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IBE

Glossary of Curriculum Terminology



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Introduction

In many countries around the world the curriculum is increasingly viewed as laying the foundation for comprehensive educational reforms aimed at achieving quality learning outcomes. Contemporary curriculum development processes more frequently involve public discussion and consultation with a range of stakeholders, and the curriculum is progressively evolving into a topic of debate engaging policy-makers, experts, practitioners, and society at large.

Curriculum terminology is no longer only used by specialists in this field who are aware of all the complexities involved, and this may generate confusion and misinterpretation. Many curriculum-related terms are frequently used interchangeably even if they refer to different concepts and, depending on the context, the same term may be understood in many different ways by various stakeholders. An example is the diversity of definitions for the term 'curriculum', a word that in many national languages does not even exist.

The main purpose of the UNESCO IBE Glossary of curriculum-related terminology is not to establish standard universally applicable definitions. Rather, it is intended to be a working reference tool that can be used in a range of activities and help to stimulate reflection among all those involved in curriculum development initiatives. Given the strong connection between concepts and practice, such a Glossary may contribute to productive reflection within national education systems, as well as regional and international contexts, on the role of curriculum terminology in promoting meaningful improvements.

The first draft of this Glossary was developed by Mr Massimo Amadio, Senior Programme Specialist, and Ms Ruth Creamer, Documentalist, with the assistance of Mr Hanspeter Geisseler, Assistant Programme Specialist, and Mr Konstantin Doulamis (Greece and Cyprus), Intern, at UNESCO IBE on the basis of (a) previous glossaries created for several IBE curriculum projects by Ms Dakmara Georgescu, Programme Specialist, and Mr Philip Stabback (Australia), IBE consultant, and (b) specialized terminology selected from a range of authoritative sources (see bibliography). The draft Glossary was then shared with several curriculum specialists and experts in the field of organizing information, who were invited to provide their feedback on the document. Comments and suggestions were received from:

Ms Imke Behr, Senior Assistant Librarian, UNESCO Institute for Lifelong Learning (Hamburg);

Ms Rosette Defise (Canada), Researcher, University of Quebec at Montreal (UNESCO Chair in Curriculum Development);

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Ms Lori Rabinovitch (Canada), Researcher, University of Quebec at Montreal (UNESCO Chair in Curriculum Development); and

Mr Philip Stabback (Australia), Curriculum Specialist, previously at the Curriculum Directorate, Department of Education and Training, New South Wales (Australia).

An updated version of the Glossary was then prepared taking into account the contributions received, and the second draft was made available online as a consultation document inviting other curriculum specialists and organizations to offer feedback. Additional comments and suggestions were provided by:

Mr Jan Berkvens (Netherlands), Curriculum Development Specialist, Netherlands Institute for Curriculum Development (SLO);

Mr Gwang-Chol Chang, Senior Programme Specialist and Chief, Education Policy & Reform Unit, UNESCO Asia-Pacific Regional Bureau for Education (Bangkok);

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Mr Kerry John Kennedy (Australia), Research Chair Professor of Curriculum Studies and Director of the Centre for Governance and Citizenship, Hong Kong Institute of Education;

Korea Institute for Curriculum and Evaluation–KICE, Republic of Korea (various researchers);

Ms Karen Lam (Singapore), Senior Curriculum Policy Officer, Curriculum Policy Office, Ministry of Education, Singapore;

Mr Phil Lambert PSM (Australia), General Manager Curriculum, Australian Curriculum, Assessment and Reporting Authority;

Mr David Leat (United Kingdom), Professor of Curriculum Innovation, Newcastle University;

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The IBE is deeply indebted to all the colleagues listed above for their valuable input and recommendations.

Based on the feedback to the consultation document, a new version of the Glossary has been prepared. The final document has been further revised by a small editorial team comprising: Mr Massimo Amadio and Ms Ruth Creamer, UNESCO IBE; Ms Dakmara Georgescu, Programme Specialist, UNESCO Regional Bureau for Education in the Arab States and Cluster Office (Beirut); Mr Jan Berkvens; Mr Alexandru Crisan (Romania), Lead Education Consultant, World Bank and Kuwait Government Partnership Programme for Education; and Mr Philip Stabback.

As pointed out by one contributor, “the glossary is very useful in helping curriculum developers and education stakeholders have a common understanding of terms that are often used in curriculum development, implementation and assessment but with varied meanings.” The IBE therefore hopes that the final outcome of this collaborative process involving many colleagues around the world will support curriculum specialists, practitioners and educationalists in their challenging task of enhancing the quality of learning and learning outcomes.

As a working reference tool, this Glossary is made available online in electronic format only and will continue to be revised based on feedback from curriculum specialists and interested parties including practitioners and other users, who are cordially invited to send their comments to UNESCO IBE.

Geneva, Switzerland, September 2013

A

Ability	An inherent or acquired faculty for doing or achieving something. In typical educational practice, the terms 'abilities' and 'aptitudes' are used interchangeably to denote an individual's potential for acquiring and applying new knowledge or skills. (<i>Adapted from: Pellegrino 1996</i>).
Academic year	The annual period during which students attend courses or take final examinations, not taking minor breaks into account. It may be shorter than 12 months but would typically not be shorter than 9 months. It may vary for different levels of education or types of educational institutions within a country. This is also referred to as the 'school year', mainly for the pre-tertiary level. (<i>Source: UIS 2012</i>).
Accountability	In general terms, accountability can be defined as a process by which actors provide reasons for their actions against the backdrop of possible negative (or positive) consequences. (<i>Source: Hooge, Burns & Wilkoszewski 2012</i>). The concept of accountability is particularly important in the context of decentralized education systems that encourage school autonomy, including decisions concerning the curriculum.
Achieved curriculum	See 'Attained curriculum'.
Adolescent learners	Adolescence is a distinct stage that marks the transition between childhood and adulthood. The Swiss developmental psychologist Jean Piaget described adolescence as the period during which individuals' cognitive abilities fully mature. According to Piaget, the transition from late childhood to adolescence is marked by the attainment of formal operational thought, the hallmark of which is abstract reasoning. Advances in the field of neuroscience have shown that the frontal cortex changes dramatically during adolescence. It is this part of the brain that controls higher-level cognitive processes such as planning, metacognition, and multitasking. Adolescent learners thrive in school environments that acknowledge and support their growing desire for autonomy, peer interaction, and abstract cognitive thinking, as well as the increasing salience of identity-related issues and romantic relationships. (<i>Source: Seel 2012</i>).
Achievement standards	A means of defining levels of performance that can take a variety of forms. In some contexts they are used to mark a minimum level of acceptable performance. In other settings, more general descriptions of

performance that sort learners into achievement levels, such as basic, proficient, and advanced, are used. They provide teachers with targets for instruction by specifying what, and how much, learners must be able to do in order to demonstrate mastery of content standards and the achievement level that is called for. They provide clear directions to developers of tests about the kinds of performance situation and tasks that will be used to make judgements about learner proficiency. They help to clarify for the public what it means for a learner to be classified at a particular level. To test developers and psychometricians, an achievement standard is represented by the point on a test score scale that separates one level of achievement from another, e.g. a passing score from a failing one. To educators involved in the development of curriculum, the term can mean a description of what a learner knows and can do to demonstrate proficiency against a standard. (Source: Wilson & Bertenthal 2005).

See also 'Content standards'.

Adult education

Education specifically targeted at individuals who are regarded as adults by their society to improve their technical or professional qualifications, further develop their abilities, enrich their knowledge with the purpose to complete a level of formal education, or to acquire, refresh or update their knowledge, skills and competencies in a particular field. (Source: UIS 2012). In many contexts today, competencies acquired in non-formal or informal education – including different forms of adult education – are increasingly recognized as part of lifelong learning.

Apprenticeship

A system of training in both formal and non-formal education regulated by law or custom which combines on-the-job training and work experience while in paid employment with formal off-the-job training. The apprentice may enter into a contract of training or training agreement with an employer who imposes mutual obligations on both parties. (Adapted from: Deißinger & Hellwig 2011).

Articulation (in the curriculum)

See 'Vertical and horizontal articulation (of the curriculum)'.

Assessment

The process through which the progress and achievements of a learner or learners is measured or judged in compliance with specific quality criteria.

Assessment as learning

Assessment that actively involves learners and encourages them to think about the way they learn. It occurs when learners reflect on and regulate and monitor their learning progress. It comprises learner reflection and peer and self-assessment.

See also 'Self-assessment', 'Assessment for learning'.

Assessment for learning	Assessment of learner's progress and achievement, the primary purpose of which is to support and enhance learning by adapting the educational process to meet the learner's needs. Learners are made aware of their strengths and weaknesses while being provided with adequate support to overcome learning difficulties. See also 'Formative assessment'.
Assessment of learning	Assessment of learner's achievement the primary purpose of which is to provide information about what has been learned at a particular point in time. This process often involves the use of standardized tests or examinations. It is often, though not always, used for the purpose of promotion and/or graduation. See also 'Centrally-set examinations', 'Summative assessment', 'Test'.
Assessment of learning outcomes	Assessment of an individual's achievement of stated learning outcomes, using a variety of methods (written, oral and practical tests/examinations, projects and portfolios) during or at the end of an education programme or a defined part of that programme. (Adapted from: UIS 2012).
Attained curriculum	Curriculum which indicates the knowledge, understanding, skills and attitudes that learners actually acquire as a result of teaching and learning, assessed through different means and/or demonstrated in practice. It may differ from the intended and the implemented curriculum. See also 'Intended curriculum', 'Implemented curriculum'.
Attainment targets	Targets which specify the knowledge, understanding and skills related to specific subjects or disciplines that learners are expected to have acquired by the end of a programme or educational level and to be assessed against a predetermined set of criteria. They are normally organized in clearly articulated levels specifying the degree of proficiency to be attained. See also 'Achievement standards'.
Attitude	A learned tendency or readiness to evaluate things or react to some ideas, persons or situations in certain ways, either consciously or unconsciously. Attitudes are underpinned by values and beliefs and have an influence on behaviour.
Authentic assessment	Assessment of learner performance that is as closely related to a real life situation as possible and is not artificial or contrived. One way to make an assessment more authentic is to have learners choose the

particular task they will use to demonstrate what they have learned. (Source: ASCD). Authentic assessment involves the collection of information from a rich range of sources, including, importantly, the individual. Portfolios, checklists, work samples, diaries, permanent products, pencil-and-paper tests, observations and other forms of assessment may shed light on what the learner knows or is able to demonstrate, and the direction(s) required in one's learning programme. (Source: Wyatt-Smith & Joy Cumming 2009).
See also 'Performance assessment'.

Authentic learning

Learning related to real-life or 'authentic' situations – the kinds of problems faced by citizens, consumers, or professionals. Advocates complain that what is taught in school has little relationship to anything people do in the world outside of school; efforts to make learning more authentic are intended to overcome that problem. Authentic learning situations require teamwork, problem-solving skills, and the ability to organize and prioritize the tasks needed to complete the project. Learners should know what is expected before beginning their work. Consultation with others, including the teacher or instructor, is encouraged. The goal is to produce a high-quality solution to a real problem, not to see how much the learner can remember. (Adapted from: ASCD).

Awarding body

An organization or consortium, recognized by the regulatory authorities, whose purpose is to award accredited qualifications.

B

Basic education

The foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training. (Source: UNESCO 1992). Basic education typically comprises primary and lower secondary education, and increasingly one or more years of pre-primary education. It usually encompasses compulsory schooling.

Basic learning needs

Needs which comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning. The scope of basic learning needs and how

they should be met varies with individual countries and cultures, and inevitably, changes with the passage of time. (Source: UNESCO 1992).

Basic skills

The fundamental knowledge (i.e. declarative and procedural) as well as operational aspects of knowledge needed for learning, work and life. Within the curriculum, literacy and numeracy are normally considered as foundational, essential or basic skills. The term can include a range of skills that individuals need to live successfully in contemporary society.

Benchmark

A reference point or standard against which performance or achievements can be assessed. (Source: OECD 2002).

Benchmarking

A systematic process of comparing the activities, processes and/or performance of a programme, organization, country, learner, etc. against a theoretical, political or existing reference with the aim of identifying ways to improve performance. (Source: CEDEFOP 2011).

Benchmark test

A test designed to measure student achievement and mastery of predetermined curriculum standards. Its main purposes are to provide information that can be used to guide the teaching and learning process, as well as to determine placement levels before commencing intervention. See also 'Diagnostic assessment'.

Bilingual education

A language policy in education under which two languages are used as mediums of instruction. There are several models of bilingual education depending on the goal pursued, the most common being the additive and subtractive models. In additive bilingual education programmes both languages are given the same value and recognition, are systematically taught and learned throughout the years of schooling, and the goal for learners is the development of literacy and communication in two languages. In subtractive or transitional bilingual education programmes, one language (e.g. the first language or learner's mother tongue, frequently a minority language) is used to favour the acquisition of the other language (e.g. the second or subsequent language, often the official or dominant language) and its teaching and learning is progressively reduced, as the goal for learners is to develop literacy and communication in the second language.

Blended learning

Structured opportunities to learn which use more than one teaching or training method, inside or outside the classroom, through which at least part of the content is delivered online. This definition includes different

learning or instructional methods (lecture, discussion, guided practice, reading, games, case study, simulation), different delivery methods (face-to-face or computer mediated), different scheduling (synchronous or asynchronous) and different levels of guidance (individual, instructor or expert led, or group/social learning). More commonly, blended learning refers to a combination of face-to-face teaching and technologies. (*Adapted from: Seel 2012*). It involves changing traditional schooling methods and organization by taking advantage of the new technologies.

