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Glossary of Curriculum Terminology

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Glossary of Curriculum Terminology

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Introduction

In many countries around the world, the school curriculum is increasingly viewed as laying the foundation for comprehensive educational reforms aimed at achieving quality learning outcomes.

In recent years, interest in the curriculum field has expanded significantly as countries seek to revise their curricula to respond to 21stC personal, social, economic and environmental challenges, such as: the transition to knowledge-based economies; the information and technology revolution; the increasingly digital workplace, changes in labor market demand and the onset of Industry 4.0. As a result, there has been an exponential growth in efforts to articulate competences considered relevant to the fast changing demands of the 21st century.

Contemporary curriculum development processes more frequently involve public discussion and consultation with a range of stakeholders, including policymakers, experts, practitioners, and society at large As a result, curriculum terminology is no longer the preserve of specialists, who are aware of all the complexities involved. Rather, it is used by array of wider educational, political and public stakeholders. In this fast changing context, where more and more agencies and countries are seeking technical advice and support on curriculum matters, there is a need for greater consistency in the definition and use of curriculum terminology, concepts, constructs and content that will allow for contextual adaption. This is all the more important as many curriculum-related terms are frequently used interchangeably, even if they refer to different concepts. An example is the diversity of definitions that exist for the term 'curriculum' alone, a term that does not even exist in many national languages.

The first draft of this IBE Glossary was developed by IBE staff members, Mr Massimo Amadio and Ms Ruth Creamer, with the assistance of Mr Hanspeter Geisseler and Mr Konstantin Doulamis. The draft drew on previous glossaries created for several IBE curriculum projects, developed by Dr Dakmara Georgescu and Mr Philip Stabback. The draft Glossary was shared with several curriculum specialists and experts in the field, who were invited to provide feedback. Following consultation the initial version of the Glossary was published in 2013.

This second draft of the Glossary has been updated by Dr. Carmel Gallagher, IBE Senior Fellow, in response to the significant expansion in terminology arising from:

- research into curriculum, teaching, learning and assessment;
- trends towards competence-based curricula;
- wider considerations of personal, social and thinking skills;
- new approaches to pedagogy and assessment;
- the enhancement of teacher and learner agency; and
- the increasing professionalization of teaching globally.

In particular, the glossary references curriculum terminology set out in a series of normative papers issued by the IBE in 2017 which aim to regularize dialogue and initiatives in the field, safeguard the integrity of technical assistance offered to countries; and to guide the development of future curricula. An outline of these significant papers follows.

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- Paper 1 entitled Reconceptualizing and Repositioning Curriculum in the 21st Century (Marope, 2017:1, IBE) [1] argues for a paradigm shift to reconceptualize curriculum as 'the first operational tool for ensuring the sustained development relevance of curricula and wider education and learning systems'. It repositions curriculum along eight dimensions to underscore the reality that the global Education 2030 Agenda will be mostly implemented within Industry 4.0 context, which needs to be fully acknowledged as a formidable accelerant of change and complexity in the 21st century, (alongside change drivers such as: the transition to knowledge and technology driven growth; the broadening concept of development; The Sustainable Development Goals for propelling development; the new demands of work and workplace and new ways and tools for working; climate change; social fracture and political instability; multiple youth disengagement; heightening recognition of student and teacher agency; and advances in our understanding of learning). all of these have significant implications for the development of curricula.

- Paper 2, entitled Future Competences and the Future of Curriculum: A Global Reference for Curricular Transformation, (Marope et al., 2017:2, IBE)[2] sets out a rationale for repositioning curriculum at the center of national, regional and global development dialogue and agendas. It argues that future curricula must enable learners, young and old, to acquire the competences to enable them to address the challenges and opportunities of fast-changing 21st century and Industry 4 contexts. The paper offers a global normative guide for the development competence-based curricula that can support the attainment of the Education 2030 Agenda, and that can prepare learners (young and old) for meeting the challenges inherent in the Industry 4.0 context. It defines competence and offers a framework of competences to serve as a global reference point for future curricular transformations as well as proposing an institutional mechanism for keeping the competence framework current.

- Paper 3 entitled 'Transforming Teaching, Learning and Assessment',[3] (Marope et al., 2017:3, IBE) outlines the transformations required for teaching learning and assessment to best support the implementation of competence-based curricula. It argues for greater teacher and student agency to enable the transformative implementation of a competency-based curriculum.

