-dependent basis after graduation. The money from the fees is to be used to improve the quality of teaching and studies, as well as the general conditions under which studying takes place.

On top of this, all students pay a small administrative fee to cover registration and use of the social facilities. Where the higher education institution has a body for self-administration (a general student council), a contribution towards this body is also charged. In most *Länder*, students who spend a long period studying on a course or who choose to take a second degree must pay fees too.

Student fees of €500 per semester are payable at the state-run colleges of advanced vocational studies in Baden-Württemberg. Saxony and Thuringia currently have no plans to bring in tuition fees. Admission fees and/or contributions for the use of social facilities must also be paid at some colleges of advanced vocational studies.

[Eurydice/KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany) 2009 *Das Bildungswesen in der Bundesrepublik Deutschland 2008* (education in Germany 2008), draft]

The statistics do not record student fees separately from other payments made by students. All in all, students' contributions make up around 6% of higher education institutions' total revenues.

4.3.2. Business, other

Over recent years, third-party funding has made up an increasing share of higher education's institutions financing. Third-party funding consists of resources for the promotion of research and development, young academics and teaching, which are obtained from the public or private sector on top of the normal budget for higher education (the basic resources). Third-party funding may be awarded to the higher education institution itself, to one of its establishments or to individual full-time researchers. In 2008, third-party funding amounted to €4.9bn.

As for the shares from different sources, 28.8% of third-party funding came from the DFG, 19.4% from the Federation, 26.2% from businesses, 0.8% from international organisations, 9.6% from the European Union, 8.5% from foundations and 2.4 % from the *Länder* (data for 2006). The 2006 statistics were the first to list third-party funding from university support associations (*Hochschulfördergesellschaften*). They provided a 0.5% share. This indicates that the range of third parties providing funding is widening.

Third-party financing of research at higher education institutions

Higher education institutions' basic financing comes from the budget resources of the responsible *Land* ministry. In addition to this, however, the institution's research staff are entitled within the scope of their duties to carry out research projects funded by third parties, for example organisations for the promotion of research, rather than from budget resources. Third-party funding makes up around 8.4% of institutions' revenues.

The most significant body for the promotion of research, in particular basic research, at higher education institutions is the DFG. The DFG promotes research via such avenues as grants to individual researchers or institutions. The Federation and *Länder* provided more than €1.4bn in funding towards these grants in 2006. The higher education pact for 2020 has a sub-programme for the introduction of DFG overhead funding allowances. These are available for projects supported by the DFG and amount to 20% of the project funds that have been approved and disbursed by the DFG. This has applied to collaborative research centres, research centres and graduate colleges since 1 January 2007 and was extended to cover other DFG projects as well in 2008. The Federation is providing around €703m until 2010 to finance these overhead funding allowances.

Higher education institutions also receive third-party funding from companies that contract them to carry out specific research and development work.

4.3.3. Grants/loans

Support for students

Students at tertiary level who do not have the resources available for their own maintenance and studies (that is, to meet their needs) from other sources, particularly their parents' income, are able to finance their studies thanks to the Federal Training Assistance Act. Assistance for education is granted to German students, as well as to foreign students who have the perspective of remaining permanently in Germany or who are accorded equal treatment to domestic students under EU law on the freedom of movement.

The 22nd Act Amending the Federal Training Assistance Act (*BAföG-Änderungsgesetz*) brought in considerable changes. The assistance levels to meet the needs of school and higher-

education students were raised by 10% and the level of income not taken into account increased by 8% as of the 2008/2009 winter semester. Students with the long-term perspective of staying in Germany were given easier access to financial support. To foster more international mobility during a course of studies, the obligation to spend an initial phase in Germany was abolished (for courses in an EU Member State or Switzerland). Furthermore, an additional grant for childcare was introduced at the start of 2008.

The choice of subject decisively influences how long the support is available. In principle, the maximum duration of the support corresponds to the standard duration of studies, either in accordance with section 12 paragraph 2 of the Framework Act for Higher Education or as set out definitively in the examination regulations for the course. If no standard duration of studies or similar regulation exists, the maximum period of support set out in the Federal Training Assistance Act for the various courses applies. From their fifth semester of studies onwards, students must present evidence of progress to receive support. The level of financial assistance granted depends, in principle, on a student's income and wealth, as well as the income of his or her spouse and parents.