Block teaching

Refers to a 'block' of time – for example, a number of weeks – being devoted to a particular topic or prescribed set of learning objectives/outcomes. It can also indicate a way of organizing the school day using long class periods (more than 60 minutes and typically 90-minutes long) to incorporate more activities and materials to engage the learners. It can be used to make time allocation more flexible to enhance activities such as project- and problem-based learning.

Bloom's taxonomy

A classification of educational objectives developed in the 1950s by a group of researchers headed by Benjamin Bloom of the University of Chicago. The taxonomy comprises three learning domains — cognitive, affective and psychomotor. The affective domain relates to emotions, attitudes, appreciations, and values, such as enjoying, conserving, respecting, and supporting. It is divided into five main subcategories, namely: receiving, responding, valuing, organization, and characterization. The psychomotor domain refers to the motor-skills or behavioural skills that constitute the relationship between the cognitive process and physical movement in education. The cognitive domain is described as the recall or recognition of knowledge and the development of intellectual abilities and skills. Each domain is organized as a matrix of increasing levels of difficulty, with examples of activities and keywords for describing mastery of each level. With regard to the cognitive domain, the classification provides a way to organize thinking skills into six levels, from the most basic to the more complex levels of thinking (e.g. knowledge, comprehension, application, analysis, synthesis and evaluation). The taxonomy is probably the original reference of the term higher-order thinking. (*Adapted from: ASCD; Seel 2012*).

During the 1990s Lorin Anderson, one of his former students, updated the taxonomy changing the Bloom's six major categories from noun to verb forms, as the taxonomy reflects different forms of thinking, and thinking is an active process. In the revised Bloom's taxonomy the six categories and cognitive processes

are: remembering (retrieving, recognizing, and recalling relevant knowledge); understanding (constructing meaning through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining); applying (carrying out or using a procedure through executing, or implementing); analysing (breaking information into parts to explore understanding and relationships through differentiating, organizing, and attributing); evaluating (making judgements based on criteria and standards through checking and critiquing); and creating (putting elements together to form a coherent or functional whole; generating new ideas, products or ways of viewing things). Higher-order thinking refers to the cognitive processes of analysing, evaluating and creating. (*Source: Anderson & Krathwohl 2001*). There are also other revised versions of the Bloom's taxonomy.

C

Career guidance

Services and activities intended to assist individuals of any age and at any point throughout their lives, to make educational, training and occupational choices and to manage their careers. Such services may be found in schools, universities and colleges, in training institutions, in public employment services, in the workplace, in the voluntary or community sector and in the private sector. The activities may take place on an individual or group basis, and may be face-to-face or at a distance (including help lines and web-based services). They include career information provision (in print, ICT-based and other forms), assessment and self-assessment tools, counselling interviews, career education programmes (to help individuals develop their self-awareness, opportunity awareness, and career management skills), taster programmes (to sample options before choosing them), work search programmes, and transition services. (*Source: OECD & European Commission 2004*).

Carrier subject

A subject that by its scope and nature is more likely to help learners develop certain knowledge, skills and attitudes that are not the domain of a single subject. An example is environment and sustainability 'carried by' biology and geography.

Centrally-set examinations

An external, standardized summative assessment developed at the central level that normally has influence on a learner's eligibility to progress to higher levels of education. Usually central examinations occur at the end of an educational level and their results can be used to sort learners into certain types of schools

as well as to certify learning and award qualifications. Sometimes they are used in the early years of schooling and become more widespread at the lower and upper secondary levels. Central examinations are considered 'standardized' if they are designed to ensure that the questions, conditions for administering, marking procedures, and interpretations are consistent and comparable among learners (i.e. are based on some standards such as content and/or performance standards of the curriculum). Many countries have hybrid forms where assessments are centrally developed but locally administered and/or marked. In this case, countries tend to use guidance materials and moderation to ensure the reliability of local marking. Standardized examinations tend to focus on a few priority subjects and frequently some examination subjects are compulsory for all candidates. In standardized central examinations that have formal consequences for individual learners, the most frequently used assessment formats are open-ended written tasks. Multiple-choice items are also frequently used, especially in language subjects examinations. (*Adapted from: OECD 2013*). Also referred to as 'national examinations' or 'public examinations'.

See also: 'Assessment of learning', 'Summative assessment'.

Child-centred approach	Placing the child at the notional centre of the learning process in which they are active participants. Involves giving children choices of learning activities, with the teacher acting as facilitator of learning.
Child-friendly environment	A supportive educational and community environment that is inclusive, healthy, friendly, protective and rights-based. The Child-Friendly School model, developed by UNICEF, promotes inclusiveness, gender-sensitivity, tolerance, dignity and personal empowerment.
Classroom-based assessment (CBA)	Assessment carried out by teachers based on the learning that has taken place within the context of a classroom, without reference to assessment being conducted in other classes or groups. It offers feedback to teachers and students on the quality of the learning performance supporting its ongoing improvement. Also referred to as 'classroom assessment' and 'teacher-based assessment'.
Cognitive neuroscience	Study and development of mind and brain research aimed at investigating the psychological, computational, and neuroscientific bases of cognition. (<i>Source: OECD-CERI 2007</i>).
Cognitive science	Study of the mind. An interdisciplinary science that draws upon many fields including neuroscience,

psychology, philosophy, computer science, artificial intelligence, and linguistics. The purpose of cognitive science is to develop models that help explain human cognition – perception, thinking, and learning. (Source: OECD-CERI 2007).

Collaborative learning

A process through which learners at various performance levels work together in small groups toward a common goal. It is a learner-centred approach derived from social learning theories as well as the socio-constructivist perspective on learning. Collaborative learning is a relationship among learners that fosters positive interdependence, individual accountability, and interpersonal skills. For collaborative learning to be effective, teaching must be viewed as a process of developing and enhancing students' ability to learn. The instructor's role is not to transmit information, but to serve as a facilitator for learning. This involves creating and managing meaningful learning experiences and stimulating learners' thinking through real-world problems. Yet, the task must be clearly defined and be guided by specific objectives. Sometimes cooperative and collaborative learning are used interchangeably but cooperative work usually involves dividing work among the team members, whilst collaborative work means all the team members tackle the problems together in a coordinated effort. (*Adapted from:* Seel 2012). 'Collaboration' is frequently included among key competences/competencies and 21st century skills.

Competence

Within the European Union area a competence is defined as a combination of knowledge, skills and attitudes appropriate to the context. Competence indicates the ability to apply learning outcomes adequately in a defined context (education, work, personal or professional development). Competence is not limited to cognitive elements (involving the use of theory, concepts or tacit knowledge); it also encompasses functional aspects (involving technical skills) as well as interpersonal attributes (e.g. social or organizational skills) and ethical values. (CEDEFOP 2011).

Competences can be domain-specific, e.g. relating to knowledge, skills and attitudes within one specific subject or discipline, or general/transversal because they have relevance to all domains/subjects. In some contexts the term 'skills' (in a broader sense) is sometimes used as an equivalent of 'competences'. See also 'Key competences/competencies or skills'.

Competency-based curriculum

A curriculum that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about

in terms of traditionally-defined subject content. In principle such a curriculum is learner-centred and adaptive to the changing needs of students, teachers and society. It implies that learning activities and environments are chosen so that learners can acquire and apply the knowledge, skills and attitudes to situations they encounter in everyday life. Competency-based curricula are usually designed around a set of key competences/competencies that can be cross-curricular and/or subject-bound.

Competency-based Education and Training (CBET)

An approach to vocational education and training in which skills, knowledge and attitudes are specified in order to define, steer and help to achieve competence standards, mostly within a kind of national qualifications framework. (*Source: Deißinger & Hellwig 2011*).

See also 'Vocational education and training', 'National Qualifications Framework'.

Concept map

An external network-like representation of knowledge structures consisting of spatially grouped nodes with keywords representing concepts, connecting lines representing the semantic connection of concepts, and labels on the lines specifying the kind of semantic relation. In its simplest form, a concept map would consist of two concepts and a linking word, e.g. cats – are – mammals. Concept maps are potentially valuable tools for planning, learning, and (self-) assessment. When used for planning activities, concept maps allow an overview and the detection of the 'red line' running through different topics, steps, or key concepts. In learning settings, concept mapping can facilitate organization and elaboration processes leading eventually to the construction of high-level cognitive schemas. For assessment, concept maps provide the possibility to tap into a learner's cognitive structure and externalize, for both the learner and the teacher, what the learner already knows and does not know. (*Source: Seel 2012*).

Constructivism

A learning theory which places the learner at the centre of the educational process on the understanding that the learner actively constructs knowledge rather than passively receiving it. Thus, an individual's knowledge is a function of one's prior experiences, mental structures, and beliefs that are used to interpret objects and events. Largely influenced by the works of the psychologists Jean Piaget and Lev Vygotsky.

See also 'Learning'.

Consultation (in curriculum)

The process of seeking and valuing opinions and experience of experts and various, legitimate stakeholders that is an integral part of the broader

	curriculum development/review process.
Contact period	The scheduled interaction time of teachers and learners engaged in active teaching and learning activities inside and outside the classroom.
Content	See 'Learning content'.
Content standards	<p>Specifications of what all learners are expected to know and be able to do within a particular field of study, discipline or subject at different grade levels, ages, or other criteria. These standards should be clear, detailed, and complete; reasonable in scope; rigorous and scientifically correct; and they should be built around a conceptual framework that reflects sound models of student learning. They should also describe examples of performance expectations for learners in clear and specific terms so that all concerned will know what is expected of them. (Source: Wilson & Bertenthal 2005).</p> <p>See also 'Achievement standards', 'Standards-based curriculum'.</p>
Core curriculum	The body of knowledge, skills and attitudes expected to be learned by all students, generally related to a set of subjects and learning areas that are common to all students, such as languages, mathematics, arts, physical education, science and social studies.
Core learning areas	See 'Core curriculum'.
Creativity, creative thinking	<p>Traditionally creativity has been seen as an ability to respond adaptively to the needs for new approaches and new products. It is often defined as the ability to bring something new into existence purposefully. The concept of creativity has expanded and changed in recent years. A new emphasis on 'everyday' and 'social' creativity is shifting the focus from individual genius in some fields (e.g. fine arts, advanced science) to collaborative creativity in everyday life, with new implications for learning and education. In order to produce a stable aptitude in learners to think and behave creatively, it is generally recommended to:</p> <p>(a) develop an integrated structure of various mental mechanisms, each playing a role in a particular kind of situation or in a particular phase of the creative process; (b) use materials that mimic real-life situations or, at least, help trainees to recognize the relationship between the training tasks and such situations; (c) consider individuals' spontaneous beliefs and tendencies toward creative thinking and start the teaching and learning process from their naïve creative competencies, with the hope of changing spontaneous beliefs, tendencies, and strategies by means of an internal restructuring process; (d) show a metacognitive</p>

sensibility, that is, train learners not only to execute creative strategies, but also to control their execution; and (e) encourage learners to accept the risks and discomforts that creativity involves, to avoid the tendency to stick to familiar responses and to induce learners to look for novelty. (*Adapted from: Seel 2012*). Creativity is frequently included among key competences/competencies and 21st century skills. See also 'Bloom's taxonomy'.

Criterion-referenced assessment

Assessment of a learner's progress and achievement against a pre-determined set of criteria.

Critical thinking

A process that involves asking appropriate questions, gathering and creatively sorting through relevant information, relating new information to existing knowledge, re-examining beliefs and assumptions, reasoning logically, and drawing reliable and trustworthy conclusions. Critical thinking calls for persistent effort to apply theoretical constructs to understanding the problem, consider evidence, and evaluate methods or techniques for forming a judgement. The cognitive skills of analysis, interpretation, inference, explanation, evaluation, and of monitoring and correcting one's own reasoning are at the heart of critical thinking. (*Source: Seel 2012*). Attributes such as curiosity and flexibility and a questioning attitude are closely related to critical thinking. Increasingly referred to as a key competence/competency and 21st century skill.

Cross-curricular approach

An approach to formulating curriculum that favours the dynamic use of learning topics and themes to be covered and skills/competencies to be developed in a number of learning areas across the curriculum.

Cross-cutting issues

See 'Cross-cutting themes'.

Cross-cutting themes

Important curriculum content which is to be covered across subjects (or disciplines or learning areas), rather than being taught and learned in one particular subject. These themes can connect programme content across disciplinary boundaries; enrich the curriculum without overloading it through the introduction of additional teaching subjects; and facilitate interdisciplinary thinking and collaborative learning. Examples include human rights, gender issues, peace education, and education for sustainable development. See also 'Curriculum structure'.

Culturally responsive curriculum

A curriculum that respects learners' cultures and prior experiences. It acknowledges and values the legitimacy of different cultures, not just the dominant culture of a society, and encourages intercultural

understanding. It incorporates cultural aspects into the curriculum, rather than adding them on as an extra or separate module or course.

Culturally responsive pedagogy

Teaching methodologies which address the need to be sensitive and responsive to cultural differences within the classroom.

