11. QUALITY ASSURANCE

11.1. Introduction

The debate about evaluation in the education system, in other words the systematic assessment of organisational structures, teaching and learning processes and performance criteria with a view to improving quality, did not start in Germany until the end of the 1980s, later than in other European countries. Although the actual concept of evaluation may not yet have been institutionalised before, this does not mean that no control mechanisms existed. State supervisory authorities for schools and higher education, statistical surveys carried out by the Federal Statistical Office and by the Statistical Offices of the Länder as well as educational research in institutes that are subordinate to federal or Land ministries or jointly funded by the Federal Government and the Länder are used for quality assurance and evaluation purposes.

Within the school system, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (Kultusministerkonferenz – KMK), in the so-called Konstanzer Beschluss of October 1997, took up quality assurance processes that had already been introduced in several Länder in the school sector and declared these a central issue for its work. Since then the Länder have developed evaluation instruments in the narrower sense which may be employed depending on the objective.

In 2003 and 2004, educational standards were adopted for the primary sector, the Hauptschulabschluss and the Mittlerer Schulabschluss. In October 2012 the Standing Conference has resolved educational standards for the Allgemeine Hochschulreife (general higher education entrance qualification) in German and Mathematics and in follow-on courses in the foreign languages English and French.

In June 2006, the Standing Conference adopted a comprehensive strategy for educational monitoring which was revised in June 2015. For further information on the procedures and tools of the educational monitoring, see chapter 11.2.

The evaluation of research and teaching has been provided for in the higher education sector since the amendment to the Framework Act for Higher Education (Hochschulrahmengesetz – R121) of 1998. The evaluation of study courses and subjects is also established in the higher education legislation of most Länder. In a resolution of March 2002, the Standing Conference laid down the future development of quality assurance for all Länder and institutions of higher education; in the long-term, this should lead to an overall concept for quality assurance, taking account of all types of higher education institution and all study courses. With the introduction of the accreditation of study courses, the setting up of the Accreditation Council (Akkreditierungsrat), the foundation of accreditation agencies and the adoption of joint structural requirements for all Länder for Bachelor’s and Master’s study courses, standards and procedures were established for the teaching sector. These should provide students and employers with reliable orientation and create transparency in international cooperation with regard to the study offer and study qualifications in Germany. In September 2005, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder passed a comprehensive quality assurance framework concept for teaching (Qualitätssicherung in der Lehre). For further information on quality assurance for all Länder and higher education institutions, see chapter 11.3.
Besides the common structural guidelines of the Länder for the accreditation of Bachelor’s and Master’s study courses (Ländergemeinsame Strukturvorgaben für die Akkreditierung von Bachelor- und Masterstudiengängen), the 2004 Standards for Teacher Training in the Educational Sciences (Standards für die Lehrerbildung: Bildungswissenschaften) and the May 2013 edition of the common content requirements for subject-related studies and subject-related didactics in teacher training which apply to all Länder (Ländergemeinsame inhaltliche Anforderungen für die Fachwissenschaften und Fachdidaktiken in der Lehrerbildung) serve as the basis for the accreditation and evaluation of teacher-training courses. For more information on quality assurance and quality development through the Standards for Teacher Training and the common content requirements for subject-related studies and subject-related didactics, see chapters 9.1. and 14.2.2.

Pursuant to Article 91b, Paragraph 2 of the Basic Law (Grundgesetz) the Federation and the Länder may mutually agree to cooperate for the assessment of the performance of the education system in international comparison and in drafting relevant reports and recommendations. An important element of this collaboration and also of the comprehensive strategy of the Standing Conference on educational monitoring is the joint reporting of the Federation and of the Länder. For more detailed information on joint education reporting by the Federation and the Länder, see chapter 11.2.

Specific legislative framework

Primary and secondary education

Land authority to carry out academic supervision is derived from the state sovereignty over schools enshrined in the Basic Law (Grundgesetz – R1). This states that the entire school system is under the supervision of the state (Art. 7, Paragraph 1). Detailed provisions are set out in the Education Acts (R84, R86, R88, R90, R92, R95, R97, R99, R101–102, R104, R106, R112, R114–115, R117) and regulations of the Länder. The school legislation of most Länder provides for measures of external and internal evaluation beyond state supervision. The full texts of the current Education Acts are available on the website of the Standing Conference (www.kmk.org).

In-company vocational training

Quality assurance in in-company vocational training is achieved mainly through laws and regulations and through the recommendations of the board of the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung – BIBB). The Vocational Training Act (Berufsbildungsgesetz – BBiG – R79) places a high value on quality assurance and quality development. Within the framework of their activities the vocational training boards of the competent authorities (Section 79, paragraph 1, sentence 2 Berufsbildungsgesetz) and of the Länder committees for vocational education and training (Section 83 paragraph 1, sentence 2 Berufsbildungsgesetz) are thus also responsible for steadily improving the quality of vocational education.

Higher education

Under Section 59 of the Framework Act for Higher Education (Hochschulrahmenge- setz – R121) and the higher education legislation in place in the Länder (R126, R128, R131, R133, R135–136, R139, R141, R143, R145–146, R148, R149-152, R154,
higher education institutions are subject to state supervision which is exercised by the Länder. The full texts of the current laws for higher education institutions are also available on the website of the Standing Conference (www.kmk.org).

The evaluation of research and teaching has been provided for in the higher education sector since the amendment to the Framework Act for Higher Education of 1998. Higher education legislation of most Länder now includes regulations regarding both internal and external evaluation.

Continuing education

In their laws and statutory provisions for the promotion of continuing education (R169–170, R172–173, R176, R178, R180, R182, R184, R186, R188–189, R191, R193), Federation and Länder have formulated general minimum requirements of a structural and quantitative nature for institutions of continuing education. Furthermore, some Länder have adopted specific quality assurance standards in their statutory provisions. In the area of distance learning, the Law on the Protection of Participants in Distance Education (Fernunterrichtsschutzgesetz – R167), as well as the control by the Central Office for Distance Learning of the Länder (Zentralstelle für Fernunterricht der Länder), assure the quality and further development of the offer.