Many of the 250+ new terms defined in this second draft of the IBE Glossary are drawn from these normative papers, including many terms that are not strictly curricular in nature, but which are associated with the drivers, accelerants and outcomes of change discussed in the papers. The revised glossary also includes terminology from the OECD 'Future of Learning and Skills 2030' project[4]. Both IBE and OECD have shared their draft Glossaries to enable harmonization of terminology. As before, the IBE Glossary does not aspire to establish standard, universally applicable, definitions of curriculum-related terminology. Rather, it is

[1] http://www.ibe.unesco.org/sites/default/files/resources/reconceptualizing_and_repositioning.pdf
[2] http://www.ibe.unesco.org/sites/default/files/resources/future_competences_and_the_future_of_curriculum.pdf
[3] http://www.ibe.unesco.org/sites/default/files/resources/03_transforming_teaching_learning_and_assessment_31oct.pdf
[4] https://www.oecd.org/education/2030-project/

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intended as a reference guide for use by all those involved in curriculum development initiatives, to help clarify the meaning of over 500 curriculum-related terms and to stimulate reflection about their appropriate use within national, regional and international contexts. It is hoped that this significantly expanded glossary will help to regularize curriculum dialogue and initiatives in the field.

This draft is now being shared for consultation with curriculum specialists, academics, policy-makers, practitioners and other users across IBE's Global Curriculum Network (GCN) who are cordially invited to send their comments to UNESCO IBE *(ibe-info@unesco.org*). The draft will be further revised on the basis of GCN feedback before publication on the IBE website.

The IBE intends that the outcome of this on-going collaborative process will support future users in the challenging task of enhancing the quality of curriculum, learning, assessment and learning outcomes globally.

Dr. Mantsetsa Marope
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Geneva
Switzerland
September 2019

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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 (Pellegrino, 1996).

Academic discipline

An academic discipline or field of study is a branch of knowledge, taught and researched as part of higher education. A scholar's discipline is commonly defined by the university faculties and learned societies to which they belong and the academic journals in which they publish research. The general characteristics associated with academic disciplines are: ‘1) disciplines have a particular object of research (e.g. law, society, politics), though the object of research maybe shared with another discipline; 2) disciplines have a body of accumulated specialist knowledge referring to their object of research, which is specific to them and not generally shared with another discipline; 3) disciplines have theories and concepts that can organize the accumulated specialist knowledge effectively; 4) disciplines use specific terminologies or a specific technical language adjusted to their research object; 5) disciplines have developed specific research methods according to their specific research requirements; and maybe most crucially 6), disciplines must have some institutional manifestation in the form of subjects taught at universities or colleges, respective academic departments and professional associations connected to it. Only through institutionalization are disciplines able to reproduce themselves’ (Krishnan, 2009).

Academic (school) subject

Refers to a branch of knowledge studied or taught in schools. These subjects are also branches of knowledge but are often adjusted to accommodate the goals of education.

Academic (school) year

The annual period during which students attend educational courses or take final examinations; an academic year is usually divided into semesters or terms with short breaks in between. An academic year 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 (UIS, 2012).

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Accountability

The process through which partners in the education process each take responsibility for their actions and report to those who are entitled to the information.

Accountability measures

Set of policies and practices used to measure, evaluate and hold teachers and schools accountable for student achievement and, ostensibly, to prompt and support improvement where necessary. 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

A measurement/judgement/perception of the competencies (i.e. the knowledge, skills, attitudes and values) that learners actually acquire as a result of teaching and learning. It can be assessed through different means and/or demonstrated in practice. Achieved curriculum differs from the intended and the implemented curriculum.
See also 'Attained curriculum', 'Experienced curriculum', 'Implemented curriculum' and 'Intended curriculum'.

Achievement standards

A means of defining levels of performance that can take a variety of forms. In some contexts, achievement standards are used to mark a minimum level of acceptable performance. In other settings, more general descriptions of performance may be used to sort learners into achievement levels, such as basic, proficient, and advanced.