Curriculum (plural curricula)

In the simplest terms, 'curriculum' is a description of what, why, how and how well students should learn in a systematic and intentional way. The curriculum is not an end in itself but rather a means to fostering quality learning. (Source: UNESCO IBE 2011). The term curriculum has many definitions, ranging from a planned 'course of study' (derived from the Latin) to an all-embracing view that includes all the learning experiences for which the school is responsible (e.g. "the curriculum is the totality of experiences which are planned for children and young people through their education, wherever they are being educated", Scottish Government 2009). Some examples of definitions: "The curriculum is a plan incorporating a structured series of intended learning outcomes and associated learning experiences, generally organized as a related combination or series of courses." (Australian Thesaurus of Education Descriptors). The curriculum is the "inventory of activities implemented to design, organize and plan an education or training action, including definition of learning objectives, content, methods (including assessment) and material, as well as arrangements for training teachers and trainers." (CEDEFOP 2011). "A curriculum is a plan for learning." (Taba 1962). "The curriculum defines the educational foundations and contents, their sequencing in relation to the amount of time available for the learning experiences, the characteristics of the teaching institutions, the characteristics of the learning experiences, in particular from the point of view of methods to be used, the resources for learning and teaching (e.g. textbooks and new technologies), evaluation and teachers' profiles." (Braslavsky 2003). The curriculum can also be viewed as a political and social agreement that reflects a society's common vision while taking into account local, national and global needs and expectations. Thus contemporary curriculum development and reform processes increasingly involve public discussion and consultation with a wide range of stakeholders. Curriculum design has evolved into a topic of considerable debate – with frequently conflicting perspectives – engaging policy-makers, experts, practitioners and society at large.

Curriculum adaptation

A process of adjusting the existing curriculum to meet the diverse needs of learners of all abilities.

Curriculum aims/goals	Broad descriptions of purposes or ends stated in general terms without criteria of achievement or mastery. Curriculum aims or goals relate to educational aims and philosophy. They are programmatic and normally do not delineate the specific courses or specific items of content. Typically they refer to the accomplishment of groups (e.g. all learners, learners in general, most learners) rather than the achievement of individual learners. They are broad enough to lead to specific curriculum objectives. Examples include: 'students will learn to respect and get along with people of different cultures'; 'students will develop a sense of civic responsibility'; 'students will attain an appreciation for literature, art, music'. See also 'Curriculum objectives'.
Curriculum alignment	A process aimed at ensuring coherence and consistency between the intended outcomes as specified in the formal curriculum and teaching methods, assessment tasks, and learning activities in the classroom.
Curriculum area	See 'Learning area'.
Curriculum change	Modifications introduced in the curriculum to improve or adapt it to new circumstances or priorities. This can be done through: minor adjustments that do not affect the curriculum structure; modernization to ensure that the curriculum remains current and relevant, reflects new developments in society and adequately prepares learners for life; innovation that brings new approaches and solutions; and large scale, system-wide reform that entirely reshapes the existing curriculum.
Curriculum coherence	A characteristic of curriculum indicating the extent to which the curriculum aims and content, as well as textbooks, teaching methods, and assessment are all aligned and reinforce one another. Some research findings suggest that a high level of curriculum coherence is associated with high performing systems. (<i>Adapted from: Oates 2010</i>). See also 'Curriculum alignment'.
Curriculum design	The process of meaningfully constructing and interconnecting the components of a curriculum so as to address such fundamental questions as what needs to be learned and how and why, the resources required and how learning will be assessed.
Curriculum development	The process of designing the national, local or school curriculum. In order to produce a quality curriculum, this process should be planned and systematic. It should value the input of stakeholders and also cater for sustainability and long-term impact. In contemporary educational practice curriculum

development is seen as a comprehensive cycle of development, implementation, evaluation and revision to ensure that the curriculum is up-to-date and relevant. (*Adapted from: UNESCO IBE 2011*).

Curriculum differentiation The process of modifying or adapting the curriculum according to the different ability levels of the learners in the classroom. It is a strategy that teachers can use with a view to providing meaningful learning experiences for all learners. Differentiation takes account of learner differences and matches curriculum content and teaching and assessment methods to learning styles and learner needs and characteristics. It may focus on input, task, outcome, output, response, resources or support. (*Source: UNESCO 2004b*).

Curriculum evaluation The process of measuring and judging the extent to which the planned courses, programmes, learning activities and opportunities as expressed in the formal curriculum actually produce the expected results. If carried out effectively, this process can enable decisions to be made about improvements and future progress.

Curriculum framework An overarching document that fulfills some or all of the following: places national statements of vision, economic development and education policy in a curriculum context; sets out broad aims and objectives of the curriculum at the various stages of schooling; explains the educational philosophy underlying the curriculum and approaches to teaching, learning and assessment that are fundamental to that philosophy; outlines the curriculum structure, its subjects or learning areas and the rationale for the inclusion of each in the curriculum; allocates time to various subjects and/or learning areas in each grade or stage; provides guidelines to subject curricula developers, teacher trainers and textbook writers; prescribes requirements for curriculum implementation, monitoring and evaluation. (*Source: UNESCO IBE 2011*).

The term can also be used to refer to a document which specifies the general outcomes (to be attained throughout the grades), the specific outcomes (to be attained by the end of a given grade), and the achievement indicators (e.g. a representative list of the depth, breadth, and expectations of the outcome) for a particular subject or subject area. It can also be used with reference to an educational stage or level (e.g. primary education curriculum framework).

Curriculum guidelines A document or set of documents usually providing guidance for teachers and instructors on approaches and procedures for a successful planning and implementation of the curriculum at school, local or

national level. Guidelines can focus on a specific learning area or subject (e.g. health education curriculum guidelines), a particular educational level (e.g. curriculum guidelines for preschool education), a specific group of learners (e.g. learners with special educational needs, minorities, immigrants) or more broadly on the curriculum (e.g. curriculum, instruction and assessment guidelines). Curriculum guidelines can provide ideas, suggestions and recommendations intended to help teachers to make informed decisions, or be more prescriptive and detailed specifying the content, activities, tasks, and materials to be used by teachers.

Curriculum harmonization

Initiatives developed by sub-regional and regional organizations (for example the Organization of Eastern Caribbean States and the East African Community) intended to harmonize curricular contents, standards, and assessment in some subject areas such as mathematics and science education, as a way to foster integration and facilitate the mobility of students and teachers across countries. Harmonization is seen as a means of achieving an increasingly networked and interrelated group of curriculum and examination systems and improving education against common agreed benchmarks of excellence. Curriculum harmonization is also an important issue within decentralized and federal education systems.

Curriculum implementation

The process of putting the formal curriculum into practice. In the case of a new or revised curriculum this process ideally includes school development and improvement processes; fostered school leadership and ethos; in-service teacher training and the development of new textbooks, teaching and learning materials and resources, as well as guidelines.

Curriculum in action

See 'Implemented curriculum'.

Curriculum integration

The process of combining/articulating learning content and subjects with a view to promoting holistic and comprehensive learning.
See also 'Interdisciplinary approach', 'Multidisciplinary approach', 'Transdisciplinary approach'.

Curriculum models

Broad theoretical frameworks used to design and organize the curriculum according to certain principles and criteria. For example, the product model that emphasizes plans and intentions, and the process model that focuses on activities and effects. Other examples include subject-centred (e.g. traditional or discipline-based curriculum), learner-centred, and problem-centred models.

Curriculum monitoring	A process of gathering information for evaluating the effectiveness of the curriculum and ensuring that the intended, implemented and attained curricula are aligned. This process typically focuses on such issues as relevance, consistency, practicality, effectiveness, scaling-up and sustainability, as well as whether learners are achieving the expected learning outcomes. It measures the extent to which the curriculum is commensurate with the diverse needs of all learners.
Curriculum objectives	Specific statements setting measurable expectations for what learners should know and be able to do, described either in terms of learning outcomes (what the learners are expected to learn), products or performance (what learners will produce as a result of a learning activity) or processes (describing the focus of learning activities). They can be seen as refinements of curriculum aims/goals that, for example, specify: performance standards or those skills and knowledge the learners are expected to be able to demonstrate; inferred or precise degree of mastery; and the conditions under which the performance will take place. In terms of effectiveness, curriculum objectives should: be concise and understandable to teachers, learners and parents; be feasible for the teachers and learners to accomplish; encompass previous learning and require the learner to integrate and then apply certain knowledge, skills, and attitudes in order to demonstrate achievement; and be measurable on a cumulative basis and at different stages of the learner's educational career. See also 'Curriculum aims/goals'.
Curriculum organizers	Elements of the curriculum used as the main reference or basis for selecting and organizing learning experiences and defining the curriculum architecture. These can be subjects, themes, instructional time, learning outcomes, etc.
Curriculum planning	The process concerned with making decisions about what to learn, why, and how to organize the teaching and learning process taking into account existing curriculum requirements and the resources available. At the general level, it often results in the definition of a broad curriculum framework, as well as a syllabus for each subject to be used as reference by individual schools. At the school level, it involves developing course and assessment plans for different subjects. At the classroom level, it involves developing more detailed plans for learning units, individual lessons and lesson sequences.
Curriculum policy	Formal decisions made by government or education authorities that have a direct or significant effect on the

curriculum, its development and implementation. These decisions are normally recorded in a range of official documents.

Curriculum relevance	Applicability and appropriateness of a curriculum to the needs, interests, aspirations and expectations of learners and society in general.
Curriculum review cycle	A systematic approach to evaluating, reviewing and revising curricular areas and programmes within a specific timeframe which aims to identify gaps and weaknesses with a view to increasing curriculum effectiveness and continually improving student learning experiences. Normally it involves several phases including: research and selection; revision and development; implementation; and evaluation and monitoring.
Curriculum strands	Structural elements of the curriculum designating the way in which content is organized for the purpose of planning for student learning. The term 'strands' is used to indicate: (a) the disciplines within a learning area, e.g. history, geography, economics and civics under 'social studies', each with its own associated goals for learning; (b) domains that group the related general and specific learning outcomes or achievement aims and objectives within a particular learning area or discipline. For example, in the New Zealand Curriculum of 2007 science education includes 'nature of science' as a core, unifying strand, and 'the living world', 'the planet earth and beyond', 'the physical world' and 'the material world' as strands providing contexts for learning. Another example is mathematics which can include, depending on the country, the following content strands: 'number sense and operations', 'algebra', 'geometry', 'measurement', and 'statistics and probability'.
Curriculum structure	The way in which the curriculum is organized, including the subjects or learning areas, when they must be studied and the 'pattern' in which they must be studied. The curriculum may be composed, for example, of core and elective subjects studied with some variation between grades. It may also comprise cross-cutting or cross-curricular themes.
Curriculum studies	A field dealing with an array of sources that provide the following: (a) perspective on questions about what curriculum is or ought to be; (b) alternative or complementary paradigms of inquiry that enable explorations of such questions; and (c) diverse possibilities for proposing and enacting responses to the questions in educational theory and settings of educational practice. (<i>Source: Kridel 2010</i>).

Curriculum trends

Increasingly important changes that are taking place in the field of curriculum to respond to current and anticipated developments in society and education.

D**Developmental cognitive neuroscience**

A multidimensional and interdisciplinary field that attempts to explain how cognitive development is supported by changes in underlying brain structure and function, and how brain organization changes over developmental time. Developmental cognitive neuroscience lies at the intersection of multiple fields including brain imaging, electrophysiology, neurogenetics, computational modeling of development, and comparative research with nonhuman primates. Neuroscience provides a means by which to constrain our understanding of cognitive development and learning to biologically plausible mechanisms. Developmental cognitive neuroscience will help determine the neurobiological processes of learning and development, and the mechanisms that support changes (neuronal plasticity) in brain function and structure over time. (*Source: Seel 2012*).

Developmental curriculum

A curriculum designed for learners with severe cognitive impairments reflecting their developmental stage. It should be age and developmentally appropriate, rather than merely being a curriculum designed for younger learners. Such a curriculum, while taking specific challenges into account, should nevertheless contribute to fully developing the learner's potential.

See also 'Functional curriculum'.

Diagnostic assessment

Assessment aimed at identifying a learner's strengths and weaknesses with a view to taking necessary action to enhance learning. Also used prior to the teaching and learning process to appraise the learner's readiness or level of achievement.

Didactics

Term originating from the Greek noun 'teaching' and stemming from the German tradition of theorizing classroom learning and teaching. It is a singular noun spelt in the plural form, indicating that connotations to the somewhat pejorative English word 'didactic' (e.g. text overburdened with instructive matter or oversimplifying way of teaching) are not intended. Didactics serves as a major theory in teacher education and curriculum development, especially in the German-speaking and Scandinavian countries, as well as in the Russian Federation. (*Source: Seel 2012*). In French, German, and Scandinavian educational contexts there is a marked tendency to

include educational practice as part of the concept of didactics where the term is viewed as the theory and practice of teaching and learning. In a simplified way, the concern of didactics can be described as follows: what should be taught and learned (the content aspect); how do we teach and learn (the aspects of transmitting and learning); and to what purpose or intention should something be taught and learned (the goal/aims aspect). (*Source: Kridel 2010*). See also 'Pedagogy'.

Differentiated instruction

An approach to teaching that involves offering several different learning experiences and proactively addressing students' varied needs to maximize learning opportunities for each student in the classroom. It requires teachers to be flexible in their approach and adjust the curriculum and presentation of information to learners of different abilities.