In the field of regulated continuing vocational education, the recommendation of the Federal Institute for Vocational Education and Training from March 2014 on key points of the structure and quality assurance of continuing vocational education in accordance with the Vocational Training Act and Handicrafts Code (Handwerksordnung – HwO – R80) are decisive when determining the level, standardisation and quality assurance.

11.2. Quality Assurance in Early Childhood and School Education

Responsible bodies

Early childhood education and care

Unlike the school sector, in pre-school education responsibility for the quality of a day-care centre for children lies with the maintaining body for that centre, which undertakes the Fachaufsicht (academic supervision of teaching and education activity) and the Dienstaufsicht (supervision of educational staff and head teachers) for its employees.

The maintaining bodies of day-care centres for children are obliged to explain how quality assurance and development are guaranteed in their concept. A number of methods are used in practice. A method of quality monitoring that is binding for the whole Land only exists at present in Berlin. This stipulates an annual internal evaluation as well as external evaluations every five years by certified agencies.

The youth welfare offices (Jugendämter) have the task of supporting the private-sector maintaining bodies (as well as regularly self-employed child-minders) through appropriate measures in exercising their promotional mission. This is less a matter of control, and more a matter of specialist support, for instance through practical or specialist advice, which have an important role in this context. Thus support on concept and team development issues and organisational development specific to the establishment, inter alia, count among the tasks of specialist support.
Within the scope of the needs-based and quality-oriented expansion of day care for children, the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth (Bundesministerium für Familie, Senioren, Frauen und Jugend – BMFSFJ) is financing various programmes for the further development of quality in day care for children. In the Länder, there are manifold measures to ensure and develop the quality of day-care centres and day care for children. The Federal Government’s quality assurance initiative is being accompanied by the Working Party of the Highest Youth and Family Authorities of the Länder (Arbeitsgemeinschaft der Obersten Landesjugend- und Familienbehörden – AGIF) in an advisory capacity, on behalf of the Conference of Ministers of Youth and Family Affairs (Jugend- und Familienministerkonferenz).

**Primary and secondary education**

School supervisory authorities exercise Fachaufsicht (academic supervision), Rechtsaufsicht (legal supervision) and Dienstaufsicht (staff supervision) within the school system. Special educational support and academic evaluation is provided in school pilot projects carried out by the school supervisory authorities and the institutes for school development (Landesinstitute für Schulentwicklung) of the Länder. Accompanying research examines the effectiveness of the reform measures and the framework that should be created if they are to be successfully implemented. The introduction of new curricula is often preceded by a test phase. In some Länder, for example, teachers are surveyed in order to establish whether the new guidelines have proved successful or require amendment.

By providing advice and assistance and recommending changes in schools and by reporting to higher-ranking education authorities, the school supervisory authorities and institutes for school development are to make a contribution to the evaluation and further development of the school system.

In almost all Länder, schools are evaluated by external quality or evaluation agencies and inspection procedures. In the Länder where there are legal provisions for external evaluation, as a rule, responsibility lies with the school supervisory authorities. In several Länder, responsibility lies with the institutes for school development.

The vocational education and training committees and the Land committees shall, within the framework of their duties, work towards a continuous improvement of the quality of vocational education and training.

In June 2004 the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder set up the Institute for Educational Progress (Institut zur Qualitätsentwicklung im Bildungswesen – IQB) at the Humboldt University in Berlin. Since then the IQB has been in charge of the operationalisation and verification of the educational standards as well as the coordination of the development of corresponding standard-oriented assignments. The so-called IQB Educational Trends study (formerly: IQB Länder Comparison Study) check the extent to which the competence requirements set out in the educational standards have been achieved on primary level and lower secondary level in the individual Länder before completion of the relevant educational stage. This makes a key contribution to the implementation of the Standing Conference’s comprehensive strategy for educational monitoring.
In addition, the data records from national and international school performance studies are archived and documented as well as provided for re- and secondary analysis in the Research Data Centre (Forschungsdatenzentrum – FDZ) at the IBQ, which is funded jointly by the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung – BMBF) and the Länder.

As part of the joint task “assessment of the performance of the German educational system in international comparison” in October 2010 the Standing Conference and the BMBF set up the Center for International Large Scale Assessment (Zentrum für Internationale Bildungsvergleichsstudien – ZIB). A network formed by the Technical University of Munich (TUM), the German Institute for International Educational Research (Deutsches Institut für Internationale Pädagogische Forschung – DIPF), and the Leibniz Institute for Science and Mathematics Education (Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik – IPN), the ZIB is responsible for implementing PISA studies in Germany, including drafting national reports. Other tasks of the ZIB are ensuring and coordinating continuous participation in international academic committees on educational comparative studies, research and the promotion of up-and-coming academics in the field of empirical educational research and – as of 2017 – the preparation of syntheses that bring together research work and process these for education administration and practice. In general, it is to contribute to securing the educational monitoring in an international comparison which is jointly funded by the Federation and the Länder, and to increasing the extent and presence of German educational research in the context of international educational comparative studies, and to provide the results of research within the scope of the range of tasks.

Approaches and methods for quality assurance

Early childhood education and care

The BMFSFJ promoted the structures and expansion of day-care for child up to the end of 2015 in the Action Programme Child Day Care (Aktionsprogramm Kindertagespflege). In June 2009 a quality label was introduced for educational institutions destined to ensure that new day-care staff throughout Germany have a minimum qualification based on a professionally recognized standard. Alongside the in-service continuing qualification of day-care staff, since 2012 permanent employment contracts in child-minding services have been promoted. The programme is carried out in cooperation with the Federal Employment Agency (Bundesagentur für Arbeit) and the majority of the Länder. Furthermore, as of 2016 the implementation of the new competence-oriented Qualification Manual Day Care for Children (Qualifizierungshandbuch Kindertagespflege – QHB) developed by the DJI is supported. The new QHB stipulates a basic qualification for day care staff of 300 hours plus 80 hours of prevocational placements and 120 hours of self-learning units.