Support payments are also made during the semester break to cover students' needs. As of 1 October 2008, up to €48 a month has been available to students at higher education institutions and academies who do not live with their parents (this consists of €12 for maintenance and accommodation, €4 for health insurance, €10 for long-term care insurance and an additional amount of up to €2 for high accommodation expenses). Within the maximum duration of the support, half of the amount is a grant and half is an interest-free loan from the government. Loan repayment arrangements take account of social factors and income. The total to be repaid in respect of periods of study beginning after 28 February 2001 has now been capped at €10,000. Students who exceed the maximum period for which support is available only continue to receive any support at all in certain exceptional cases. Depending on the reason why they require more time, the support may be provided in the form of a bank loan with interest.

Financial assistance is also available to students who move from Germany to another EU Member State or Switzerland and begin or continue their studies there. For periods abroad spent outside of the EU or Switzerland, support is provided for a minimum of between one semester and one year (and sometimes longer in exceptional cases), provided that such periods are useful for the course being followed and can be counted, at least in part, towards the duration of the course, or provided the time abroad occurs within the framework of organised cooperation between higher education institutions.

In addition to this, a programme of loans for education was launched in 2001. Under the programme, school and higher education students can receive €300 a month for 24 months during the final stages of their education, irrespective of what support is received under the Federal Training Assistance Act. The educational loan (*Bildungskredit*) is also paid out for studies abroad or work experience during studies abroad. It must be paid back in full with

interest. As part of the student loan programme operated by the state-run bank *Kreditanstalt für Wiederaufbau* (KfW), loans of between €100 and €50 a month towards living costs have been available since 2006 to students of all disciplines, irrespective of their income or wealth.

There are other forms of support besides those available under the Federal Training Assistance Act. In some *Länder*, the student welfare services at higher education institutions, or the institutions themselves, provide loans to support students suffering particularly difficult circumstances. There are also a number of smaller, usually regional, foundations dedicated to providing assistance to needy students. Most are privately funded. The systems loans for tuition fees, which have been developed in the *Länder*, are also a form of support for students.

Particularly gifted students may receive scholarships from organisations for the promotion of young talent (*Begabtenförderungswerke*). These organisations usually have links to a denomination of the church, a political party, a trade union or business. One exception to this is the non-political and non-denominational German National Academic Foundation (*Studienstiftung des deutschen Volkes*), which is also the largest such organisation. The Federation contributes a considerable amount to fund the work of the organisations for the promotion of young talent. The *Länder* help finance the German National Academic Foundation. The German Academic Exchange Service offers scholarships to foreign students and young academics for temporary studies or research at a German higher education institution. Alongside this, some *Länder* also have special funds to help foreign students at their higher education institutions.

Once students have completed an undergraduate degree, scholarships for further studies may be awarded on the basis of primary and secondary *Länder* legislation for the promotion of graduates. The organisations for the promotion of young talent also offer scholarships to students who have already completed a first degree, to enable them to study for a doctorate.

Besides the direct support for students from low-income families, all students up to the age of 25 benefit, via their families, from the tax allowances under the Income Tax Act (*Einkommensteuergesetz*), as well as from the Federal Child Benefits Act (*Bundeskindergeldgesetz*). If students complete their course before reaching the age of 25, the support available via the family is terminated. It is the parents, not the students, who are entitled to this support. Examples of further forms of indirect financial assistance for students include reduced health insurance contributions and the recognition of some of the time spent studying towards pension entitlement.

Students are also covered by statutory accident insurance for accidents that occur at the higher education institution or on the way there and back from home. The *Länder* are responsible for the students' statutory accident insurance. [Eurydice/KMK (Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany) 2009 *Das Bildungswesen in der Bundesrepublik Deutschland 2008* (education in Germany 2008), draft]

In Germany, as in other countries, students derive income from both private and public sources. The education policy debate in this area centres on the relative role of the different sources, particularly the importance and scale of support from private or public funds (such as under the Federal Training Assistance Act), from the (new) loan-based sources, as well as the issue of part-time student jobs.

In 2009, 23% of the students received support under the Federal Training Assistance Act; the sum received amounted to an average of €413 a month. 5% of students made use of educational or student loans, while 3% had scholarships (for example, from the organisations for the promotion of young talent).

[19th Social Survey of the *Deutsches Studentenwerk*, carried out by HIS, 2010]

5. Impact on Employability

As the following table, taken from the OECD report “Education at a glance” shows, unemployment is much lower among higher education graduates than among individuals who only hold a qualification from secondary education.

Table A6.3b. (Web only) Unemployment rates and educational attainment (2007)

Number of 25-64 year-olds in unemployment as a percentage of the labour force aged 25 to 64, by level of education attained

	Pre-primary and primary education (1)	Lower secondary education (2)	Upper secondary education			Post-secondary non-tertiary education (6)	Tertiary education		All levels of education (9)
			ISCED 3C Short (3)	ISCED 3C Long/3B (4)	ISCED 3A (5)		Type B (7)	Type A and advanced research programmes (8)	
Germany	25.6	16.5	a	8.7	8.5	5.2	3.6	3.9	8.3

A further table from the OECD indicates that the employment gap between poorly and highly qualified individuals has increased over the years.