Discipline-based curriculum

A model of curriculum in which content is divided into separate and distinct subjects or disciplines, such as language, science, mathematics, and social studies. The term 'discipline-based' or 'subject-based' covers the full range of distinct subjects or fields of study, both the more traditional such as mathematics or physics and the newer areas of study, such as media education. Learners must have frequent and recurring opportunities to practice their disciplinary skills throughout their fields of study in a way that allows later courses to build on the work of earlier ones. The instructional emphasis of discipline-based curriculum tends to be on specific, current, and factual information and skills as it emerges from the discipline experts. A discipline-based curriculum approach characterises teaching practice within one subject and encourages teachers for specialization, depth of content knowledge, and integrity to the conventions of their discipline. (*Adapted from: Kridel 2010*). See also 'Subject/subject area'.

E

E-assessment/ICT-based assessment

Assessment involving the use of information and communication technologies (ICT). ICT can be used (a) to deliver traditional assessment formats more effectively and efficiently, and (b) to change the way competences are assessed and develop formats that facilitate the assessment of competences that have been difficult to capture with traditional assessment formats. ICT can be used to develop tests such as computer-based tests (often a digital version of the traditional paper-based tests), computer adaptive tests (e.g. able to change their form in response to the input

from the learner being tested), and test-creation applications. ICT-based assessments may also incorporate simulation, interactivity and constructed response formats. Sophisticated ICT programmes that score open-ended performances, measure learners' reasoning processes, examine how learners go about thinking through problems and even provide feedback to learners have been developed in some settings, predominantly in the United States. (*Adapted from: OECD 2013*).

Early childhood development (ECD)

An integrated concept that cuts across multiple sectors – including health and nutrition, education, and social protection – and refers to the physical, cognitive, linguistic, and socio-emotional development of young children. The definition of ECD includes children up to age 8 on the premise that a successful transition to primary school depends not only on the child's school readiness, but also on the readiness of schools to adapt to the specific needs of young learners in the early grades. ECD is also known as early childhood care and development (ECCD) and encompasses early childhood education (ECE), early childhood care and education (ECCE), and other designations. (*Source: Naudeau et al. 2011*).

Early childhood education (ECE)

ECE provides learning and educational activities with a holistic approach to support children's early cognitive, physical, social and emotional development and introduces young children to organized instruction outside of the family context. It aims to develop socio-emotional skills necessary for participation in school and society as well as some of the skills needed for academic readiness and to prepare children for entry into primary education. Within the framework of ISCED 2011 it includes early childhood educational development and pre-primary education. The former has educational content designed for younger children (in the age range of 0 to 2 years), whilst the latter is designed for children from age 3 years to the start of primary education. (*Source: UIS 2012*).
See also 'ISCED'.

Education for All (EFA)

An international initiative first launched at the 'World Conference on Education for All' (Jomtien, Thailand, 1990) by UNESCO, UNDP, UNFPA, UNICEF and the World Bank. Participants endorsed an 'expanded vision of learning' and pledged to universalize primary education and massively reduce illiteracy by the end of the decade. Ten years later, with many countries far from having reached this goal, a broad coalition of national governments, civil society groups, and development agencies met again in Dakar, Senegal, and affirmed the commitment to achieving EFA by the year 2015. They identified six key education goals

which aim to meet the learning needs of all children, youth and adults by 2015 (e.g. the Dakar Framework for Action). The six goals are: (a) expand and improve comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged children; (b) ensure that by 2015 all children, particularly girls, those in difficult circumstances, and those belonging to ethnic minorities, have access to and complete, free and compulsory primary education of good quality; (c) ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills programmes; (d) achieve a 50% improvement in adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults; (e) eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality; and (f) improve all aspects of the quality of education and ensure the excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills. (Source: World Education Forum 2000).

E-learning

All forms of electronically supported teaching and learning, especially the web-based and computer-based acquisition of, and engagement with, knowledge and skills. It may take place in or out of the classroom. It is often an essential component of distant education and may involve virtual learning environments.

Elective curriculum

Courses or subjects from which learners can choose according to their interests and needs, also referred to as 'electives'. Typically offered in secondary and tertiary education and complementing the core curriculum that all learners must follow. 'Electives' usually refer to subjects to be chosen within a range of options where opting for one or more subjects is compulsory. In some cases 'elective' and 'optional' mean the same thing, while in other cases 'optional' refers to a subject that is not compulsory.

Elementary education

See 'Primary education'.

Emerging issues

New or important learning content that is considered relevant for learners. As the curriculum needs to respond to emerging issues as they arise (for example, HIV and AIDS prevention, peace education, sustainable development, etc.), one approach that can be adopted is to integrate or mainstream knowledge, skills and attitudes that will bring the desired behaviours related to these issues into the existing learning areas or subjects, thereby engaging learners

in the process of solving 'real-life' problems. (*Adapted from: UNICEF 2000*).

Emotional intelligence	The capacity to reason about emotions, and of emotions to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth. (<i>Source: Mayer, Salovey & Caruso 2004</i>).
Evaluation (in teaching and learning)	A systematic process aimed at judging the effectiveness of any teaching and learning programme.
Expanded learning time	Lengthening of the school day, school week or school year for all students to focus on core academic and enrichment activities to enhance learner success.
External assessment	A process and method of assessment developed and used by an examination body or agency other than the learner's school. This process commonly involves standardized testing, and often serves to grade candidates for further educational opportunities and/or for certification purposes.
Extra-curricular activities	A range of activities organized outside of the regular school day, curriculum or course intended to meet learners' interests. These activities can help learners become more involved in their school or community and can help them to develop social and soft skills and to promote wellbeing. These activities can include athletics, sport, voluntary work, photography, drama, music, etc. In some countries, this is also referred to as 'co-curricular activities'.

F

Fairness (in assessment)	Refers to the consideration of learner's needs and characteristics, and any reasonable adjustments that need to be applied to take account of them. It is important to ensure that the learner is informed about, understands and is able to participate in the assessment process, and agrees that the process is appropriate. It also includes an opportunity for the person being assessed to challenge the result of the assessment and to be reassessed if necessary. Ideally an assessment should not discriminate between learners except on grounds of the ability being assessed. See also 'Validity (in assessment)'.
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Formal curriculum	The learning experiences and opportunities that are provided to learners in the context of formal education and serve as a basis for certification processes.
Formal education	Education that is institutionalized, intentional and planned through public organizations and recognized private bodies and – in their totality – constitute the formal education system of a country. Formal education programmes are thus recognized as such by the relevant national education authorities or equivalent authorities, e.g. any other institution in cooperation with the national or sub-national education authorities. Vocational education, special needs education and some parts of adult education are often recognized as being part of the formal education system. (<i>Source: UIS 2012</i>).
Formative assessment	Assessment conducted throughout the educational process with a view to enhancing student learning. It implies: eliciting evidence about learning to close the gap between current and desired performance (so that action can be taken to close the gap); providing feedback to students; and involving students in the assessment and learning process. (<i>Source: CCSSO 2008</i>). See also ‘Assessment for learning’.
Four pillars-oriented curriculum design	Curriculum that takes into account the four pillars defined as the foundations of education in the Report to UNESCO of the International Commission on Education for the Twenty-first Century (Delors <i>et al.</i> 1996), namely: learning to know, learning to do, learning to live together, and learning to be. See also ‘Curriculum design’.
Functional curriculum	A curriculum designed to teach skills deemed essential for living and working independently to learners with cognitive impairments. See also ‘Developmental curriculum’.

G

Games-based learning	A learning process that is facilitated by the use of a game. Games can be used at any level from preschool through to lifelong learning in a variety of learning situations, from behaviour modification and rote learning to supporting learning in complex domains such as evaluation or creativity. (<i>Source: Seel 2012</i>).
Gender equality	According to the International Labour Office, gender equality refers to the enjoyment of equal rights, opportunities and treatment by men and women and by boys and girls in all spheres of life. It asserts that

people's rights, responsibilities, social status and access to resources do not depend on whether they are born male or female. Gender equality implies that all men and women are free to develop their personal abilities and make life choices without the limitations set by stereotypes or prejudices about gender roles or the characteristics of men and women. (Source: ILO 2007).

Gender mainstreaming in the curriculum

Ensuring consideration of gender issues as part of the design, implementation and monitoring of policies or programmes with the aim of achieving and maintaining gender equality.

General capabilities

In the Australian Curriculum (2013), 'general capabilities' encompass the knowledge, skills, behaviours and dispositions that, together with curriculum content in each learning area and the cross-curriculum priorities, will assist students to live and work successfully in the twenty-first century. The Australian Curriculum includes seven general capabilities, namely: literacy; numeracy; Information and Communication Technology (ICT) capability; critical and creative thinking; personal and social capability; ethical understanding; and intercultural understanding. Students develop capability when they apply knowledge and skills confidently, effectively and appropriately in complex and changing circumstances, both in their learning at school and in their lives outside school. The encouragement of positive behaviours and dispositions underpins all general capabilities. While each of the capabilities covers a particular body of learning, it should be noted that some knowledge, skills, dispositions and behaviours are shared across capabilities. In some cases, a particular aspect of one capability is covered in another, for example, the application of social and ethical protocols in the use of digital technologies is included in ICT capability. When combined in learning area contexts, general capabilities enhance and complement each other. The capabilities are intended to be 'general' and operate across the whole curriculum. More 'specialized' knowledge and skills are detailed in learning areas, particularly in relation to literacy, numeracy and ICT. (Source: ACARA 2013).

See also 'Key competences/competencies or skills', 'Twenty-first century skills'.

General education

Education programmes that are designed to develop learners' general knowledge, skills and attitudes, as well as literacy and numeracy skills, often to prepare students for more advanced education programmes and to lay the foundation for lifelong learning. General education includes education programmes that are designed to prepare students 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. (*Adapted from: UIS 2012*).

General or generic competencies

See 'Key competences/competencies or skills', 'Twenty-first century skills'.

Gifted learners

Gifted learners are those whose potential is distinctly above average in one or more of the following domains: intellectual, creative, social and physical. They need services and activities not ordinarily provided by the school in order to fully develop their potential.

H

Hard skills

Skills typically related to the professional or job-related knowledge, procedures, or technical abilities necessary for an occupation. Normally they are easily observed and measured.
See also 'Soft skills'.

Hidden curriculum

This term has various interpretations and in general it refers to unofficial norms, behaviours and values that teachers teach and students learn at school, or that are directly/indirectly transferred by the school culture or ethos, and which are not necessarily a product of conscious intention. The hidden curriculum acknowledges that schooling takes place in a broad social and cultural environment that has an influence on learning. Increasingly referred to as 'school-related factors'.

High-stakes test/exam

An examination which may have significant consequences for learners, such as determining their future educational pathways. Also refers to forms and uses of assessment that may be of 'high stakes' for teachers and schools within an accountability system that links results to rewards and sanctions.
See also 'Centrally-set examinations'.

Higher-order thinking

See 'Bloom's taxonomy'.

Holistic learning approach

An approach that seeks to fully activate all aspects of the learner's personality (intellect, emotions, imagination, body) for more effective and comprehensive learning.

Homework

Any activity related to the school programme that learners are asked to complete outside of lesson time at school and that can take place in the home or in the community. The type of homework set by schools

varies. In the early years, activities are usually based on supporting literacy, numeracy and thinking skills. In the junior phase of learning, homework is more likely to focus on reading, revising, report writing, investigating and project work. Learners in the senior years are likely to undertake a range of homework activities dependent on the course of study being completed. (*Adapted from: Queensland Department of Education and the Arts 2004*).

I

ICCS (International Civic and Citizenship Education Study)

ICCS, conducted by the International Association for the Evaluation of Educational Achievement (IEA) in 2009, investigates the ways in which young people are prepared to undertake their roles as citizens in the 21st century in a range of countries. It reports on student achievement in a test of knowledge, conceptual understanding, and competencies in civic and citizenship education. It also provides evidence on student attitudes relating to civics and citizenship. It focuses on grade 8 students, i.e. students approximately 14 years of age.

Implemented curriculum

The actual teaching and learning activities taking place in schools through interaction between learners and teachers as well as among learners, e.g. how the intended curriculum is translated into practice and actually delivered. Also defined as the 'curriculum in action' or the 'taught curriculum'.
See also 'Attained curriculum', 'Intended curriculum'.

Inclusive curriculum

Curriculum which takes into consideration and caters for the diverse needs, previous experiences, interests and personal characteristics of all learners. It attempts to ensure that all students are part of the shared learning experiences of the classroom and that equal opportunities are provided regardless of learner differences.

Inclusive education

UNESCO defines inclusive education as a process of strengthening the capacity of the education system to reach out to all learners and can thus be understood as a key strategy to achieve Education for All. As an overall principle, it should guide all education policies and practices, starting from the fact that education is a basic human right and the foundation for a more just and equal society. (*Source: UNESCO 2009*). Inclusive schools are based upon a child-centred pedagogy capable of successfully educating all children, including those who have serious disadvantages and disabilities. The merit of such schools is not only that they are capable of providing quality education to all

children; their establishment is a crucial step in helping to change discriminatory attitudes, in creating welcoming communities and in developing an inclusive society. (*Source: UNESCO 1994*).

Informal learning

Forms of learning that are intentional or deliberate but are not institutionalized. It is consequently less organized and structured than either formal or non-formal education. Informal learning may include learning activities that occur in the family, workplace, local community and daily life, on a self-directed, family-directed or socially-directed basis. (*Source: UIS 2012*).