The Action Programme Child Day Care will be replaced by the Child Day Care (Kindertagespflege) federal programme that will run until December 2018. Within the scope of this programme, Euro 7.5 million will be provided each year, amongst other things for the continued support of employment relationships, the further qualification of child day care personnel, inclusion in child day care as well as quality development for specialist advisors.
With the “Lernort Praxis” (practical on-the-job learning) federal programme launched in May 2013, the Federation is also supporting high-quality care for prospective early education professionals in their practical training stage in day-care centres for children. In a pilot project that began in August 2013, 76 qualified practical mentors in day care facilities for children from seven Länder have been funded for a project period of three years. These should in particular assist the staff of the day care facilities for children with practical guidance, offer the future staff possibilities for reflection and professional interaction, and expand the cooperation with Fachschulen and institutions of higher education. The experience gained in this programme will be used in a competence-oriented curriculum that will set lasting quality standards for practical guidance. A total of Euro 8 million euros is being provided for this.

The further training initiative for early childhood teaching professionals (Weiterbildungsinitiative Frühpädagogische Fachkräfte – WIFF), launched by the BMBF in conjunction with the Robert Bosch Foundation (Robert Bosch Stiftung), and implemented in collaboration with the German Youth Institute (Deutsches Jugendinstitut), promotes the professionalisation of pedagogic staff in the sector of early childhood and care. This generates specialized knowledge that is placed at the protagonists’ disposal and discussed. A further focus lies on making the offers more visible and on strengthening the mobility of the training and continuing education systems.

Since 2008, the BMBF has been supporting the initiative House of Small Researchers (Haus der kleinen Forscher) in its efforts to get children between the ages of 3 and 10 interested in natural sciences and technology and at the same time encourage an awareness for dealing with people, nature and resources in a responsible manner. With its 225 local networks, the initiative covers 90 percent of all day care facilities for children in Germany. At present, more than 29,700 day care facilities for children, day nurseries and primary schools make use of the foundation’s services.

In January 2016 the federal programme Language Day Care Centres for Children – Because Language Is the Key to the World (Sprach-Kitas: Weil Sprache der Schlüssel zur Welt ist) (2016–2019) was started. This programme encourages the imparting of language skills in day-care facilities for children that is integrated in everyday life. More detailed information is available in chapter 12.4.

Primary and secondary education

School supervisory authorities

School supervisory authorities exercise Fachaufsicht (academic supervision), Rechtsaufsicht (legal supervision) and Dienstaufsicht (staff supervision) within the school system. Academic supervision concerns the teaching and educational work carried out by schools. The school inspectors support and foster the work of the school, ensure that curricula and other legal provisions are being adhered to and that teaching and education are being conducted professionally using appropriate methods and further improved wherever possible. Academic supervision is carried out by visiting schools, observing lessons and providing advice at school level. Legal supervision is a further element in school supervision. It involves monitoring the legality of management of what is called external school affairs (for example, the construction and maintenance of school buildings) by the Schulträger, the school's
maintaining body. Finally, school supervisory authorities exercise staff supervision over teachers and head teachers at public-sector schools, thus ensuring that teaching staff are carrying out their duties. Civil service guidelines stipulate the need for the appraisal of teachers on specific occasions (end of probationary period, promotion, transfer) and in some cases at periodic intervals. This serves both to advance the career of the individual teacher and to maintain the efficiency of the school system. Teaching ability and aptitude are assessed, as are the teacher’s professional competence. Assessment is based on visits to classes by the head teacher and school inspectors, performance reports by the head teacher on the teacher concerned, conversations with the teacher and inspection and assessment of pupils’ work.

**Evaluation measures in schools**

In recent years, initiatives have been taken in all Länder in order to develop measures for assuring the quality of education at both the level of the school system and the level of the individual schools; this goes beyond the customary range of instruments of the school supervisory authority and project supervision. The Länder have taken a number of evaluation measures in which various quality assurance and quality development procedures interact. These procedures include:

- the development or further development of framework curricula,
- comparative tests across the Länder and schools in core subjects,
- the extension of external evaluation,
- the development of standards and their review,
- the development of quality management in schools,
- centralised final examinations (lower and upper secondary education).

These measures are embedded in the comprehensive strategy of the Standing Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz – KMK) for educational monitoring as well as in strategies of individual Länder for quality evaluation and quality assurance which, amongst other measures, include the strengthening of the autonomy of the individual school, the development of school-specific profiles, the promotion of inter-school cooperation as well as the strengthening of the advisory functions of the school supervisory authority.

An external evaluation of schools is carried out on a regular basis in almost all Länder (Fremdevaluation, Schulvisitation, Schulinspektion). The Ministries of Education or the institutes for school development of the Land are usually responsible for the external evaluation. The goal is to monitor and improve the quality of school education. External evaluations are held every three to six years depending on the Land. Characteristic methods include the analysis of data and documents, observations (visits to classes, inspections), standardised questionnaires and interviews. The evaluation procedures for schools in the Länder are in line with the educational standards of the Standing Conference of the Ministers of Education and Cultural Affairs. These cross-Länder target criteria are in most Länder complemented by the provisions of the so-called frameworks for school quality which by means of indicators of school and teaching practice quality provide schools with a frame of reference.

As part of these strategies, increasing weight is given to measures for the evaluation of individual schools. In the majority of Länder, the obligatory development of school-specific programmes plays a central role. In the school-specific programmes,
the individual schools specify the main focuses and objectives of their work on the basis of Land regulations regarding the content and qualifications obtained after completing the courses. At the same time, the school-specific programmes determine internal evaluation methods and criteria based on the requirements specific to the Land (e.g. curricula, timetables). The areas to be evaluated are determined autonomously by the schools in the school-specific programmes. School-specific programmes should take account of the social and demographic requirements of the individual school. The frameworks for school quality referred to above are of central importance for the implementation of school-specific programmes.

