

Learning tasks

As a further measure to support the *Länder* in the process of implementing the educational standards, the IQB, in collaboration with experts in subject-matter education, publishes collections of annotated learning tasks which teachers may use in class.

Pool of examination questions for the *Abitur*

In 2012, the Standing Conference (KMK) introduced educational standards for the German general higher education entrance qualification (*Abitur*). The IQB has been commissioned to coordinate the development of a pool of examination questions based on the educational standards, starting with the school year 2013–2014. The establishment of this pool aims to provide greater comparability of the *Abitur* examination across the *Länder* as well as to ensure the alignment of examination tasks with the educational standards. According to the timeline of the KMK, the pool will be continuously extended and made available to the *Länder* for *Abitur* examinations starting in the school year 2016–2017.

Research Data Centre

The Research Data Centre (*Forschungsdatenzentrum*, FDZ) at the IQB archives and documents data sets from national and international large-scale assessment studies and makes them available for re- and secondary analyses. The FDZ also offers a broad variety of training seminars, such as workshops on specific data sets and their appropriate analysis. Moreover, the FDZ organizes academies on advanced methodological issues in educational research and aims to promote the general infrastructure of research data in the field of education.

Research

As an academic institution, the IQB carries out various projects in the field of empirical educational research focusing on the following questions:

- How are students' competencies structured and how can they be assessed?
- Which factors influence educational success of children and adolescents?
- How can methodological and statistical requirements of educational testing and large-scale assessments best be met?
- Language skills are vital for school success. How can their development be measured and promoted?
- To what extent and under which circumstances do teachers successfully adopt competence-oriented teaching methods?

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Competence in Education.

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Institut zur Qualitätsentwicklung
im Bildungswesen



Establishment of the IQB

As a reaction to the disappointing results for Germany in international large-scale assessments of student achievement, such as TIMSS (*Trends in International Mathematics and Science Study*) and PISA (*Programme for International Student Assessment*), a number of steps have been taken towards the development and monitoring of educational quality in Germany.

A core element of these efforts undertaken by the *Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany* (KMK) was the introduction of National Educational Standards. These standards describe competencies and skills students are expected to have developed by the time they reach a certain point in their school career.

A key objective of educational standards is to shift attention to the outcomes of educational processes and to ensure greater comparability of educational requirements within the school system.

Educational standards passed by the Standing Conference (KMK)

	Primary Level	Secondary Level I	Secondary Level II
German	✓	✓	✓
Mathematics	✓	✓	✓
First Foreign Language (English, French)		✓	✓
Sciences (Biology, Chemistry, Physics)		✓	

The introduction of the educational standards in 2004 was accompanied by the foundation of the Institute for Educational Quality Improvement (IQB). As an academic institution of the German federal states (*Länder*), the IQB is an associated institute of Humboldt-Universität zu Berlin.

The IQB's mission

Teams of practitioners with years of teaching and administrative experience as well as scholars from various disciplines, mainly psychology, educational science and subject-matter education (*Fachdidaktik*), work together at the IQB on the following tasks:

Development of achievement tests and proficiency level models

Under the auspices of the IQB, experienced teachers develop test items designed to measure competencies aligned with the educational standards. These items are thoroughly evaluated by experts in subject-matter education and empirically tested prior to their use in national assessments.

Moreover, the IQB is in charge of developing proficiency level models as tools for interpreting test scores. These models provide a more concrete description of what students with a given test score are able to do ("can-do statements").

The models developed at the IQB typically comprise five proficiency levels, with level III representing the normative level (*Regelstandard*) as defined by the Standing Conference (KMK). This is the level students are, on average, expected to reach.

PL V	Optimal standard	Level of proficiency substantially above the normative standard	Is able to independently justify central arguments related to the text
PL IV	Normative standard "plus"	Level of proficiency moderately above the normative standard	Is able to comprehend essential aspects of the text so as to establish general coherency
PL III	Normative standard	Level of proficiency students are on average expected to reach	Is able to relate pieces of information located throughout the text and to rudimentarily comprehend the text as a whole
PL II	Minimum standard	Level of proficiency all students are expected to reach	Is able to relate pieces of information that are located close to each other in the text
PL I		Level of proficiency well below expectations according to the educational standards	Is able to identify individual pieces of information explicitly given in the text

Overview of the five proficiency levels (PL) as defined by the model for German – Reading at primary level (end of grade 4)

National Assessment Studies

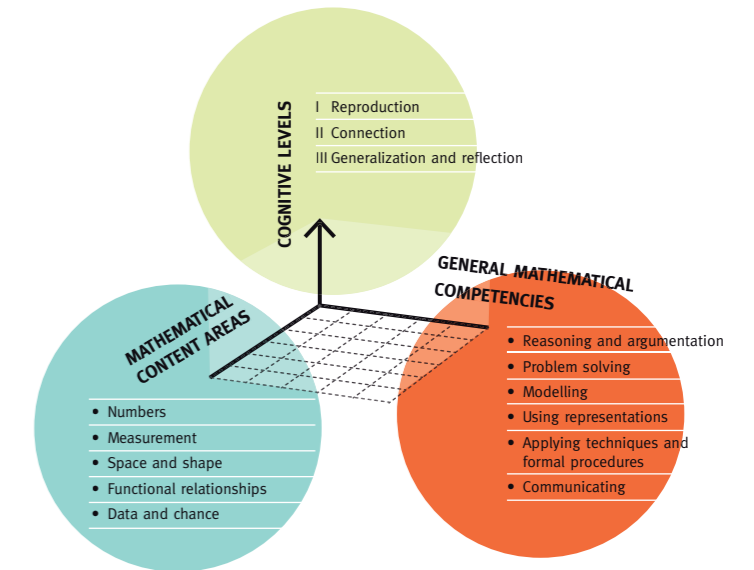
At regular intervals, the IQB conducts National Assessment Studies (*Ländervergleiche*) in order to determine the extent to which educational standards are being met in the 16 German federal states (*Länder*).

In the national reports, the achievement results are also broken down according to a number of student background characteristics (e.g., gender or socio-economic status). In this way, the IQB helps identify specific strengths and weaknesses of the *Länder's* respective school systems, thus providing them with vital information for targeted intervention programs in order to enhance educational quality.

Carried out parallel to the corresponding international large-scale assessments (PIRLS/TIMSS, PISA) the national assessments take place on a regular basis. At the primary level, they are scheduled every five years (from 2011), at the secondary level I every three years (from 2009).

State-wide comparison tests

While the national assessment studies are sample-based and aim at evaluating the educational quality at the system



Overview of the structural model of mathematical proficiency at the secondary school level

level of the *Länder*, the state-wide comparison tests (*Vergleichsarbeiten*) were introduced in order to determine achievement levels of all students at a certain grade. The *Länder* carry out these tests annually in spring.

The IQB coordinates both the development and piloting of items for the state-wide comparison tests in grades 3 (German and Mathematics), 6 (German), and 8 (German, Mathematics and English/French as a foreign language). The *Länder* themselves are then in charge of administering the tests and of reporting the results back to the schools.

The state-wide comparison tests provide teachers with information on the strengths and weaknesses of their students with regard to the educational standards. In concert with aligned teaching material provided together with the test results, this feedback serves to support each school and teacher in their efforts to optimize instructional quality. On a more general level, the testing scheme is expected to promote the implementation of competence-oriented teaching practices in schools throughout Germany.