Information and Communication Technologies (ICT)

A diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices) and telephony (fixed or mobile, satellite, visio/video-conferencing, etc.). (*Source: UIS 2009*).

Inquiry-based learning

A process that provides opportunities for learners to construct their own understanding of the complexity of the natural and human world around them. Many models of inquiry-based learning share some common features such as: investigation into a relevant issue, problem or concept; a learner-centred approach; the discovery and examination of the complexity of understanding and the involvement of thinking and reflection in the learning process. A curriculum adopting this approach implies that learners work with new and challenging content and concepts, connect new information to former knowledge, select thinking and learning strategies deliberately and plan, monitor, and evaluate their own thinking processes. (*Adapted from: Seel 2012*).

Instruction

The creation and implementation of purposefully developed plans for guiding the process by which learners gain knowledge and understanding, and develop skills, attitudes, appreciations and values. Instruction is frequently associated with the term 'curriculum' and generally refers to the teaching methods and learning activities that a teacher uses to deliver the curriculum in the classroom. The terms 'teaching' and 'instruction' are often used interchangeably. (*Source: Kridel 2010*).
See also 'Teaching'.

Instructional time

The amount of time during which learners receive instruction from a classroom teacher in a school or a

virtual context. Instructional time does not include holidays or teacher professional development days when learners are not expected to be in school; breaks during the school day; or time spent on learning outside of school (e.g. homework, tutoring). Intended instructional time is usually specified in school or education policies or regulations. Note that the intended instructional time may be very different from the actual instructional time learners receive. (Source: UIS-IBE 2013).

See also 'Learning time'.

Intended curriculum

A set of formal documents which specify what the relevant national education authorities and society expect that students will learn at school in terms of knowledge, understanding, skills, values, and attitudes to be acquired and developed, and how the outcomes of the teaching and learning process will be assessed. It is usually embodied in curriculum framework(s) and guides, syllabi, textbooks, teacher's guides, content of tests and examinations, regulations, policies and other official documents. Also referred to as the 'official curriculum' and the 'planned curriculum'.

See also 'Attained curriculum', 'Implemented curriculum'.

Interactive teaching and learning

The practice of involving learners in the educational process by encouraging them to bring their own experience and knowledge into the process, while also contributing to defining or organizing their learning.

Intercultural understanding

Awareness, understanding and appreciation of one's own and other cultures. It implies openness towards and respect for other cultures.

Interdisciplinary approach

An approach to curriculum integration that generates an understanding of themes and ideas that cut across disciplines and of the connections between different disciplines and their relationship to the real world. It normally emphasizes process and meaning rather than product and content by combining contents, theories, methodologies and perspectives from two or more disciplines.

See also 'Multidisciplinary approach', 'Transdisciplinary approach'.

International assessments of student achievement

See 'ICCS', 'PIRLS', 'PISA', 'TIMSS'.

International benchmarking (and the curriculum)

The term benchmarking is used to describe a large variety of different measurement and evaluation technologies which have been collected with one single aim: the improvement of organizational performance. Benchmarking can be conducted using a

case study approach or through performance indicators. International indicators provide an opportunity to compare a country performance with that of other countries, to identify similarities and differences between one system and others, and to suggest new approaches to the challenge of providing a world-class education. (*Source: Wyatt 2004*). Policy debates and decision-making processes with regard to the curriculum increasingly refer to international benchmarks or the need to benchmark to international standards as a tool to ensure high quality, effectiveness and accountability and achieve a world-class education system. While evidence from international comparisons is certainly useful to inform national policies, most researchers and analysts recommend being cautious in interpreting the success of others.

International Standard Classification of Education (ISCED)

ISCED is a framework to classify educational activities as defined in programmes and the resulting qualifications into internationally agreed categories. ISCED classifies education programmes by their content using two main cross-classification variables: levels of education and fields of education. The basic concepts and definitions of ISCED are intended to be internationally valid and comprehensive of the full range of education systems. ISCED is a product of international agreement and adopted formally by the General Conference of UNESCO Member States. (*Source: UIS 2012*).

K

Key competences/competencies or skills

Within the European Union area key competences are defined as the sum of skills (basic and new basic skills) needed to live in a contemporary knowledge society. In their recommendation on key competences for lifelong learning (2006), the European Parliament and the Council set out eight key competences: communication in the mother tongue; communication in foreign languages; competences in mathematics, science and technology; digital competence; learning to learn; interpersonal, intercultural and social competences, and civic competence; entrepreneurship; and cultural expression. (*Source: CEDEFOP 2011*). The recommendation of the European Parliament and the Council also states that the key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. Many of the competences overlap and interlock: aspects essential to one domain will support competence in another. Competence in the fundamental basic skills of

language, literacy, numeracy and in information and communication technologies (ICT) is an essential foundation for learning, and learning to learn supports all learning activities. Critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings play a role in all eight key competences. (*Source: European Parliament 2006*).

Curriculum policies increasingly focus on competences that students are expected to develop during the whole process of learning across specific subjects or disciplines and that they need to succeed in education and for personal development, employment and inclusion in a knowledge society. A variety of terms are used to indicate these competences, the most frequent ones being competences or competencies (defined as key, core, general, generic, basic, cross-curricular or transversal competences) and skills (defined as key, foundation, core, basic, essential, cross-thematic, cross-curricular or 21st century skills). Beyond the European Union area, several organizations, partnerships and consortia have defined and endorsed different core competences/skills frameworks.

See also 'Twenty-first century skills'.

Key stages of the curriculum

A way of organizing the curriculum into blocks of school years and normally covering the period of compulsory schooling. This typically implies defining the knowledge, skills, attitudes and the related attainment targets/learning outcomes appropriate for the learner's age and maturity level within each stage. Key stages of the curriculum may not necessarily overlap with formal educational stages.

Knowledge

There are many definitions and forms of knowledge. It can be described as the body of concepts and factual information (data), including their interrelated structures and patterns, concerning the natural and social environment as well as our understanding of the world, people and society, gained through learning and/or experience. Declarative knowledge points to 'knowing what' (e.g. factual knowledge), while procedural knowledge to 'knowing how', e.g. knowledge of specific functions and procedures to perform a complex process, task or activity. Other forms of knowledge often considered are tacit and explicit knowledge (see, for example, CEDEFOP 2011). The former is knowledge learners possess which influences cognitive processing; however, they may not necessarily express it or be aware of it. The latter is knowledge a learner is conscious of, including tacit knowledge that converts into an explicit form by becoming an 'object of thought'.

Knowledge-based economy

An expression coined to describe trends in advanced economies towards greater dependence on knowledge, information and high skill levels, and the increasing need for ready access to all of these by the business and public sectors. (*Source: OECD 2008*).

Knowledge society

According to UNESCO, knowledge societies are about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development. They require an empowering social vision that encompasses plurality, inclusion, solidarity and participation. (*Source: UNESCO 2005b*). The need for continuous learning is a general characteristic of the knowledge society and the capacity for each individual to learn throughout life is crucial.

L**Learner centredness**

An approach to organizing teaching, learning and assessment based on the learner's personal characteristics, needs and interests.

Learning

The complex and long-term psychosocial process consisting of the individual acquisition or modification of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours through experience, practice, study or instruction. (*Adapted from: UIS 2012*). Note that the definition of learning depends on the philosophical and psychological approach adopted. There are at least three different models in defining the learning process. Behaviourism views learning as a measurable change of behaviour as a result of the joint action of a number of environmental factors. Cognitive theories emphasize internal mental organization of knowledge, stressing the acquisition of knowledge, mental structures, and the processing of information. Constructivism views learning as a process in which the learner actively constructs new ideas or concepts based on prior knowledge and/or experience. (*Source: Kridel 2010*). See also 'Teaching'.

Learning area

Grouping of traditionally discrete but related subjects with the explicit aim of integrating students' learning. For example, the learning area 'social sciences/studies' can include elements of geography, history, citizenship, economy/ commerce, philosophy, and sociology. (*Adapted from: UNESCO IBE 2011*). Many education systems organize the curriculum of general education around broad learning areas or fields of learning. For example: language and communication (including a first and a second

language); mathematical thinking; exploration and understanding of the natural and social world (including natural sciences, geography, history, biology, physics, and chemistry); and personal and social development (including artistic education, citizenship, ethics and physical education). (Mexico, *Study plan of basic education*, 2011).

Learning content	The topics, themes, beliefs, behaviours, concepts and facts, often grouped within each subject or learning area under knowledge, skills, values and attitudes, that are expected to be learned and form the basis of teaching and learning.
Learning environment	This term is used in a variety of ways. Essentially, it indicates the learner's immediate physical surroundings (classroom, school), the resources made available to support the learning process, and the social interaction or types of social relationship functioning within this context and having an influence on learning.
Learning experiences	A wide variety of experiences across different contexts and settings which transform the perceptions of the learner, facilitate conceptual understanding, yield emotional qualities, and nurture the acquisition of knowledge, skills and attitudes. In educational settings learning experiences are ideally challenging, interesting, rich, engaging, meaningful, and appropriate to learner needs. Previous learning experiences are considered to be key factors predicting further learning.
Learning objectives	Specification of learning to be achieved upon completion of an educational programme or an activity. (<i>Adapted from:</i> UIS 2012). Learning objectives can also be specified for a lesson, a theme, a year, or an entire course.
Learning outcomes	The totality of information, knowledge, understanding, attitudes, values, skills, competencies or behaviours a learner has mastered upon the successful completion of an education programme. (<i>Adapted from:</i> UIS 2012).
Learning progression	A description of increasing levels of difficulty and complexity in acquiring knowledge, skills and attitudes within a domain. It implies that learning is a process of increasing difficulty and complexity, rather than a body of content to be covered within specific grade levels. Teachers need to have in mind a continuum of how learning develops in any particular knowledge domain so that they are able to locate students' current learning status and decide on pedagogical action to move students' learning forward. Learning

progressions that clearly articulate a progression of learning in a domain can provide a comprehensive view of what is to be learned, support instructional planning, and act as a touchstone for formative assessment. (*Adapted from: CCSSO 2008*).
See also 'Formative assessment'.

Learning resources

Any resource – including print and non-print materials and online/open-access resources – which supports and enhances, directly or indirectly, learning and teaching. Typically the use of a learning resource in the classroom is subject to a process of evaluation and approval at the school, local or national level. Evaluation criteria may include relevance to the curriculum and expectations for learning, social considerations, and age or developmental appropriateness.

Learning styles

A set of behaviours and attitudes that influence how students learn and interact with teachers and peers. Learning styles are cognitive, affective, and physiological behaviours that serve as indicators of how learners perceive, interact with, and respond to the learning environment. For example, for David Kolb (1984) learning is the process whereby knowledge is created through the transformation of experience. In Kolb's model, learning is based on two continuums, namely: (a) processing continuum, e.g. approach to a task, such as preferring to learn by doing (active experimentation) or watching (reflective observation); (b) perception continuum, e.g. emotional response, such as preferring to learn by thinking (abstract conceptualisation) or feeling (concrete experience). The four combinations of processing and perceiving determine one of the learning styles (or learning preferences) of how individuals prefer to learn.

According to the VAK (Visual, Auditory, and Kinesthetic – movement –, sometimes known as VAKT, Visual, Auditory, Kinesthetic, and Tactile) model, learners use these three/four modalities to receive and learn new information, one or two of these being normally dominant. An individual may have several learning styles which can change over time and according to the learning task.

There are also more elaborate models.

Learning time

Generally the amount of time during which learners are actively working on tasks and are effectively engaged in learning. There are different approaches to time in education. For example, a distinction can be made between: (a) officially allocated time, which includes school time (i.e. the total amount of time spent in school), classroom time (i.e. the amount of time spent in the classroom), and instructional time (i.e. the portion of classroom time devoted to the teaching and

learning of curriculum subjects); (b) engaged time or time-on-task, which refers to the portion of time during which students are paying attention to a learning task and attempting to learn; and (c) academic learning time, which indicates that portion of engaged time that students spend working on tasks at an appropriate level of difficulty for them and experiencing high levels of success (see, for example, Berliner 1990). See also 'Instructional time'.

Learning to learn

A lifelong process in which individuals deliberately or intuitively plan, monitor, and adapt their learning. When individuals learn to learn, they treat learning activities as objects of inquiry, personal reflection and self-analysis. (*Adapted from:* Seel 2012). Within the European Union area learning to learn is seen as the ability to pursue and persist in learning, to organize one's own learning, including through effective management of time and information, both individually and in groups. This key competence includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. This competence means gaining, processing and assimilating new knowledge and skills as well as seeking and making use of guidance. Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts. Motivation and confidence are crucial to an individual's competence. (*Source:* European Parliament. 2006). See also 'Key competences/competencies or skills'; 'Twenty-first century skills'.

Lesson plan

An outline of a topic to be addressed in a given period which can take a variety of forms and be prepared on a daily, weekly or monthly basis. It normally involves defining specific learning objectives aligned with the existing curriculum, selection of subject matter, required materials and resources, the activities that will take place as well as time and class management notes, assessment methods, and the links between previous and following lessons.