The development and efficacy of all-day schools in Germany has been scientifically accompanied and evaluated since 2005 with the involvement of all Länder by the *Studie zur Entwicklung von Ganztagsschulen – StEG* (study on the development of all-day schools). The study, which was established within the framework of the investment programme Future, Education and Care (*Zukunft Bildung und Betreuung – IZZB*), is carried out by a research team and funded by the BMBF. The Federation and Länder support the continuation of the nationwide study on the Development of All-Day Schools (*Studie zur Entwicklung von Ganztagsschulen – StEG*) (2016–2019).

Key topics are the nationwide monitoring of all-day schools with representative surveys on the development of all-day schools in Germany and studies on the quality and effects of the all-day offers.

The Vocational Training Act (*Berufsbildungsgesetz – R79*) puts great emphasis on quality assurance within the dual system of vocational education and training. This focus includes a flexibilisation of the training quality control instruments and their supplementation by a number of new quality assurance guidelines, amongst other measures. Moreover, procedures are to be drawn up for the external evaluation of quality assurance in continuing vocational training and education.

**Comprehensive strategy for educational monitoring**

In June 2015, the Standing Conference revised the overall strategy on educational monitoring from the year 2006. The various elements of the comprehensive strategy should not only describe developments in the education system but also create applicable knowledge. From the empirical data, the right conclusions should be drawn and put into action.

The overall strategy provides for the following methods and instruments:

- participation in international school performance studies (PIRLS/IGLU, TIMSS primary school, PISA)
- monitoring and implementation of educational standards for the primary sector, the lower secondary level and the *Allgemeine Hochschulreife*
- method to ensure quality at the level of schools
- the joint report on education of the Federation and Länder

The four pillars of the overall strategy on educational monitoring will be presented in more detail in the following and the considerations of the Standing Conference described as to how more application-oriented knowledge can be obtained for educational policy and pedagogical practice on the basis of the instruments and methods of the overall strategy on educational monitoring as well as further empirical data.
Participation in international comparative studies of pupil achievement

The joint task pursuant to Article 91b, Paragraph 2 of the Basic Law (Grundgesetz – R1) includes the cooperation of the Federation and the Länder for the assessment of the performance of educational systems in international comparison and drafting relevant reports and recommendations. A corresponding administrative agreement has entered into force in 2007.

Germany is taking part in international comparative studies of pupil achievement such as the Trends in International Mathematics and Science Study (TIMSS), the Progress in International Reading Literacy Study (PIRLS) and the OECD project entitled Programme for International Student Assessment (PISA) as a means of establishing pupils' performance.

After the publication of the results of the PISA 2000 OECD study in December 2001, the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder named seven areas in which the Länder and the Standing Conference of the Ministers of Education and Cultural Affairs will become active and are still active:

- measures to improve linguistic competence as early as early childhood education
- measures to strengthen the link between the early childhood sector and primary school with the aim of an early school entry
- measures for the improvement of primary education and the continuous improvement of reading literacy and basic understanding of mathematical and scientific concepts
- measures for efficient support of educationally disadvantaged children with particular regard to children and young people with a migrant background
- measures to thoroughly develop and assure the quality of teaching and schools on the basis of binding educational standards and result-oriented evaluation
- measures to improve professionalism in teaching with particular regard to diagnostic and methodical competence as an element of systematic school development
- measures to expand provision of all-day activities and care with the aim of increasing opportunities for education and support with particular regard to pupils with educational deficits and especially gifted pupils

The results of the PISA 2009 survey, which was carried out by the Center for International Large Scale Assessment (Zentrum für Internationale Bildungsvergleichsstudien – ZIB) on the national level, confirmed the continuing positive development of the German education system and thus the effectiveness of the measures taken as a consequence of PISA 2000. Germany achieved its best PISA results to date. Alongside improvements in all areas of competence, further progress was also made in the field of equality in education. The close link between social background and reading competence has declined perceptibly since the year 2000. Germany is also one of the few countries which has managed to lessen the link between social background and competence development, and at the same time to significantly improve the performance of pupils from socio-economically poorer families. The differences between pupils with a migrant background and pupils without a migrant background have also fallen considerably. The Standing Conference and the Federal Ministry of Education and Research have drawn the following key conclusions from the results of PISA 2012:
• Germany’s improved results in international comparison show that the chosen paths are successful and must be sustained. Better quality education and improved equality in education remain the central objectives, in particular the challenge remains to further reduce social disparities.
• The share of poorer-performing pupils has decreased significantly, but the targeted support of this group must nevertheless be continued.
• Even though the performance level as a whole has significantly improved, the shares of the top tiers in Germany have not grown to the same extent. Individual support measures therefore have to reach out to higher-performing pupils also.
• Greater efforts need to be made to reduce the gender-based differences in reading and mathematics.

The results of the PIRLS/IGLU 2011 and TIMSS 2011 studies, which the Institute for School Development Research (Institut für Schulentwicklungsforschung – IfS) at the Technical University of Dortmund was commissioned to implement, were presented in December 2012. They confirmed the level of competence already achieved by German pupils in previous reviews, and improvements in the performance of children from a migrant background in the three areas reading, mathematics and natural sciences. The Standing Conference and the Federal Ministry of Education and Research pointed to the need for greater efforts to continue to strengthen early and individual support, particularly for children from educationally disadvantaged family backgrounds.

Within the framework of the joint tasks pursuant to Article 91b paragraph 2 GG (German Basic Law), the BMBF also supports the International Computer and Information Literacy Study 2013 and 2018. The information and computer-related competences of grade 8 pupils are hereby tested in an international comparison. The University of Paderborn is in charge of the performance of the current study. The Länder have opened up field access to the schools for both studies.

