

Glossary for the Database on Learning Assessments

Table 1. General information

National assessment: refers to a nationally-representative assessment of students' learning outcomes at a particular age or grade level. It provides information on a limited number of outcome measures that are considered important by policymakers, politicians and the broader educational community.

Public examination: an exit or end-point standardised examination that is generally set by a central federal/state examination board or department in order to promote, select or provide certification to all candidates who qualify or are supposed to have formally or informally learned and covered the curriculum of a formal education programme, as part of their requirements for graduation. The public examination is generally administered every year, at the end of the school year, to all students who wish to take this test.

Grades(s): a specific stage of instruction in initial education usually covered during an academic year. Students in the same grade are usually of similar age. This is also referred to as a 'class', 'cohort' or 'year'.

International Standard Classification of Education (ISCED): a classification system that provides a framework for the comprehensive statistical description of national educational systems and a methodology that translates national educational programmes into internationally comparable levels of education. The basic unit of classification in ISCED is the educational programme. ISCED also classifies programmes by field of study, programme orientation and destination.

ISCED level 1 – Primary education: primary education provides learning and educational activities typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy), and to establish a sound foundation for learning and solid understanding of core areas of knowledge and personal development, preparing for lower secondary education. It aims at learning at a basic level of complexity with little if any specialisation.

ISCED level 2 – Lower secondary education: programmes at ISCED level 2, or 'lower secondary' education, are typically designed to build upon the fundamental teaching and learning processes which begin at ISCED level 1. Usually, the educational aim is to lay the foundation for lifelong learning and human development on which education systems may systematically expand further educational opportunities. Programmes at this level are usually organized around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects.

ISCED level 3 – Upper secondary education: programmes at ISCED level 3, or ‘upper secondary’ education, are typically designed to complete secondary education in preparation for tertiary education, or to provide skills relevant to employment, or both. Programmes at this level offer students more varied, specialised and in-depth instruction than programmes at lower secondary education (ISCED level 2). They are more differentiated, with an increased range of options and streams available.

Programme orientation: dimension of classification of educational programmes. The orientation of a programme is distinguished starting at ISCED level 2. There are two categories of orientation: general and vocational education (terms used for secondary education levels).

General education: education programmes that are designed to develop learners’ general knowledge, skills and competencies, as well as literacy and numeracy skills, often to prepare participants for more advanced education programmes at the same or a higher ISCED level and to lay the foundation for lifelong learning. General education includes education programmes that are designed to prepare participants for entry into vocational education but do not prepare for employment in a particular occupation, trade or class of occupations or trades, nor lead directly to a labour market relevant qualification.

Vocational education: education that is designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation, trade, or class of occupations or trades. Vocational education may have work-based components (e.g. apprenticeships). Successful completion of such programmes leads to labour market-relevant vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labour market.

School type: educational institutions are classified as either public or private. Private institutions are further classified between government dependent private and independent private institutions. The classification between public and private is made according to whether a public agency or a private entity has the ultimate control over the institution. Ultimate control is decided with reference to who has the power to determine the general policies and activities of the institution and to appoint the officers managing the school. Ultimate control will usually also extend to the decision to open or close the institution. As many institutions are under the operational control of a governing body, the constitution of that body will also have a bearing on the classification. *Source: UNESCO-UIS/OECD/Eurostat, 2013*

Table 2. Stakeholders and funding

Stakeholder: is an organization or individual involved at any stage of development or implementation of the assessment/examination – from test development to sampling, administration, analysis and dissemination. Stakeholders can include the government (Ministry of Education or equivalent, entities linked to the Ministry of Education, other ministries); a non-governmental organization (national or international); a university (national or foreign); a private company; or any other organization or individual (teacher unions, parent associations, other).

Funding source: refers to the source of financing of the development or implementation of the assessment/examination. Sources of funding are classified into national budget (includes allocation determined by law, discretionary allocation, allocation determined by policy and ministerial budget); local funding (grants or donations from local organizations); foreign funding (grants or donations from international or foreign organizations); and other sources (fees paid by test takers, loans by development banks, other).

Purpose of the assessment: refers to the reason why the assessment/examination is conducted: i) certification or selection; ii) provide feedback (design of individualised instructional plan, support to teacher training, relevant materials, etc.); iii) monitoring quality (regional-level monitoring of learning outcomes or monitoring quality of education levels); or iv) policy planning (planning education policy reforms) or other (school or education accountability, promotion of competition among schools, other).

Table 3. Cycle of implementation

First year: year in which the assessment/examination was established in the country.