Levels of education

Within the framework of the International Standard Classification of Education (ISCED), levels of education are an ordered set of categories, intended to group educational programmes in relation to gradations of learning experiences and the knowledge, skills and competencies which each programme is designed to impart. Levels of education are therefore a construct based on the assumption that education programmes can be grouped into an ordered series of categories. These categories represent broad steps of educational progression in terms of the complexity of

educational content. The more advanced the programme, the higher the level of education. The ISCED 2011 classification consists of nine levels of education, namely: early childhood education (level 0); primary education (level 1); lower secondary education (level 2); upper secondary education (level 3); post-secondary non-tertiary education (level 4); short-cycle tertiary education (level 5); bachelor's or equivalent level (level 6); master's or equivalent level (level 7); doctor or equivalent level (level 8). (*Source*: UIS 2012). See also 'ISCED'.

Life skills

Originally defined by the World Health Organization as a group of psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, and cope with and manage their lives in a healthy and productive manner. Life skills are not normally seen as a domain, or a subject, but as cross-cutting applications of knowledge, skills, values and attitudes which are important in the process of individual development and lifelong learning. They are not just a set of skills, nor are they equal to survival skills, livelihood skills, or vocational skills but are part of these skills. (*Source*: UNESCO 2004a). In some cases the term is used as an equivalent of key competencies/skills, and in certain contexts it is used to indicate a subject area. For UNICEF life skills are part of a rights-based approach to learning. Children are fundamentally entitled to quality education that respects their dignity and expands their abilities to live a life they value and to transform the societies in which they live. Child-friendly schools promote and enhance life skills. See also 'Child-friendly environment'.

Lifelong learning

All learning activity undertaken throughout life, which results in improving knowledge, know-how, skills, competences and/or qualifications for personal, social and/or professional reasons. (*Source*: CEDEFOP 2011).

Literacy

The ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts. Literacy involves a continuum of learning in enabling an individual to achieve his or her goals, develop his or her knowledge and potential and participate fully in community and wider society. (*Source*: UNESCO 2005a). New forms of literacy needed in modern life are also increasingly taken into account in the curriculum, in particular those related to new technologies such as digital literacy, information literacy, mass media literacy and social media literacy.

See also 'Multiple literacies'.

Localization of curriculum

Process of defining parts or components of the curriculum at community/local or school level, normally with the involvement of local staff, stakeholders and institutions, so as to address issues that are locally relevant and allow for more meaningful learning experiences.

Lower secondary education

Lower secondary education programmes are typically designed to build on the learning outcomes from primary education. Usually, the aim is to consolidate the foundation for lifelong learning and human development upon which education systems may then expand further educational opportunities. Some education systems may already offer vocational education programmes at this level to provide individuals with skills relevant to employment. Programmes at this level are usually organized around a more subject-oriented curriculum, introducing theoretical concepts across a broad range of subjects. Teachers typically have pedagogical training in specific subjects and, more often than at primary level, a class of students may have several teachers with specialized knowledge of the subjects they teach. (Source: UIS 2012).

M

Mainstreaming (in special needs education)

The integration of learners with special needs into general educational settings or regular schools, ideally facilitated by appropriate curriculum and infrastructure adjustments and by the provision of specially trained staff.

Mathematical literacy

Within the framework of the OECD Programme for International Student Assessment (PISA), mathematical literacy is defined as an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgements and to use and engage with mathematics in ways that meet the needs of that individual's life as a constructive, concerned and reflective citizen. Mathematical literacy is concerned with the ability of students to analyse, reason, and communicate ideas effectively as they pose, formulate, solve, and interpret solutions to mathematical problems in a variety of situations. (Source: OECD 2009).
See also 'PISA'.

Meaningful learning

Unlike rote learning, it is a process leading to the development of conceptual networks (i.e. concept mapping) that can be applied in different situations,

supporting creativity and problem solving. According to constructivist views, it also refers to learning that makes sense to students as it is connected to their personal experience and is practically oriented. See also 'Concept map'.

Mentoring

A relationship between a less experienced individual and a more experienced individual known as a mentor) through which the mentor facilitates and supports learning. It can involve a one-on-one relationship or a network of multiple mentors. The network can contain peers, 'step-ahead' peers, or supervisors. Psychosocial mentoring involves mentor roles such as counsellor or friend, and career-related mentoring involves mentor roles such as coach or sponsor. Each structure of mentoring may be better suited to support particular mentoring functions or desired outcomes. For example, the structure of peer mentoring may advance psychosocial functions, while supervisory mentoring may advance career functions.

Metacognition

In the simplest terms, metacognition refers to the ability to think about one's thinking or cognitive processes. It is generally understood as the ability to contemplate one's own thinking, to observe oneself when processing cognitive tasks, and to organize the learning and thinking processes involved in these tasks. Learners who engage in metacognitive thinking are able to monitor and regulate their learning and, as a result, assume greater responsibility for their progress. Metacognitive thinking involves assessing or reviewing one's current and previous knowledge, identifying gaps in that knowledge, planning gap-filling strategies, determining the relevance of new information, and potentially revising beliefs. In psychological terms metacognition includes: metacognitive knowledge (what one knows about one's own knowledge and behaviour); metacognitive skills (how one behaves or acts in relation to a given task); and metacognitive experiences in terms of a cognitive and/or emotional judgement of one's present situation. Metacognitive knowledge may also be separated into two main classes: (a) declarative metacognitive knowledge includes knowledge about one's own thinking and that of other people as well as knowledge about demands on one's own cognition; (b) procedural metacognitive knowledge refers to the control and regulation of the execution processes involved in carrying out learning tasks. Metacognition is dependent on general intellectual abilities which are developed over long periods of time on the basis of confrontations with many different kinds of problems. From a metacognitive point of view, learners are managers of their own general and specific knowledge. However, not only do they have to

possess the domain-specific and general knowledge relevant for learning transfer, they also have to know how to apply this knowledge in the context of new problems. (*Adapted from: Seel 2012*).

See also 'Learning to learn'.

Mobile learning

The use of mobile devices such as personal digital assistants (e.g. a handheld device with communicative and computational capabilities that can function as a personal organizer, web browser, fax sender, and cellular phone) or cellular phones in learning activities anywhere and anytime, bringing information and knowledge to situations and places where learning activities take place. (*Source: Seel 2012*).

Moderation (in assessment)

The process of establishing comparable standards for evaluating learners' responses to assessment tasks in order to ensure that the data are valid and reliable for the intended purposes. In schools, it involves groups of teachers looking at examples of student work, discussing the extent to which these meet the expected standard, and coming to an agreement on the level of attainment represented by each example. (*Source: Ho 2012*). Moderation is a key strategy to increase the reliability of assessment and marking across different settings. It includes a set of approaches that aim to ensure the quality and comparability of assessment judgement. It may also involve a competent external organization systematically checking school-based marking. (*Source: OECD 2013*).

Multidisciplinary approach

An approach to curriculum integration which focuses primarily on the different disciplines and the diverse perspectives they bring to illustrate a topic, theme or issue. A multidisciplinary curriculum is one in which the same topic is studied from the viewpoint of more than one discipline. Frequently multidisciplinary and cross-disciplinary are used as synonyms describing the aim to cross boundaries between disciplines.

See also 'Interdisciplinary approach', 'Transdisciplinary approach'.

Multi-grade/multi-class teaching

The teaching of learners from two or more grade levels in the same classroom environment, ideally by using appropriate and specifically designed teaching methods.

Multilingual education

According to UNESCO, the term refers to the use of at least three languages, for example, the mother tongue, a regional or national language and an international language in education. The 1999 Resolution of UNESCO's General Conference supported the view that the requirements of global and national participation and the specific needs of culturally and

linguistically distinct communities can only be addressed by multilingual education. UNESCO supports bilingual and/or multilingual education at all levels of education as a means of promoting both social and gender equality and as a key element of linguistically diverse societies. (Source: UNESCO 2003).

See also 'Bilingual education'.

Multiple intelligences

A theory of intelligence developed in the 1980s by Howard Gardner (professor of education at Harvard University), which defines intelligence broadly as "the capacity to solve problems or fashion products that are valued in one or more cultural settings." Gardner originally identified seven intelligences: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. He later suggested the existence of several others, including naturalist, spiritual, and existential. According to Gardner, everyone has all the intelligences, but in different proportions. Using this approach in teaching implies striving to present subject matter in ways that allow students to use several intelligences. (*Adapted from: ASCD*).

Multiple literacies

A concept calling for a broader view of literacy, also referred to as 'new literacies' or 'multiliteracies'. The concept is based on the assumption that individuals 'read' the world and make sense of information by means other than traditional reading and writing. These multiliteracies include linguistic, visual, audio, spatial, and gestural ways of meaning-making. Central to the concept of multiple literacies is the belief that individuals in a modern society need to learn how to construct knowledge from multiple sources and modes of representation. (Source: Seel 2012).

See also 'Literacy'.

N

National assessments of student achievement

An exercise, task or activity undertaken by students nationally and designed to determine or measure the achievement of students in a curriculum area, often aggregated to provide an estimate of the achievement level in the education system as a whole at a particular age or grade level. Normally, it involves administration of achievement tests either to a sample or to a population of students, usually focusing on a particular sector in the system. The assumption is frequently made not only that national assessments will provide information on the state of education, but also that use of the information should lead to improvement in student achievements. (Source: Greaney & Kellaghan

2007).

National curriculum

A description – normally set out in a document or series of related documents – of the prescribed common goals, objectives and quality and/or content criteria of a national school system. This may take the form of standards (defined objectives and achievement criteria at given levels of education and in specific subjects or learning areas). It may also indicate the extent to which decisions on curriculum content can be made on the local or school level. (*Adapted from: OECD 2004*).

National Qualifications Framework (NQF)

An instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels. It is a way of structuring existing and new qualifications, which are defined by learning outcomes, i.e. clear statements of what the learner must know or be able to do whether learned in a classroom, on-the-job, or less formally. The qualifications framework indicates the comparability of different qualifications and how one can progress from one level to another, within and across occupations or industrial sectors (and even across vocational and academic fields if the NQF is designed to include both vocational and academic qualifications in a single framework). The scope of frameworks may be comprehensive of all learning achievement and pathways or may be confined to a particular sector for example initial education, adult education and training or an occupational area. Some frameworks may have more design elements and a tighter structure than others; some may have a legal basis whereas others represent a consensus of views of social partners. All qualifications frameworks, however, provide a basis for improving the quality, accessibility, linkages and public or labour market recognition of qualifications within a country and internationally. Individual countries may choose to define 'qualifications framework' in a more specific way. (*Source: Tuck 2007*).

Neuroscience

An interdisciplinary field of study concerned with the anatomy, physiology, and biochemistry of the nervous system and its effects on behaviour and mental experience. (*Source: Colman 2008*).

Non-cognitive skills

Personality traits or attributes the importance of which for cognitive achievement and labour market outcomes is increasingly recognised although they are not yet systematically assessed. A broadly accepted taxonomy of personality traits is the Five-Factor model or the 'Big Five' factors. This model includes the following factors: (a) agreeableness, or the willingness to help other people, act in accordance with other

people interests and the degree to which an individual is cooperative, warm and agreeable versus cold, disagreeable and antagonistic; (b) conscientiousness, or the preference for following rules and schedules, for keeping engagements and the attitude of being hardworking, organized and dependable, as opposed to lazy, disorganized and unreliable; (c) emotional stability, encompassing dimensions such as nervous versus relaxed and dependent versus independent, and addressing the degree to which the individual is insecure, anxious, depressed and emotional rather than calm, self-confident and cool; (d) extraversion, or the preference for human contacts, empathy, gregariousness, assertiveness and the wish to inspire people; and (e) autonomy (or openness, openness to experience), which indicates the individual propensity to decide and the degree of initiative and control or the degree to which a person needs intellectual stimulation, change, and variety. (Source: Brunello & Schlotter 2011).

Non-formal education

Education that is institutionalized, intentional and planned by an education provider. The defining characteristic of non-formal education is that it is an addition, alternative and/or complement to formal education within the process of the lifelong learning of individuals. It is often provided to guarantee the right of access to education for all. It caters to people of all ages but does not necessarily apply a continuous pathway-structure; it may be short in duration and/or low-intensity, and it is typically provided in the form of short courses, workshops or seminars. Non-formal education mostly leads to qualifications that are not recognized as formal or equivalent to formal qualifications by the relevant national or sub-national education authorities or to no qualifications at all. Non-formal education can cover programmes contributing to adult and youth literacy and education for out-of-school children, as well as programmes on life skills, work skills, and social or cultural development. (Source: UIS 2012).

Norm-referenced assessment

Assessment of learner's progress and achievement with reference to the levels of achievement of his/her peer group and/or by reference to norms derived from a sample of a similar population.

Numeracy

The ability to use mathematical skills in appropriate and meaningful ways in order to meet the varied demands of personal, study, social and work life. See also 'Mathematical literacy'.

O

Official curriculum	See 'Intended curriculum'.
Open curriculum	An approach based on the principle that education and the curriculum should be active, flexible, fluid, and individualized. The primary concern of open education is to facilitate meeting educational goals while fulfilling the unique, individual potential of each learner. Curriculum in open education revolves primarily around the individual learner. It emphasises individual interests, and highlights the influence learning materials and their arrangement within a classroom may have upon learners. Educators in an open classroom may often follow a specific, daily curriculum. This curriculum is supplemented and altered through interaction to complement spontaneity. Therefore, although lessons may be taught and learned, the manner in which they are done so is rarely repeated. (<i>Adapted from: Kridel 2010</i>).
Opportunity to learn	The provision of learning conditions, including suitable adjustments, to maximize a student's chances of attaining the desired learning outcomes. (<i>Source: CCSSO 2005</i>).
Optional curriculum	See 'Elective curriculum'.
Outcomes	See 'Learning outcomes'.
Outcomes-based education (OBE)	An approach to schooling that makes outcomes (intended results) the key factor in planning and creating educational experiences. In the 1990s this approach was controversial in the USA and now the term is not frequently used. (<i>Source: ASCD</i>). Outcomes-based education and curricula became popular in other parts of the world as well. However, this approach is increasingly controversial especially when outcomes such as competences/competencies are used as curriculum organizers.
Overarching competences/competencies	See 'Key competences/competencies or skills', 'Twenty-first century skills'.