**Monitoring and implementation of educational standards for the primary sector, the lower secondary level and the Allgemeine Hochschulreife**

In order to provide a joint frame of reference for all Länder on the quality of school education, the Länder have defined certification-related educational standards for all school levels. The standards are based upon the areas of competence of the individual subject and

• take up the basic principles of the respective subject
• determine the subject-specific competences including basic levels of knowledge that pupils should have achieved by a certain stage of their school career
• are aimed at systematic learning and learning in networks and thus follow the principle of cumulative acquisition of competence
• describe expected levels of performance as part of requirement profiles
• are related to the core area of the respective subject and provide scope for pedagogical measures taken by the schools
• relate to a medium level of requirements
• are illustrated by examples for test questions

The Länder have pledged to adopt the educational standards as a basis of their relevant subject-specific requirements. They want to support competence-oriented
teaching and targeted individual support for all pupils by implementing the educational standards. At the same time, the Länder combine this with the claim of making school requirements on pupils more transparent, educational systems more mobile and qualifications more comparable.

There are nationwide applicable educational standards

- for the primary sector (grade 4) for the subjects German and mathematics,
- for the Hauptschulabschluss (grade 9) for the subjects German, mathematics and the first foreign language (English/French),
- for the Mittlere Schulabschluss (grade 10) for the subjects German, mathematics, the first foreign language (English/French), biology, chemistry and physics,
- for the Allgemeine Hochschulreife for the subjects German, mathematics and the continued foreign language (English/French).

As of 2017, educational standards will be developed for the Allgemeine Hochschulreife in the natural science subjects (biology, physics, chemistry).

The competence expectations set out in the educational standards of the Standing Conference are operationalised through test tasks to verify the achievement of the educational standards and exemplary tasks to implement the educational standards in school practice. These tasks are being continuously developed under the leadership of the IQB in cooperation with teaching staff and specialists for subject-related didactics. The Standing Conference has resolved to develop and use a pool of Abitur examination tasks for the effective implementation of the educational standards for the Allgemeine Hochschulreife. A special strategy has thus been adopted that should guarantee comparable and standard-oriented requirements in the Abitur examination of the Länder and which differs from the verification of the educational standards in the primary and lower secondary level.

The IQB Educational Trends study (formerly: IQB Länder Comparison Study), which is aligned more to school practice in Germany than international surveys, is carried out every five years at the primary level in grade 4 and every three years at the lower secondary level in grade 9 by means of representative random samples as well as on the basis of competence level models verified with regard to teaching methodology and learning psychology. The design of the test (test domains, instruments and test cycles), which aims for continuity, guarantees valid and long-term trend observations.

The language group of subjects (German and the first foreign language: English, French) alternate with mathematics and natural sciences as the subject matter of the investigation in grade 9. The subjects German and mathematics are included in each Länder comparison in grade 4. The reports on the IQB Educational Trends study are published twelve to eighteen months after the data collection. They provide information on the extent to which the pupils have achieved the competence expectations of the educational standards.

In order to increase the information content and yield of the reports for educational policy and practice, and thus better reflect the strength of standard-based monitoring in reporting, the report format is being further developed and improved. The results on the level of each Land should hereby be presented in more detail and focus drawn more to the performance of pupils with special educational needs, amongst other things.
The educational standards for the *Allgemeine Hochschulreife* are binding for all courses of education that lead to the *Allgemeine Hochschulreife* (on account of their particular profile, Berufsoberschule have initially not been taken into account). They describe the competences the pupils should normally have at the end of the *gymnasiale Oberstufe* in key subjects. Furthermore, the specifications on the design of *Abitur* examinations that are binding for all Länder have been further developed for the relevant subjects. These specify the formats of tasks that can be used in the *Abitur* examination, define guidelines for evaluating the pupils' performance and describe framework conditions for the examinations that have to be observed.

The educational standards for the *Allgemeine Hochschulreife* apply as of the school year 2016/2017 as a binding basis for the *Abitur* examinations. General criteria are available for the design, correction and assessment of standard-based *Abitur* examination tasks and suitable written *Abitur* examination tasks including the necessary evaluation sheets will be provided in a pool of *Abitur* examination tasks at the IQB. This pool is constantly growing and has been made available to the Länder as of the school year 2016/2017 for possible use in the *Abitur*. This goes hand in hand with the goal of

- aligning the tasks to the educational standards,
- guaranteeing the comparability of the requirements level of *Abitur* tasks,
- and ensuring the quality of the *Abitur* examination tasks.

The Länder and the IQB work together closely on the creation and constant expansion of the pool of *Abitur* examination tasks. The Länder have pledged to provide *Abitur* examination tasks each year for possible inclusion in the pool. A catalogue of criteria that has been developed in agreement with the Länder serves as a basis for the decision on inclusion. The nationwide specialist exchange on the design of the pool of *Abitur* examination tasks also supports the implementation of the educational standards in the own structures of the Länder in preparation for the *Abitur* examinations and contributes to a further assimilation of the *Abitur* tasks and -examinations in the Länder.

As a basis for the implementation of the educational standards, in particular for the primary sector and lower secondary sector, the Standing Conference resolved the concept on the use of educational standards for the development of teaching (*Konzeption zur Nutzung der Bildungsstandards für die Unterrichtsentwicklung*) in December 2009, that describes the central areas of action for the implementation of the educational standards.

The concept on the implementation of educational standards for the *Allgemeine Hochschulreife* (*Konzeption zur Implementation der Bildungsstandards für die Allgemeine Hochschulreife*) resolved by the Standing Conference in 2013, which should serve as a common basis for the implementation process in the Länder and the nationwide cooperation, is available for areas of educational standards for the *Allgemeine Hochschulreife*. It includes, amongst other things, a systematic exchange on necessary changes to the *Unterrichtsvorgaben* (teaching specifications) and *Prüfungsordnungen* (examination regulations) of the Länder as well as on measures to support the teaching staff.
Quality assurance measures at school level

The Länder conduct Land-specific as well as cross-Länder comparative studies, in addition to national and international performance comparisons. This includes for example measurement of language proficiency for different age groups, surveys on learning levels, or comparative studies in different grades as well as Land-specific performance comparisons. Contrary to international studies and to the Educational Trends study (formerly: Länder Comparison study) conducted by the IQB through representative samples, comparative studies serve to investigate the performance levels of pupils at school and class level and aim at school development and the improvement of teaching. Comparison tests (VERA, in some Länder also called performance level study or competence test) are conducted in all Länder for grades 3 and 8 (VERA 3 and VERA 8).