The intended purpose of achievement standards is to provide teachers with targets for instruction by specifying what, and how much, learners must be able to do in order to demonstrate mastery of the standards related to a specific level of progression. They also provide directions to test developers about the kinds of performance situation and tasks that need to be designed to inform judgements about learner proficiency. They may 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 (Wilson & Bertenthal, 2005).
See also 'Content standards'.

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Adolescent learners	A distinct stage that marks the transition between childhood and adult learning 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 multi-tasking. 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 (Seel, 2012).
Affective skills	Relate to behaviors and attitudes that learners need to develop in order to be effective in their personal and professional lives, including the manner in which they deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes (Bloom, Engelhart, Furst, Hill & Krathwohl, 1956).
Agility	The ability and willingness to learn from experience, and then apply that learning to perform successfully under new situations (De Meuse, Dai & Hallenbeck, 2010).
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 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 (Deißinger & Hellwig, 2011).
Artificial Intelligence	Refers to the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages (English Oxford Living Dictionary)
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 also includes the conceptualization of

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	learning and assessment processes and their measurement, analysis and interpretation. See also ‘Assessment criteria’, ‘Assessment as learning’, ‘Assessment for learning’, ‘Assessment of learning’, ‘Assessment methods’, ‘Formative assessment’, ‘National assessments of student achievement’, ‘Performance-based assessment’.
Assessment criteria	Descriptive statements that are developed (generally by teachers or examiners) to provide learners and teachers with information about the qualities, characteristics, and aspects of performance expected from a given learning task. Well-defined assessment criteria can assist teachers to evaluate learners' work more openly, consistently and objectively and to provide constructive feedback and advice on next steps in learning.
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	Refers to the frequent, interactive assessment of student progress to identify learning needs and adjust teaching appropriately (also known as formative assessment).
Assessment of learning	Provides 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 program or a defined part of that program (UIS, 2012).
Assessment methods	The range of written, oral and practical tests/examinations, projects, performances, presentations and portfolios that may be used to evaluate learners’ progress and make judgements about their level of achievement in relation to an educational component (unit/module). Assessment methods include written and oral examinations and tests, course work and portfolio development, These may be assessed on-line or off-line; through observation; via feedback and through peer group critique (European Commission, 2008).

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See also ‘Assessment’, ‘Assessment criteria’, ‘Assessment for learning’, ‘Assessment of learning outcomes’, ‘Assessment as learning, ‘Formative assessment’.

Arts education

Learning across the multiple arts disciplines, which include, performing arts like dance, music, theatre, visual arts like drawing, painting, sculpture, and design works including for example jewelry, pottery, weaving and fabrics.

Attained curriculum

Refers to 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 program or educational level, assessed against a predetermined set of criteria. They are normally articulated in levels, which seek to specify the degree of proficiency to be attained.
See also ‘Achievement standards’.

Attitude

A tendency to think and react to ideas, persons or situations in certain ways, arising from an inner framework of values and beliefs, developed over time. Attitudes are influenced by emotions, behaviors and thoughts and tend to be context specific, susceptible to social influence and open to change.
See also ‘Beliefs’, ‘Dispositions’, ‘Self-efficacy’, ‘Values’.

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 (ASCD, n.d.). 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 program (Wyatt-Smith & Cumming, 2009).
See also ‘Performance assessment’.

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Autonomy	The power to make independent decisions, for example, the extent of freedom that teachers (and learners) have within educational systems to make autonomous decisions relating to what, when and how to teach learn and assess.
Autonomous learning	An approach to learning which encourages learners to take responsibility for their own learning. It represents a major shift in emphasis in classroom practice, from teaching to learning and from teacher to learner. See also called student–centered or self-directed learning.
Autonomous learners	Learners who are in charge of their own learning process and activities ad who take primary responsibility for planning, managing and scheduling their work, with support from teachers and peers when needed.
Authentic learning	A pedagogical approach that allows students to explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the learner and that are focused on connecting what students are taught in school to real-world issues, problems, and applications. The approach is based on the view that learners are more likely to be interested in studying topics that are relevant and applicable to their lives outside of school and that equips them with practical and useful skills, 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 (The Glossary of Education Reform).
Awarding body	An organization or consortium, recognized by the regulatory authorities, whose purpose is to award accredited qualifications.