P

Pedagogy	The art and science of teaching, as a professional practice and as a field of academic study. It encompasses not only the practical application of teaching but also curriculum issues and the body of theory relating to how and why learning takes place.
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Because it derives from a Greek expression referring to the education of the young, pedagogy is sometimes taken to be specifically about the education of children and young people. The more recently coined term 'andragogy' is used in relation to the education of adults. (*Adapted from: Wallace 2009*).

Peer assessment	Assessment of learners' work by other learners.
Peer learning	A process based on exchange of knowledge and information between learners who may also act as mentors. Also referred to as peer education.
Peer teaching/tutoring	A practice in which students share their knowledge and support the learning of their peers through assuming a teaching role within a school setting.
Performance assessment	Assessment that is designed to measure and judge what learners know and are able to do based on how they perform certain tasks. (<i>Source: ASCD</i>).
Performance standards	See 'Standards-based curriculum'.
Personalized learning	A process of tailoring education to learners' current situation, characteristics, and needs in order to help learners to achieve the best possible learning progress and outcomes. Personalized learning can appear on different levels of education, including personalizing the curriculum, courses, learning materials and activities, and other learning support. Through personalized learning, each learner is provided with education that is tailored to his/her individual characteristics and needs and learns in a way that is most suitable for him/her, resulting in different learning experiences for each learner. (<i>Source: Seel 2012</i>). See also 'Learner centredness'.
PIRLS (Progress in International Reading Literacy Study)	PIRLS, conducted by the International Association for the Evaluation of Educational Achievement (IEA), investigates changes over time in children's reading achievement at the fourth grade (age 9-10). First assessed in 2001, PIRLS has been on a regular five-year cycle since then. In general, participating countries use PIRLS in various ways to explore educational issues, including among others monitoring system-level achievement trends in a global context, establishing achievement goals and standards for educational improvement, and stimulating curriculum reform.
PISA (Programme for International Student Assessment)	Launched by the Organization for Economic Co-operation and Development (OECD) in 1997, PISA represents a commitment by governments to monitor the outcomes of education systems through measuring

15-year-old student achievement on a regular basis and within an internationally agreed common framework. It aims to provide a new basis for policy dialogue and for collaboration in defining and implementing educational goals, in innovative ways that reflect judgements about the skills that are relevant to adult life. The PISA assessment takes a broad approach to measuring knowledge, skills and attitudes that reflect current changes in curricula, moving beyond the school-based approach towards the use of knowledge in everyday tasks and challenges. PISA covers the domains of reading, mathematics and science not merely in terms of whether students can reproduce specific subject matter knowledge, but also whether they can extrapolate from what they have learned and apply their knowledge in novel situations. Emphasis is on the mastery of processes, the understanding of concepts and the ability to function in various situations within each domain. (*Source: OECD 2009*).

Planned curriculum

See 'Intended curriculum'.

Portfolio assessment

Assessment based on the systematic collection of learner work (such as written assignments, drafts, artwork, and presentations) that represents competencies, exemplary work, or the learner's developmental progress. In addition to examples of their work, most portfolios include reflective statements prepared by learners. Portfolios are assessed for evidence of learner achievement with respect to established learning outcomes and standards.

Predictive assessment

Assessment aimed at identifying potential successes and failures in learners' development and suggesting appropriate action to stimulate progress and deal with anticipated shortcomings.

Pre-primary education or preschool education

Education typically designed for children from 3 years of age to the start of primary school. The educational properties of pre-primary education are characterized by interaction with peers and educators, through which children improve their use of language and social skills, and start to develop logical and reasoning skills. Children are also introduced to alphabetical and mathematical concepts, and encouraged to explore their surrounding world and environment. Supervised gross motor activities (i.e. physical exercise through games and other activities) and play-based activities can be used as learning opportunities to promote social interactions with peers and to develop skills, autonomy and school readiness. (*Source: UIS 2012*). See also 'Early childhood education'.

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 establish a solid foundation for learning and understanding core areas of knowledge and personal development, preparing for lower secondary education. It focuses on learning at a basic level of complexity with little, if any, specialization. (Source: UIS 2012).

Problem-based learning

A process designed to experientially engage learners in processes of inquiry into complex problems of significance and relevance to their lives and learning. It is intended to challenge learners to pursue authentic questions, wonders, and uncertainties in a focused way, which enables them to construct, deepen, and extend their knowledge and understanding. Thoughtful presentation of the problem is critical to this approach. Problems must be complex enough that there is a need to seek many perspectives on the issues, to engage in collaborative inquiry, and to generate multiple possible solutions. The problems have an authenticity that holds meaning for the learners, enables them to assume ownership of the problems, and results in findings of significance in the broader context of their lives. Problems must invite a deep approach to learning – to inquiry, thinking, and reflection – which leads to shifts or changes in learners' knowledge. At the same time, they leave room for learners to discover that knowledge is tentative, always reflective of a moment in time, and open to continued shifts and changes. (Adapted from: Kridel 2010).

See also 'Project-based learning'.

Problem solving

Within the cognitive tradition, the set of thinking processes or actions involved in the solving of a problem. Problems may be routine or novel. Routine problem solving involves moving from a given state to a goal state based on a solution plan primed from similar past experiences. In contrast, novel problem solving entails the problem solver moving from a given state to a goal state by inventing the solution procedure. (Source: Seel 2012). Increasingly referred to as a key competence/competency and 21st century skill.

Project-based learning

A process that fosters learners' engagement in studying authentic problems or issues centred on a particular project, theme, or idea. Often the term 'project-based' is used interchangeably with 'problem-based', especially when classroom projects focus on solving authentic problems. The nexus for the project may be suggested by a teacher, but the planning and execution of contingent activities are predominantly

conducted by learners working individually and cooperatively over many days, weeks, or even months. This process is inquiry-based, outcome-oriented, and associated with conducting the curriculum in real-world contexts rather than focusing on a curriculum that is relegated to textbooks or rote learning and memorization. Assessment is commonly performance-based, flexible, varied, and continuous. (*Adapted from: Kridel 2010*).
See also 'Problem-based learning'.

**Programme of study
(in/for a subject)**

See 'Syllabus'.

Q

Qualification

This term is commonly used in at least two different ways/contexts: (a) formal qualification: the formal outcome (certificate, diploma or title) of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards and/or possesses the necessary competence to do a job in a specific area of work; a qualification confers official recognition of the value of learning outcomes in the labour market and in education and training, and can be a legal entitlement to practise a trade; and (b) job requirements: knowledge, aptitudes and skills required to perform the specific tasks attached to a particular work position. (*Source: CEDEFOP 2011*).
See also 'National Qualifications Framework'.

R

Reading literacy

Within the framework of the OECD Programme for International Student Assessment (PISA), reading literacy is defined as an individual's capacity to: understand, use, reflect on and engage with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society. (*Source: OECD 2009*).
See also 'PISA', 'Literacy'.

Realized curriculum

See 'Attained curriculum'.

Remedial activities

Activities or programmes aimed at helping students with learning difficulties or supporting students that may need to develop better learning skills as well as master content.

Rubrics (in assessment)

Scoring tools containing performance criteria and a performance scale with all score points described and

defined. Rubrics are specific guidelines with criteria to evaluate the quality of learner work, usually on a point scale. Learners may use rubrics to judge their own work, and to edit and improve it. Rubrics may be part of the national curriculum or syllabi, or be provided in a separate document. (*Adapted from: OECD 2013*). A rubric is normally comprised of two components – criteria and levels of performance. For each criterion, the evaluator applying the rubric can determine to what degree the learner has met the criterion, i.e. the level of performance. Sometimes rubrics can include descriptors that spell out what is expected of learners at each level of performance for each criterion. An analytic rubric articulates levels of performance for each criterion so the evaluator can assess learner performance on each criterion. A holistic rubric does not list separate levels of performance for each criterion. Instead, it assigns a level of performance by assessing performance across multiple criteria as a whole.

S

School-based curriculum development

Curriculum developed at the level of an individual school. This notion suggests a decision-making process with regard to the curriculum involving school staff, ranging from individual teachers adapting existing curricula to the whole school staff collaboratively working together to develop new curricula in order to make them more relevant and meaningful for learners. The school-based curriculum development movement was particularly active in the 1980s as an alternative to centralized curriculum decision-making.

School culture

The guiding beliefs or ethos, underlying assumptions, expectations, norms and values that give a school its identity, influence the way a school operates, and affect the behaviour of principals, teachers, support staff and learners. School culture deserves attention in the effort to support and enhance learning. Comprehensive models that have been developed for school reform have invariably included change in school culture.

School readiness

The basic background and knowledge that children are usually expected to have upon entering pre-primary education. Some educators believe that school readiness skills should include: recognition of colours and basic shapes; gross motor coordination that enables children to catch a ball; fine motor coordination that enables them to hold a crayon or pencil; the ability to sort objects; knowing their first and last names and home address. In addition, school

readiness is usually thought to include, for example, good nutrition, inoculations, and care, safety, and guidance. (*Adapted from: ASCD*).

School term

A division of the school or academic year during which learners attend classes. Depending on the country and educational institution, these divisions can be called terms, trimesters, quarters or semesters, and are normally separated by breaks or holidays.

School timetable

A schedule of events that organizes school activities throughout the day, week, term or year. For each activity, a timetable generally specifies a starting and an ending time. Typically the shortest duration on the timetable is called a period. The length of a period varies from country to country and it may vary for different levels of education and types of schools, ranging between 30 and 60 minutes. Time as a resource must be adequately and equitably distributed, depending on the recommended number of periods and the subjects in the curriculum. Some factors that influence timetabling include: the length of the school day, week and year; the number of required contact hours or recommended periods; the number of subjects in the curriculum; the number of teachers; and the availability of facilities. (*Adapted from: SADC & COL 2000*).

Scientific literacy

Within the framework of the OECD Programme for International Student Assessment (PISA), scientific literacy is defined as an individual's scientific knowledge and use of that knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence-based conclusions about science-related issues, understanding of the characteristic features of science as a form of human knowledge and enquiry, awareness of how science and technology shape our material, intellectual, and cultural environments, and willingness to engage in science-related issues, and with the ideas of science, as a reflective citizen (*Source: OECD 2009*).

See also 'PISA'.

Scope and sequence (in curriculum)

Interrelated concepts that refer to the overall organization of the curriculum in order to ensure its coherence and continuity. Scope refers to the breadth and depth of content and skills to be covered. Sequence refers to how these skills and content are ordered and presented to learners over time.

Secondary education

Secondary education provides learning and educational activities building on primary education and preparing for labour market entry, post-secondary non-tertiary education and tertiary education. Broadly

speaking, secondary education aims at learning at an intermediate level of complexity. (Source: UIS 2012). See also 'Lower secondary education', 'Upper secondary education'.

Self-assessment

Assessment by which the learner gathers information about and reflects on his or her own learning, judges the degree to which it reflects explicitly stated goals or criteria, identifies strengths and weaknesses, and revises accordingly. It is the learner's own assessment of personal progress in knowledge, skills, processes, and attitudes. (*Adapted from:* Ontario Ministry of Education 2002).

Self-referenced assessment

Assessment of learner's progress and achievement with reference to himself/herself.

Skill

The ability to perform tasks and solve problems. (Source: CEDEFOP 2011). It is the ability, proficiency or dexterity to carry out tasks that come from education, training, practice or experience. It can enable the practical application of theoretical knowledge to particular tasks or situations. It is applied more broadly to include behaviours, attitudes and personal attributes that make individuals more effective in particular contexts such as education and training, employment and social engagement. (Scottish Government 2009).

Social and emotional learning (SEL)

Learning how to manage feelings and relationships with others. This includes ways to also recognize emotions and to maintain positive relationships in developing sympathy and empathy. It involves the acquisition of knowledge, skills and attitudes that learners need to create positive relationships, build resilience, handle challenging situations, make appropriate decisions and care for others. Commonly it focuses on skills such as self-awareness, self-management, social awareness, relationship skills and responsible decision-making. Recent advances in neuroscience have shed new light on the role of non-cognitive processes in human reasoning and consciousness, revolutionizing thinking concerning the role of feeling and intuition in solving novel problems. While the traditional view may have been that feelings interfere with an individual's ability to solve problems, this old adage failed to point out that in the absence of feeling an individual is unlikely to solve the problem at all. (*Adapted from:* Seel 2012). See also 'Emotional intelligence'.

Soft skills

Term used to indicate a set of intangible personal qualities, traits, attributes, habits and attitudes that can be used in many different types of jobs. As they are broadly applicable they are also seen as transferable

skills, even if the idea of transferability is often questioned because individuals learn to perform tasks in particular contexts and may not be able to apply them to others. Examples of soft skills include: empathy, leadership, sense of responsibility, integrity, self-esteem, self-management, motivation, flexibility, sociability, time management and making decisions. The term is also used in contrast to ‘hard’ skills that are considered as more technical, highly specific in nature and particular to an occupation, and that can be (generally) taught more easily than soft skills.