The key function of the comparative work lies in support for the development of teaching and schools for every single school through feedback oriented on the educational standards as an assessment of its current position with reference to the results in the Länder. At the same time, comparative studies have an important mediating function for the introduction of the specialist and teaching methodology concepts of the educational standards.

The Standing Conference agreed on a nationwide framework for the performance of VERA with the agreement on the further development of VERA (Vereinbarung zur Weiterentwicklung von VERA) from March 2012. Appropriate supporting and continuing education offers will be provided for the teaching staff.

Comparative studies are part of a bundle of measures with which the Länder guarantee evidence-based quality development and assurance on the level of the individual schools. These include in almost all Länder methods for an external evaluation of the individual school, within the framework of which schools receive regular and systematic feedback on strengths and weaknesses, in particular on the quality of teaching processes. Complementary to this, the Länder support the internal evaluation of schools by providing corresponding methods and counselling. So-called reference frameworks for school quality and/or quality tableaus are available in the Länder as points of reference for this; these are based on both the findings of empirical educational research and Länder-specific normative specifications.

Joint education reporting by the Federation and the Länder

Education reporting is a key part of the joint tasks pursuant to Art. 91b Paragraph 2 of the German Basic Law along with participation in international school performance comparisons. The report Bildung in Deutschland (education in Germany) is prepared every two years under the responsibility of an academically independent group of authors under the leadership of the German Institute for International Educational Research (Deutsches Institut für Internationale Pädagogische Forschung – DIPF).

Under the guiding principle of “Bildung im Lebenslauf” (education in the CV) the education report systematically presents developments in the various fields of the educational system, from the elementary via the school sector, vocational education and training and university education right through to continuing education in adulthood. In this way, reliable information is provided on framework conditions as well as the progress and results and/or yields of educational processes. The particu-
lar importance of the education report lies in the fact that it shows the interaction between the different educational areas and identifies overriding challenges in the German educational system. Since 2006, the education report has thus served as an important basis for decisions on education policy and ensures transparency on the situation in the educational system as a whole.

The core of education reporting is a certain set of indicators, each of which reflects a key aspect of an educational area in its various manifestations. The performance indicators on which this is based are primarily drawn from official statistics, though also scientific surveys. Continuing the performance indicators over time allows a systematic report on the development of the educational system as a whole as well as its respective areas over time.

In order to allow a comparison with developments in member states of the European Union and OECD (e.g. *Education at a Glance* of the OECD), certain indicators are aligned to international reports. Furthermore, the contents of the report are differentiated according to various Länder depending on the data situation.

Each education report contains a feature chapter on a topic of special significance for educational policy that is dealt with in more depth and presented across all educational areas. The education report has focused on the following key topics since 2006:

- Education and migration (2006),
- Perspectives for the educational system in demographic change (2010),
- Cultural/musical-aesthetic education in a CV (2012),
- People with disabilities in the educational system (2014),
- Education and migration (2016).

Apart from the report *Bildung in Deutschland* there are now also a number of Länder-specific and regional education reports that are based on the *Bildung in Deutschland* report in terms of their choice of indicators and even the structure of their chapters.

The comprehensive strategy of the Standing Conference for educational monitoring creates important premises for an even greater use of instruments to monitor the results and yields of educational processes so as to provide application-related knowledge for educational policy and practice. The key question here is how developments in the educational system can not only be described but also explained with the help of test methods and further empirical data. This should be linked to concrete tips on what has to be done to solve the problems that have been identified wherever possible.

The Standing Conference has agreed on thematic areas for research questions of key importance for educational policy that are regularly updated and which relate to key practical questions for the development of schools and teaching:

- Dealing with heterogeneity: individual support in heterogeneous learning groups including inclusion and support for gifted students,
- Development of teaching: effects of teaching methods and didactic concepts,
• Use of the results of quality-assuring methods for the development of teaching and schools,
• The importance of teacher training and teacher commitment for the development of pupils' competences,
• The effects of school quality assurance methods,
• All-day: effects on the learning success and
• Effects and strategies of school development: differences between schools in a comparable situation.

The research questions of the Länder related to these thematic areas are taken into account as far as possible within the framework of the IQB programme of work as well as the ZIB. In addition, available scientific results and findings should be used more in future to answer questions of key importance for educational policy. In this context, the task of the Land institutes and quality institutions of the Länder lies in processing and distributing research knowledge in cooperation with academic and scientific institutions for schools, education administration and educational policy in a manner that is appropriate for the addressees.

The BMBF supports efforts to ensure the performance of the educational system and the quality of education within the framework of general institutional research support, e.g. the German Research Foundation (Deutsche Forschungsgemeinschaft – DFG), the Max-Planck Society (Max-Planck-Gesellschaft – MPG) or the Leibniz Association (Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz – WGL), in the context of departmental research, e.g. the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung – BIBB) and through support for projects, e.g. in the framework programme supporting empirical education research. Over the past years this has included research programmes on language development, language diagnostics and the promotion of reading, the professionalisation of pedagogical staff and on controls in the educational system. The effect of all-day offers on the development of competences and the learning success of pupils is investigated in the "Studie zur Entwicklung von Ganztagsschulen – StEG" (study on the development of all-day schools).

11.3. Quality Assurance in Higher Education

Responsible bodies

The supervision of higher education institutions is exercised by the relevant Land Ministry of Science and Research. External evaluation is performed by regional evaluation agencies at Land level or by networks or associations of higher education institutions covering all Länder.

The Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (Kultusministerkonferenz – KMK) has established a Foundation for the Accreditation of Study Courses in Germany (Stiftung zur Akkreditierung von Studiengängen in Deutschland) which serves to fulfil the following tasks:

• accreditation and re-accreditation of accreditation agencies by the time-limited granting of the entitlement to accredit study courses through the award of the foundation’s seal
• compilation of the common and the specific structural guidelines of the Länder into binding guidelines for the accreditation agencies
• regulation of minimum requirements for accreditation procedures including the prerequisites and limits of bundled accreditations
• monitoring of accreditations undertaken by the accreditation agencies

The Foundation will also work to ensure fair competition among the accreditation agencies. Furthermore, taking account of the development in Europe, the Foundation determines the pre-requisites for the recognition of accreditations by foreign institutions. It promotes international cooperation in the field of accreditation and quality assurance and report regularly to the Länder about developments regarding the conversion of the system of study into a consecutive study structure and on quality development in the context of accreditation. The Accreditation council makes decisions on all matters of the Foundation. The Council comprises four representatives from institutions of higher education, four representatives from the Länder, five representatives from among professional practitioners, including one representative from the ministries of the Länder responsible for legislation governing service and wages, two students and two foreign representatives with accreditation experience, as well as one representative of the accreditation agencies in a consultative capacity. The Foundation Accreditation of Study Courses in Germany also acts a central documentation service for the accreditation system and administers the data base of the study courses accredited in Germany.

Approaches and methods of quality assurance

Supervision of higher education institutions

Higher education institutions are subject to state supervision which is exercised by the Länder (for the statutory framework of higher education supervisory authorities, see chapter 11.1.). Legal supervision encompasses all activities of the higher education institution. It is checked here whether the higher education institution has, by its actions or omissions, infringed laws or other statutory provisions. A more wide-ranging supervision is carried out in those areas for which the state is responsible, as opposed to academic affairs. This includes staff administration and economic, budgetary and financial management, i.e. participation in the preparation of the responsible minister's budget and in its implementation, the organisation of the higher education institution and the establishments affiliated to it, the management of budgetary funds, and so on. Within the relevant Land Ministry of Science and Research, the higher education supervisory authority examines whether actions taken are appropriate and economically efficient and whether targets are being fulfilled. Economic efficiency is also monitored by the audit office of the relevant Land.

The tasks of determining training capacity and setting admission figures are also subject to supervision by the higher education supervisory authority. Higher education institutions or rather the respective Land ministries issue ordinances or regulations on admission figures for the number of available places in higher education. These require education and training capacity to be used to the full, subject to budgetary constraints and the available premises, and to subject-related factors. The quality of research and teaching, and the proper performance of the functions of the higher education institution, particularly in research, teaching and study, must be guaranteed.
A legal obligation to submit regular reports on teaching and study exists in most Länder. These reports are usually set up by the departments within higher education institutions and published by the institution's governing body. The following factors, among others, may serve as indicators in the report on teaching: the ratio of those that start a course to those that complete it, the proportion of students within the standard period of study, the examination success rate and the whereabouts of graduates. Several Länder have begun to develop stipulations on the content and form of teaching reports.

The assessment of the quality of teaching has been provided for since 1998. In accordance with the principle of academic freedom, professors and junior professors perform their research and teaching duties independently. The scope and organisation of teaching is subject to supervision by the higher education supervisory authorities only in so far as the scope of teaching commitments is laid down in a teaching load ordinance, the contents of Bachelor’s and Master’s degree courses must comply with the requirements of the applicable study and examination regulations and must provide a qualification for a profession.

**Evaluation in the higher education sector**

At a time when student numbers are rising with no corresponding increase in funding, it is felt that the instruments for monitoring and control in the higher education sector, which are available in the traditional form of inspection and which principally come down to a standardisation of the conditions at the outset, are insufficient. At national and Land level, in higher education institutions, at the German Rectors’ Conference (Hochschulrektorenkonferenz – HRK) and in the Science Council (Wissenschaftsrat) a debate has therefore been in progress for some time about evaluating the efficiency of the higher education sector, especially in teaching and courses of study.

In its resolution on quality assurance in teaching at higher education institutions from September 2005, the Standing Conference defined the indispensable core elements of a coherent quality management system encompassing all aspects of higher education institutions, which combines different measures and procedures of quality assurance. Such measures and procedures also include an evaluation which refers to certain indicators and specifies individual tools (e.g., combination of internal and external evaluation, involvement of students and graduates).

Meanwhile, to support internal evaluation and implement external evaluation of the different tasks of the institutions of higher education, an infrastructure of Land-level and supraregional-level establishments has now come into being (agencies at Land level, networks/associations at supraregional level). In Germany a two-tiered system of evaluation is widely applied which combines internal and external evaluation. The internal evaluation consists of a systematic inventory and analysis of teaching and studying, taking account of research, performed by the individual department or the faculty and concludes with a written report. On this foundation, an assessment by external experts takes place who also lay down their findings and recommendations in a written final report.

At both the level of the institutions of higher education and at ministry level, various international cooperative measures exist for the development and implementation of evaluation measures. External evaluations generally take the form of peer
reviews, i.e. they are performed by competent experts from other institutions of higher education, research establishments or from the business community and are repeated at various intervals. Reports on the implementation of evaluation results are now available for the study courses of some institutions of higher education.

Student criticism of classes, in some cases involving graduates, has now also become a widespread method of evaluating teaching in the sector of higher education. Such criticism primarily serves the purpose of optimising teaching within the higher education institution and is not an official means of monitoring teaching staff. The aim is for higher education teaching staff to listen to criticism so that they can assess themselves better and rectify shortcomings.

The aim of the evaluation measures is, firstly, to subject academic standards in teaching, teaching methods and the success of teaching to regular assessment. The findings can then be used to identify possible measures for improving courses and teaching. Furthermore, it is also necessary for higher education institutions to account to the public for their achievements in teaching and research. The results of the evaluation are increasingly being taken into account in the Länder as a basis for allocating resources to higher education institutions (cf. chapter 3.3.). Attempts to evaluate higher education institutions should generally be viewed against the overall background of renewal of the higher education sector, the main elements of which include reform of the structure of study, greater financial autonomy for higher education institutions and improved management.