Last year: most recent year the assessment/examination was administered in the country.

Cycle of data collection: frequency with which the assessment/examination is carried out. The cycle of data collection can be fixed (annual, biennial, every three years or more) or variable.

Table 4. Target population

Selection method: method used to select the population to which the assessment/examination is administered.

Census: a census-based assessment/examination is administered to the whole population of students enrolled at the target grade(s) or belonging to the target age range(s).

Sample: a sample-based assessment is administered only to a subset of individuals from a specific population, formed according to a selection process (with or without replacement and at random or not). A sample that is formed through the random selection of individuals based on known probabilities is called a random or probability sample. A non-random sample is formed on the basis of a subjective method of selection.

Out-of-school children: children in the official primary or lower secondary school-age range who are not enrolled in either primary or secondary schools.

Students with special needs: students with disabilities who require specific arrangements to enable them to take the assessment/examination. If not attending special schools, these students may also need additional support in school to enable them to make satisfactory progress. The term disabilities covers impairments (problem in body function or structure), activity limitations (difficulty encountered by an individual in executing a task or action), and participation restrictions (problem experienced by an individual in involvement in life situations).

Hearing impairment: permanent or fluctuating impairment in hearing that adversely affects a child's educational performance. This includes deafness, a hearing impairment so severe that a child is impaired in processing linguistic information through hearing, with or without amplification. *Source: US Congress, IDEA 1997, modified*

Visual impairment: impairment in vision, including partial sight and blindness, which, even with correction, adversely affects a child's educational performance. *Source: US Congress, IDEA 1997*

Physical disability: severe bodily impairment that adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly, impairments caused by disease and impairments from other causes. Students with orthopedic impairments usually need physical accommodations or assistive technology. *Source: OECD, modified*

Autism: a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a child's educational performance. Other characteristics associated with autism are engaging in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. The term autism does not apply if the child's educational performance is adversely affected primarily because the child has an emotional disturbance. *Source: US Congress, IDEA 1997*

Emotional disturbance: a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: an inability to learn that cannot be explained by intellectual, sensory, or health factors, an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance. *Source: US Congress, IDEA 1997*

Speech or language impairment: a communication disorder such as stuttering, impaired articulation, language impairment, or a voice impairment that adversely affects a child's educational performance. *Source: US Congress, IDEA 1997*

Environmental effect: when students who are unable to cope with the assessment environment are accommodated. For example, they may be given an alternative test or the chance to write it at a different time.

Table 5. Subjects assessed

Language: includes the assessment of a wide range of communication skills, such as writing, reading and oral skills, in either the mother tongue or a second language.

Numeracy: includes the assessment of a wide range of skills linked to the use of algebra, arithmetic, calculus, geometry and problem-solving.

Sciences: includes the assessment of subjects such as physics, chemistry, biology, environmental studies and natural sciences.

Social studies: includes the assessment of history and geography.

Civic education: includes the assessment of civic education and citizenship.

Other subjects: includes the assessment of religion; computer science; arts; vocational classes; physical education; economy and commerce; health; accounting; social skills; among others that do not fall under the previous subjects.

Table 6. Test format and item type

Test format: the format of an assessment or test can be written, oral, practical, or a combination of these.

Item: a single question or task of an assessment test. An item comprises three parts: i) the stimulus that provides the context of the task in text, audio or video format; ii) a clear description of the task to be performed based on the stimuli; and iii) in the case of multiple choice questions, the response options.

Multiple choice items: multiple choice items consist of a stem and a number of response options. Sometimes, when a true/false response is required, only two options are required. However, providing four to five options is more common. The correct option is the *key*, and the *distractors* are the incorrect options. *Source: World Bank, 2008*

Open-ended short constructed response question: items or questions where students are required to develop a short written answer.

Essay: a structured written answer in the form of several paragraphs.

Individual project: the application of knowledge or skills through a specific practical project. An individual project is generally part of the assessment in technical/vocational education programmes.

Group project: the application of knowledge or skills through a specific practical project, conducted by a group of students.