Special needs education	Education designed to facilitate learning by individuals who, for a wide variety of reasons, require additional support and adaptive pedagogical methods in order to participate and meet learning objectives in an education programme. Education programmes in special needs education may follow a similar curriculum as that offered in the parallel regular education system, but they take individual needs into account by providing specific resources (e.g. specially-trained personnel, equipment or space) and, if appropriate, modified educational content or learning objectives. These programmes can be offered to individual students within already-existing education programmes or as a separate class in the same or separate educational institutions. (<i>Source: UIS 2012</i>).
Spiral curriculum	Curriculum design (based on the ideas of the American psychologist Jerome Bruner) in which key concepts and topics are repeatedly presented over time in the context of new, broader and more complex learning experiences. It serves for consolidating pre-existent learning as well as broadening and exploring more in-depth the different learning content.
Standard(s)	A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. (<i>Source: Website of the International Organization for Standardization–ISO</i>). See also ‘Standards-based curriculum’.
Standardized testing	Tests that are administered and scored under uniform (standardized) conditions. (<i>Source: ASCD</i>). See also ‘Norm-referenced assessment’.
Standards-based curriculum	A curriculum directed toward mastery of predetermined standards. Content standards refer to what learners are expected to know and be able to do in various subject areas. Performance standards specify what levels of learning are expected and assess the degree to which content standards have been met. (<i>Source: ASCD</i>).

Streaming/tracking	The practice of dividing learners according to their perceived abilities. Learners are placed on a particular track or stream (e.g. general, vocational, remedial) and given a curriculum that varies according to their perceived abilities and future positions in life. At the primary level, the practice is often called grouping. Advocates argue that it makes instruction more efficient and provides learners with instruction adapted to their abilities and previous knowledge. Critics argue that it deprives learners of equal opportunity, unfairly and inaccurately labels some learners, and perpetuates inequalities. (<i>Adapted from: ASCD</i>).
Subject/subject area	A branch of knowledge organized as a discrete learning discipline and taught in a systemic way over time. Other terms often used interchangeably include teaching subject, academic subject, academic discipline, and study area.
Summative assessment	Assessment of learner's achievement at the end of a term, stage, course or programme usually, although not necessarily, involving formal testing or examinations. Summative assessment is most commonly used for ranking, grading and/or promoting students, and for certification purposes. See also 'Assessment of learning'.
Syllabus (plural syllabi or syllabuses)	A document which outlines the aims, selection and sequence of contents to be covered, mode of delivery, materials to be used, learning tasks and activities, expected learning objectives or outcomes, and assessment/evaluation schemes of a specific course, unit of study or teaching subject. It is often used incorrectly as an equivalent of the term 'curriculum'.

T

Taught curriculum	See 'Implemented curriculum'.
Teaching	There are diverse approaches to teaching which also implicitly reflect the approach to learning. The didactic approach mainly entails lecturing and is typically teacher-centred and content-oriented, i.e. teaching as transmission where the learners are considered to be the passive recipients of information transmitted. Teaching can also be seen as supporting the process of learners' knowledge construction and understanding, building on what is already known by the learner and involving a learner-centred approach (i.e. teaching as facilitation). Another approach emphasizes the development of learners' cognitive processes and awareness and control of thinking and

learning.
See also 'Learning'.

Team teaching

An arrangement by which two or more teachers teach the same group of learners. Teachers may teach together in many different ways. They may teach a course, or a combination of courses, for an entire school year, or they may plan and teach a particular unit of study. They may present content from the same, or different, subject areas. And they may keep the students in a single large group or divide them up for some purposes. (*Source: ASCD*).

Technical education

See 'Technical and vocational education'.

Technical and vocational education (TVE)

A comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical and vocational education is further understood to be: (a) an integral part of general education; (b) a means of preparing for occupational fields and for effective participation in the world of work; (c) an aspect of lifelong learning and a preparation for responsible citizenship; (d) an instrument for promoting environmentally sound sustainable development; (e) a method of facilitating poverty alleviation. (*Source: UNESCO 2001*).

Technical and vocational education and training (TVET)

A range of learning experiences that are relevant for employability, portability of competencies and qualifications and recognition of skills, decent work opportunities and lifelong learning in and related to the world of work. The concept embraces the importance of innovation, competitiveness, productivity and the growth of the economy, considering that innovation creates new employment opportunities and also requires new approaches to education and training to meet the demand for new skills. The learning experiences may occur in a variety of learning contexts, including private and public training institutions, workplaces and informal learning places. (*Source: ILO 2010*).

Technology-enhanced learning

The use of information and communication technologies as mediating devices supporting student learning that can include elements of assessment, tutoring, and instruction. It involves a wide set of applications and processes, such as web-based learning, computer-based learning, virtual classrooms and learning environments, and digital collaboration. It includes the delivery of content through a wide range of electronic media (e.g. internet, intranet/extranet,

audio- and videotape, satellite broadcast, interactive television, etc.) and access to resources that inform learners of new ideas, which they can then reflect upon and integrate into their existing knowledge. Computers can be used to promote collaborative learning approaches where learners are encouraged to negotiate shared meaning and to work as teams rather than competitively towards a common goal. Social media and social software applications such as web logs (blogs) and wikis offer new opportunities for communicating, accessing knowledge, creating content and collaborating online. The appropriate use of technologies, when embedded into curriculum design, is expected to support the development of innovative teaching practices and to enhance and enrich learning experiences. Also referred to as 'e-learning' (or electronic learning) and 'digital learning'. (*Adapted from: Seel 2012*).

Test	An examination or assessment exercise designed to measure the learner's acquired knowledge and skills. Tests may be set and marked by the teacher or by an external agency. See also 'Summative assessment'.
Textbook	A written source of information, designed specifically for the use of students, on a particular subject or field of study that is usually developed based on a syllabus and geared towards meeting specific quality and learning requirements. School textbooks pertain to an instructional sequence based on an organized curriculum. Ideally they serve as a complement to a good teacher and an inquiring learner. (<i>Adapted from: UNESCO 2003a and UNESCO IBE 2006</i>).
Tertiary education	Tertiary education builds on secondary education, providing learning activities in specialized fields of education. It aims at learning at a high level of complexity and specialization. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. (<i>Source: UIS 2012</i>).
Time allocation	The amount of time to be devoted to instruction in a certain subject or discipline according to official regulations, requirements or recommendations. It should be distinguished from the time that is actually spent on learning. See also 'Learning time'.
TIMSS (Trends in International Mathematics and Science Study)	TIMSS, conducted by the International Association for the Evaluation of Educational Achievement (IEA), is a worldwide research project that measures trends in mathematics and science achievement at the fourth and eighth grades (e.g. students aged 9-10 and 13-

14). It has been conducted on a regular four-year cycle since 1995. In general, participating countries use TIMSS in various ways to explore educational issues, including among others monitoring system-level achievement trends in a global context, establishing achievement goals and standards for educational improvement, and stimulating curriculum reform.

Transdisciplinary approach

An approach to curriculum integration which dissolves the boundaries between the conventional disciplines and organizes teaching and learning around the construction of meaning in the context of real-world problems or themes.

See also 'Interdisciplinary approach'; 'Multidisciplinary approach'.

Transferable skills

Skills that are typically considered as not specifically related to a particular job, task, academic discipline or area of knowledge and that can be used in a wide variety of situations and work settings (for example, organizational skills).

See also 'Soft skills'.

Transfer of learning

Generally refers to the influence of learning in one situation on learning in another situation. It is concerned with how learning in a certain school subject affects subsequent learning in the same or another subject or how school learning influences achievements outside of school. There are at least three basic forms of transfer. Lateral transfer occurs when learners are able to solve different but similar problems of equal complexity as soon as they have learned to solve one of them. Lateral transfer involves a learning achievement at the same level as the initial learning but in another context. The concept of sequential transfer corresponds with the observation that most content learned in school is organized into broad disciplines and is taught sequentially. Sequential transfer happens in one and the same context, i.e. both are organized horizontally. Vertical transfer, on the other hand, requires that learning at a lower level must be transferred to a higher level of cognitive skills. Thus, vertical transfer is the ability to solve similar and at the same time more complex or elaborated problems with the help of previously acquired knowledge. (Source: Seel 2012).

Tutoring

Any activity offering a learner guidance, counselling or supervision by an experienced and competent professional. The tutor supports the learner throughout the learning process (at school, in training centres or on the job). Tutoring can cover: academic subjects to improve educational achievement; careers to ease transition from school to work; and personal development to encourage learners to make wise

choices. (Source: CEDEFOP 2011).

Twenty-first century skills

An overarching concept for the knowledge, skills and attitudes citizens need to be able to fully participate in and contribute to the knowledge society. This need is mostly attributed to the changes in society, and more particularly, to the rapid development of technology and its impact on the way people live, work and learn. While in the industrial society the main focus of education was to contribute to the development of factual and procedural knowledge, in the information or knowledge society the development of conceptual and metacognitive knowledge is increasingly considered important. Furthermore, the changes in economy and the labour market caused by globalization and internationalization are an important driving force for the need of 21st century skills. Different organizations, including also partnerships and consortia, have defined and endorsed core competences/skills frameworks using different foci, emphases, groupings and terminologies. Most frameworks seem to converge on a common set of 21st century skills or competences, namely: collaboration; communication; Information and Communication Technology (ICT) literacy; and social and/or cultural competencies (including citizenship). Most frameworks also mention creativity, critical thinking and problem solving. Across the various frameworks it is acknowledged that ICT is at the core of 21st century skills. Specifically, it is regarded as both (a) an argument for the need of 21st century skills, and (b) a tool that can support the acquisition and assessment of these skills. In addition, the rapid development of ICT requires a whole new set of competences related to ICT and technological literacy. (Adapted from: Lai & Viering 2012). See also 'Key competences/competencies or skills'.

U

Upper secondary education

Upper secondary education programmes are typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both. Programmes at this level offer students more varied, specialized and in-depth contents than programmes at lower secondary education level. They are more differentiated, with an increased range of options and streams available. (Source: UIS 2012).

V

Validation of learning outcomes	Evaluation of an individual's achievement of learning objectives using a variety of assessment methods (written, oral and practical tests/examinations, projects and portfolios) not presuming participation in an education programme. (<i>Source: UIS 2012</i>).
Validity (in assessment)	Refers to what is assessed and how well this corresponds with the behaviour or construct to be assessed. In the case of 'site validity' it involves assessments that intend to assess the range of skills and knowledge that have been made available to learners in the classroom context or site. High 'system validity' involves assessments that intend to assess an often narrower range of skills and knowledge, deemed essential by the particular government body or system. Current validity theorising incorporates concerns about fairness and bias, and reflects similar understandings of the social basis of assessment. Validity is not simply the way in which a test functions, but depends on what it is used for and the interpretation and social consequences of the results. Thus, an essential part of validity is the concern with whether the inferences made from the results of an assessment are fair to all those who were assessed. (<i>Source: Wyatt-Smith & Joy Cumming 2009</i>). See also 'Fairness (in assessment)'.
Values	Culturally defined principles and core beliefs shared by individuals and groups that guide and motivate attitudes, choices and behaviour, and serve as broad guidelines for social life.
Vertical and horizontal articulation (of the curriculum)	Organization of contents according to the sequence and continuity of learning within a given knowledge domain or subject over time (vertical articulation to improve coherence) and the scope and integration of curricular contents from different knowledge domains within a particular grade level (horizontal articulation or balance to develop integration between subjects, disciplines or knowledge domains).
Vocational education	Education programmes that are 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, dual-system education programmes). 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. (<i>Source: UIS 2012</i>).

Vocational education and training (VET)	Education and training which aim to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labour market. (<i>Source: CEDEFOP 2011</i>).
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W

Wash-back effect	The way in which testing or examining influence teaching and learning and might shape the curriculum by undue concentration on the form, content and focus areas of the test or examination.
Whole person/learner approach	See 'Holistic learning approach'.
Whole school approach	Involves addressing the needs of learners, staff and the wider community, not only within the curriculum, but across the whole-school and learning environment. It implies collective and collaborative action in and by a school community to improve student learning, behaviour and wellbeing, and the conditions that support these.
Wellbeing (in school)	Wellbeing in school contributes to learners' physical and psychological health and development. As such it is strongly connected to learning. It consists of cognitive, emotional, and physical components, i.e. a learner's thoughts, feelings, and bodily sensations. Wellbeing in school generally involves: positive attitudes and emotions toward school in general; enjoyment in school; positive academic self-concept; absence of worries about school; absence of physical complaints in school; and absence of social problems in school. Wellbeing contributes to the maintenance of a positive basis for learning at school. On the other hand, learning is crucial for the occurrence of wellbeing because successful learning is an important source of enjoyment in school. Thus, wellbeing and learning in school are interdependent concepts which influence each other. (<i>Source: Seel 2012</i>).

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Note:

Additional standard definitions included in ISCED 2011 (in English, French and Spanish) can be consulted online:

[Revision of the International Standard Classification of Education \(ISCED\)](#)

[Révision de la Classification internationale type de l'éducation \(CITE\)](#)

[Revisión de la Clasificación Internacional Normalizada de la Educación \(CINE\)](#)