**Reform of the study structure and quality of teaching**

The consecutive grading system introduced in the course of the Bologna Process has now largely replaced the traditional degrees (*Diplom* and *Magister*). Alongside the introduction of a system of comprehensible and comparable degrees and the improvement of mobility, safeguarding quality standards is also one of the key objectives of this comprehensive structural reform. The quality of teaching therefore became more of a focus. The modularisation of study offers with accompanying examinations, the introduction of a credit point system based on student workload, the orientation to learning outcomes and teaching centred on students are therefore key elements of the reform process, which is intended to improve the quality of teaching and the academic feasibility of the courses offered.

With the Teaching Quality Pact (*Qualitätspakt Lehre*) of the Federation and of the Länder, in 2010, a support programme was launched which aims to improve the framework conditions for teaching at institutions of higher education, in the field of student/lecturer ratios, for instance, and to support higher education institutions with further measures to assure quality in teaching, such as the continuing education of teaching staff or the establishment of quality management systems in teaching.

Even before the conclusion of the Teaching Quality Pact the Länder had taken measures to ensure and improve quality, e.g. to improve student-teacher ratios and other initiatives to develop the quality of teaching.

**Accreditation of study courses**

For Bachelor’s and Master’s study courses, the Standing Conference has adopted accreditation as an instrument of quality assurance which is functionally separate from the state approval of study courses: As with the other study courses, the state
approval refers to guaranteeing the fundamental financial means for the study courses to be set up and the inclusion in the higher educational planning of the respective Land. In contrast to this, the objective of the accreditation is to guarantee standards in terms of academic content, the maintenance of structural guidelines, and to determine the professional relevance of the degrees. It is to ensure quality in international competition and create transparency for international collaboration. In the accreditation system, the state is assuming its responsibility for higher education studies through structural requirements for study offers, which guarantee the equivalence of qualifications and the possibility of changing to another higher education institution. Observance of the structural requirements is a pre-requisite for the accreditation of a study course. They form the basis for the accreditation process. Land legislation determines to which extent accreditation is a pre-requisite for the state approval of a new study course. It is essentially performed by external peer review. Periodically, the study courses are re-accredited.

In accordance with the principles for the future development of quality assurance for all Länder and institutions of higher education (Grundsätze für die künftige Entwicklung der länder- und hochschulübergreifenden Qualitätssicherung), also adopted by the Standing Conference of the Ministers of Education and Cultural Affairs in 2002, the system of accreditation is to be extended to all courses of study. In 2004, tiered study courses at colleges of art and music, as well as Bachelor’s study courses at Berufsakademien, were included in the accreditation system. Bachelor’s and Master’s study courses conveying the educational prerequisites for a teaching position are also subject to the accreditation process.

In December 2007, the Standing Conference resolved to enhance the accreditation of study programmes through the implementation of a system accreditation scheme by which the internal quality assurance system of an entire higher education institution is assessed for the quality of its learning and teaching. The subject of assessment is whether the higher education institution provides for a quality management system ensuring the implementation of these criteria. System accreditation aims to reduce the administrative burden of higher education institutions and to accelerate certification.

11.4. Quality Assurance in Adult Education and Training

Responsible bodies

The employment agencies entrusted external certification bodies with the task of inspecting maintaining bodies for continuing education in the area of vocational continuing education as promoted by the Federal Employment Agency (Bundesagentur für Arbeit).

The Central Office for Distance Learning of the Länder of the Federal Republic of Germany (Staatliche Zentralstelle für Fernunterricht der Länder der Bundesrepublik Deutschland – ZFU) decides whether or not a distance learning course is to be approved.

Furthermore, the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung – BMBF) promotes comparative tests of continuing education media, continuing education measures and continuing education advice by Stiftung Warentest, Germany’s independent consumer-product testing agency.
Approaches and methods for quality assurance

The increasing importance of lifelong learning has also promoted the awareness of binding quality standards in the field of continuing education. The plural structure of maintaining bodies which support continuing education is also expressed in the number of different efforts and approaches for quality assurance in continuing education. Both jointly and individually, Federation and Länder promote numerous projects for improving quality assurance in continuing education.

In 2004, the support of continuing education was reformed with the aim of improving competition and transparency in the area of vocational continuing education as promoted by the Federal Employment Agency. Certification of the maintaining body of a continuing education measure or of the continuing education course by an expert body is a prerequisite before participants can obtain support in accordance with the Social Security Code III (Sozialgesetzbuch III – R165). Amongst other things, organisers of continuing education must prove that they apply a recognised quality assurance system.

The quality management models currently applied cover countrywide supra-regional procedures specific to general or continuing education, as well as systems that are regional or specific to particular associations or federations. An overview of the various quality management models in further education and training can be found in the publication Porträts von Qualitätsmanagement-Modellen für die Weiterbildung (portraits of quality management models for further education and training) from 2011, which was funded amongst others by the European Social Fund (ESF).

Since 1 January 1977, distance-learning courses provided by private organisers (institutes of distance-learning) must be approved by the state on the basis of the Law on the Protection of Participants in Distance Education (Fernunterrichtsschutzgesetz – R167). In the admission procedure, the subject-related and didactic quality of the learning material with regard to the objective of the course, as well as the advertising placed for the course and the form and content of the distance-learning contract entered into is examined by the Central Office for Distance Learning of the Länder of the Federal Republic of Germany. In 2007, the new quality standard PAS 1037 for providers of distance-learning courses, distance-teaching and E-learning was introduced. The new standard meets the specifications of the Federal Employment Agency for the certification of bodies of further education and furthermore relates to international standards of quality management. For newly developed distance-learning courses from providers who have already been certified in accordance with the new quality standard, a simplified admission procedure with the ZFU can be anticipated.

In October 2004, a quality certificate was introduced for all of Germany for suppliers in all areas of continuing education. The Learner-oriented Quality Certificate in Continuing Education, Version 2 (Lernerorientierte Qualitätstestierung in der Weiterbildung, Version 2 – LQW 2) quality seal was developed as part of the joint project Quality Certificate in Continuing Education (Qualitätstestierung in der Weiterbildung) of the Commission of the Federation and the Länder for Educational Planning and Research Promotion (Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung – BLK) and should provide orientation when searching for high-quality education offers.