Table A6.4a. Trends in unemployment rates by educational attainment (1997-2007)

Number of 25-64 year-olds unemployed as a percentage of the labour force aged 25 to 64, by level of educational attainment

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Germany	Below upper secondary	15.4	15.4	15.9	13.9	13.5	15.3	18.0	20.4	20.2	19.9	18.0
	Upper secondary and post-secondary non-tertiary	9.9	10.3	8.8	8.1	8.2	9.0	10.2	11.2	11.0	9.9	8.3
	Tertiary education	5.7	5.5	5.0	4.2	4.2	4.5	5.2	5.6	5.5	4.8	3.8

Cooperation with employers

Politicians, higher education institutions and businesses agree that internationalisation and globalisation require the closest continual cooperation possible between higher education institutions and representatives and establishments from the world of work.

In Germany, higher education institutions and employers are engaged in an in-depth discussion of the following issues:

- Syllabus structure, work placements and experience abroad
- Accreditation / quality assurance
- Self-governance of universities

In a survey of German companies about measures to improve employability, the following factors were named:

- Involvement of representatives and institutions from the world of work in the Accreditation Council, the accreditation agencies and the accreditations commissions, in order to ensure that teaching and studies are of a good quality and competencies relevant for working life are learned at all stages of studies
- Involvement of business representatives in the university councils and advisory councils for programmes of studies, to consult on the institution's strategy and the general focus of the courses
- Close cooperation between businesses and universities, with reforms to curriculum content where necessary
- Emphasising and integrating key competencies in course curricula
- Extending the scope of work placements in course curricula
- Increasing transparency, for example by an employability rating
- Provision of advice by career centres

Advice for students and measures to facilitate the transition from higher education to employment

Measures to advise and support students

Under the Framework Act for Higher Education or the higher education Acts of the *Länder*, the higher education institutions have a duty to provide course-related advice throughout programmes of study.

The task of providing student advice involves informing and advising students and applicants about the study options available as well as course content, structure and requirements. It also means supporting students throughout their studies by providing accompanying advice, particularly after the end of the first year. The task of advising students is shared out, with

higher-education teachers offering assistance with course content and the student advice offices at the higher education institutions providing general advice. The student advice offices' duties also include helping students with personal problems or questions relating to their studies. Alongside higher-education teachers and student advice offices, committees of student representatives also offer help and advice in individual subjects. Higher education institutions often hold special introductory events for potential students. The higher education institution is to work together with the offices responsible for careers advice and for state examinations in the provision of advice for students.

At some higher education institutions and on some specific courses, tutorials and remedial sessions have been set up. These are taught by student and research assistants and have the following functions:

- Offering information about the bodies constituting the higher education institution, about methods for conducting academic work, about course structures and about examination requirements
- Helping deal with difficulties in comprehension and study, as well as supporting independent learning by means of group activities
- Fostering individual advisory relationships and promoting social relations between students

Students experiencing personal problems or difficulties studying can also turn to student advice offices and mental health counselling services. The higher education institutions and student welfare services have developed a number of schemes of their own, particularly for foreign students. These include special student advisers, rooms for societies, scholarships and service centres.

Measures to facilitate the transition from university to employment

To prepare students for the transition from higher education to employment, the higher education institutions' student advice offices and the labour agencies' careers advice services offer information and advice. Students can improve their chances on the labour market by choosing suitable course options and subscribing to advanced courses. Work placements offer an opportunity to get to know the realities of the workplace and establish contact with potential employers. Many courses, particularly in science and engineering subjects, require students to demonstrate that they have completed work experience (lasting between four and six months, or in some cases one year) before or during their studies. To improve the outlook for arts and social sciences graduates seeking employment, some higher education institutions have cooperated with the employment agencies to set up programmes offering arts and social science students the chance to take part in work placements in industry, as well as helping them to gain key skills such as basic IT competencies or elementary business know-how.

Measures to prepare students for self-employment or starting a business are also on offer at a number of higher education institutions.

Measures to facilitate the transition from colleges of music or fine arts to employment

Graduates in artistic disciplines often experience difficulties in finding a suitable occupation or in gaining sufficient income from producing art of their own. To improve their prospects, these courses have been adapted to include additional subjects that qualify graduates for practical occupations (such as teaching and cultural management). By opting for suitable course content and additional qualifications, students can make their transition to working life smoother.