Stimulus material: the stimulus material provides the context for an item. It may be a piece of text, a diagram, a graph, a table, a map, a chart, or a combination of these (*source: World Bank, 2008*). The stimulus can have multiple formats:

- **Continuous text:** sentences organised into paragraphs. Examples of continuous texts include newspaper reports, essays, novels, short stories, reviews and letters. *Source: OECD, PISA 2009 Assessment Framework*
- **Non-continuous text:** also known as documents, written text organised differently than continuous texts and requiring a different reading approach. Examples of non-continuous text objects are lists, tables, graphs, diagrams, advertisements, schedules, catalogues, indexes and forms. *Source: OECD, PISA 2009 Assessment Framework*
- **Mixed text:** coherent set of written texts comprising elements in continuous and non-continuous format. The components are mutually supportive through coherence and cohesion links at the local and overall level (for example, a prose explanation including a graph or table). This is a common format in magazines, reference books and reports, where authors use a variety of presentations to communicate information. *Source: OECD, PISA 2009 Assessment Framework*
- **Multiple texts:** set of written texts that have been generated independently, each text making sense independently, and are juxtaposed for the purpose of the assessment. The relationship between the texts may not be obvious; they may be complementary or may contradict one another (for example, a set of information drawn from different companies' websites and which may or may not provide similar travel advice or directions to tourists. Multiple texts may have a unique format, or may

include continuous and non-continuous texts. *Source: OECD, PISA 2009 Assessment Framework*

- **Audio:** content strictly delivered using sounds, requiring the test-takers to listen to understand the information. The content can be played from a recording or delivered by a person.
- **Video:** content consisting of a combination of audio information and images.

Table 7. Measurement model and reporting metrics

Classical test theory (CTT): measurement theory which consists of a set of assumptions about the relationships between actual or observed test scores and the factors that affect the scores. It is used for measuring and managing test and item performance data. In contrast to item response theory, it comprises a set of more traditional psychometric methods. In CTT, the global level ability of a test taker depends on the overall test difficulty and vice-versa. There is no way to obtain parameters of each test item or the level ability of the test taker in each item on a scale performance continuum as in IRT and Rasch models.

Item Response Theory (IRT): group of mathematical models for relating and predicting the individual's performance on a test item to his level of performance on a scale of the ability or trait being measured, and the item's characteristic parameters: guessing, discrimination and difficulty parameters.

Reporting metrics: different forms of reporting assessment results (or achievement on a given test), which can be reported for individuals or aggregated for specific groups. The possible forms (metrics) of reporting results include percentage of correct items, scale scores and proficiency levels.

Scale scores: ability estimates that are generated from Item Response Theory (IRT) models, which are based on students' response vectors. Scale scores are designed to provide a metric that is consistent for different versions of a test and consistent across time.

Percentage of correct items: the number of test items that a student answers correctly, divided by the total number of test items, times 100 is that student's percentage score on that test. That is, the score is a percentage rather than the number of correct responses.

Proficiency levels: it refers to the classification of students into bands of performance that are identified by series of cut-off scores on the performance scale. Proficiency levels are commonly used in criterion-referenced tests. For each of these levels, there should be descriptions of what it means to be in the level, in terms of knowledge, skills, attitudes, etc. Each level (or band) represents a degree of mastery of what the test purports to measure. The same levels of proficiency can be expressed with words or letters. For example, "below basic", "basic", "above basic"; or high, middle, low; or A, B, C.

Reporting level: refers to the level at which specific reports are drafted and provided to inform the results on the assessment/examination. Possible levels of reporting are: student; school; local; regional; and national.

Table 8. Disaggregation and dissemination of results

Background questionnaires: a set of items designed to collect information about key variables that might help explain differences in the performance of students on an achievement test. Because questionnaires will be designed to address topics that respondents are likely to know about, the topics will vary for students, parents, teachers, and principals. *Source: World Bank 2008*

Student questionnaire: a set of items usually designed to obtain information on the demographic characteristics of students, their perceptions and attitudes towards learning, study habits, use of educational resources (books, IT), etc.

Family questionnaire: a set of items usually designed to obtain information on household characteristics, such as parents' educational background and occupation, family attitudes towards education and expectations of educational achievement for children. Information about housing facilities, presence of durable goods and access to educational resources, such as books, are also often collected.

Teacher questionnaire: a set of items usually designed to obtain information on the experience and qualifications of teachers, teaching practices, expectations for student performance, relations with the community and the educational authorities, etc.

Principal questionnaire: a set of items usually designed to obtain general information about the functioning of the school, such as management practices, school environment, school records, etc.

Disaggregation of results: refers to the different variables used to present results by population subgroups. Data are commonly disaggregated by: sex, urban/rural area, major city, type of school, etc.

Dissemination of results: refers to the platform used to communicate and spread the results of the assessment/examination. These include: reports (available in printed or online), database (available online), media (radio, television or newspaper coverage of results) and others (e.g. workshops).