Measures to facilitate the transition from universities of applied sciences to employment

To prepare students for the transition from higher education to employment, the higher education institutions' student advice offices and the labour agencies' careers advice services offer information and advice. Students can improve their prospects on the labour market by choosing suitable course options.

Study programmes at universities of applied sciences are expressly intended to have close links with the workplace. The main way they do this is by integrating one or two work-experience semesters in the course. The topics on which students write their bachelor's or *Diplom* dissertations are very often based on issues they have encountered during the work-experience semesters. Sometimes the dissertations are written in cooperation with the industry or business. In this way, students can gain insights into working life and establish contacts with potential employers before graduating. The offices responsible for work-experience matters at the higher education institutions and the careers advice services at the employment agencies help students to find placements. There are also dedicated websites where students can look for such placements.

Measures to facilitate the transition from higher education to employment – institutions outside the sphere of higher education – colleges of advanced vocation studies and trade and technical schools

Those who complete occupational training under the dual system at a college of advanced vocational studies are prepared for taking up an occupation while still studying, as the courses alternate between theory and practice. Students are often hired by the company that trained them once they have attained their vocational qualification at the college of advanced vocational studies.

6. Recent and planned reforms of the tertiary education system

Ongoing debates and future developments

The *Länder* and the Federation are continuing their efforts to modernise and internationalise higher education. The reforms aim to enable institutions to stand apart. The mechanism for this is deregulating, increasing institutions' autonomy, focussing on performance and creating incentives for achievement. Germany's higher education institutions should become more competitive on the international stage as a result.

With a particular view to the demographic challenge higher education will face, it is highly important to strengthen higher education institutions' financial resources.

Both quantitative and qualitative developments are affecting higher education reform. The quantitative aspects include higher numbers of entrants, a higher share of older entrants and a sustained increase in the proportion of graduates.

Bearing in mind the aims of the Bologna Process, it is generally agreed that the focus of the structural forms must now be on further developing course content. The aims pursued are as follows:

- The organisational and structural conditions for courses of study are to be improved further. This includes making curricula flexible, with scope for work experience and periods abroad.
- The measures to improve teaching quality are being further intensified.
- The framework for studying in the two-cycle system is to be further improved. This means, for example, offering more advice and support at all stages of a course, increasing students' independent responsibility and improving the way information about the options currently available is communicated.
- Doctoral students are an essential link between the European Higher Education Area and the European Research Area. The international exchange of experiences in terms of status and financial support is to be intensified. Efforts are ongoing to expand the structured forms of working towards a doctoral degree. However, it is important to maintain different paths to a doctoral degree, which depend on personal factors, financial conditions and the situation at the higher education institutions as well as in the individual subjects.
- The process of transferring across to the two-cycle system is continuing, with a growing range of accredited bachelor's and master's courses available. Courses that have traditionally led to a *Staatsexamen* degree are trailing behind somewhat.

The following objectives are being pursued in terms of quality assurance:

In 2007, system accreditation was introduced to complement the accreditation of the programme. System accreditation focuses on a higher education institution's internal quality-

control system. As a result, the challenges to be faced in the years ahead include bringing in and expanding internal quality management throughout the higher education institutions.

Increased efforts are being made to tackle practical problems affecting the recognition of examinations taken and credits gained in studies elsewhere. This involves continuing to push through the national action plan for recognition (*Nationaler Aktionsplan Anerkennung*), established in 2007.

Mobility within the European Higher Education Area is to be assured and extended. Within bachelor's courses, too, longer periods abroad are to be systematically included in curricula. It is necessary to make sure in such cases that credits gained abroad are recognised.

Businesses and society are showing increasing acceptance of bachelor's and master's degrees, but there is still room for improvement. More must be done to reinforce trust in the quality of the qualifications by means of transparent quality assurance measures. Furthermore, the comprehensive information on offer to future students and potential employers should be optimised. One key to ensuring that bachelor's and master's courses meet with acceptance lies in even closer cooperation between higher education institutions and businesses, covering such areas as the structure of curricula, writing of dissertations, expansion of careers centres on a joint basis and exchanges of personnel.

On the social side, the measures to be taken will implement Germany's national action plan for the social dimension of the Bologna Process (*Nationaler Aktionsplan Soziale Dimension*) launched in 2008.

In view of the demographic challenges ahead and the lack of qualified staff, the focus is on lifelong learning measures that break down the barriers between occupational and academic education and meet the demand for further academic education. The Bund and *Länder* initiative for qualification expressly aims to tap into educational reserves, facilitate access to higher education for applicants with occupational qualifications who have not been entitled to attend higher education, and to promote academic further education.