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Balancing rights and privileges/responsibilities	Recognizes the limited nature of some rights and the need to balance them against the rights and freedoms of others. For example, the right to express views publicly may need to be balanced with another person's right to a private life. The rights of someone accused of a crime to question witnesses may need to be balanced against the rights of the victim and vulnerable witnesses, such as children. The ECHR also recognizes that the system of respecting rights works best when there is a recognition that rights and responsibilities go together. If individuals recognize this and act responsibly towards others and the wider community, then a system of rights can work effectively (Open University, n.d.).
Balancing freedoms with respect	Respecting principles such as legality, necessity, proportionality and non-discrimination and prohibiting certain forms of extreme hate speech (The EU Agency for Fundamental Rights, 2017).
Basic education	The foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training (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 (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.

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Behavioral engagement	Determines learner participation levels and their willingness to pay attention, participate and persist (Marope et.al., 2017:3)
Behaviorism	A theory of learning based on the idea that all behaviors are acquired through conditioning arising from interaction with one's environment. Behaviorists believe that our responses to environmental stimuli shape our actions (also known as behavioral psychology) (Krapfl, 2016).
Beliefs	Strong convictions associated with values, through which factual data is filtered to create a convincing argument based on (or claimed to be based on) evidence and data.
Benchmark	A reference point or standard against which performance or achievements can be assessed (OECD, 2002).
Benchmarking	A systematic process of comparing the activities, processes and/or performance of a program, organization, country, learner, etc. against a theoretical, political or existing reference with the aim of identifying ways to improve performance (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	An educational policy 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 are the additive and subtractive models. In additive bilingual education programs both languages are given the same value and recognition, are systematically taught and learned throughout the years of schooling, to enable the development of literacy and communication in two languages. In subtractive or transitional bilingual education programs, one language (e.g. the first language or learner's mother tongue, frequently a minority language) is used to favor 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, to enable the development of literacy and communication in the second language.

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Blended learning

A combination of traditional face-to-face instruction with digital learning to allows learners to have greater 'agency' or personalized control over their learning path and their individual pace of learning, while preserving the benefit of teacher oversight.

Block teaching

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 longer class periods (more than 60 minutes and typically 90-minutes long) to incorporate more activities and materials to engage learners in in 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, led 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 behavioral 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 (ASCD, n.d.; Seel, 2012).

The taxonomy was updated during the 1990s, changing the six major categories from noun to verb form to reflect different forms of thinking as an active process. In the revised Bloom's taxonomy, the six categories and cognitive processes include: 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); analyzing (breaking information into parts to explore understanding and relationships through differentiating, organizing, and attributing); evaluating (making judgements based on criteria and

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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 analyzing, evaluating and creating (Anderson & Krathwohl, 2001). There are also other revised versions of the Bloom's taxonomy.

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Career guidance

Services and activities intended to assist individuals 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. They include career information provision (in print, ICT-based and other forms), assessment and self-assessment tools, counselling interviews, career education programs (to help individuals develop their self-awareness, opportunity awareness, and career management skills), taster programs (to sample options before choosing them), work search programs, and transition services. 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) (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 administrated and/or marked. In this case, countries tend to use guidance materials and moderation to quality assure 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

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	written tasks. Multiple-choice items are also frequently used, especially in language subjects examinations (OECD, 2013). Also referred to as 'national examinations' or 'public examinations'. See also 'Assessment of learning', 'Summative assessment'.
Character	Enduring and consistent affective, cognitive and behavioral attributes, developed over time, that collectively exemplify a person's drive, values and interactions with other people. Exhibiting character involves the development of discipline, ethical thinking and emotional intelligence and the demonstration of values such as caring, citizenship, courage, diligence, fairness integrity, respect, responsibility and trustworthiness.
Character education	The ethical, intellectual, social and emotional education of individuals to become moral, caring, critical and responsible individuals.
Child-centered approach	Placing the child at the notional center of the learning process in which they are active participants. Involves giving children choices of learning activities, with the teacher acting as a 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.
Citizenship education	Educating learners, from early childhood, to become clear-thinking and enlightened citizens who participate in decisions concerning a society with a circumscribed territory, which is recognized as a state.
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 insights into the effectiveness and outcomes of the learning process and the performance of learners, to support ongoing improvement. Also referred to as 'classroom assessment' and 'teacher-based assessment'.
Co-agency	A process which enhances the scope for learners to influence and shape the direction of their learning, affording learners greater choice and opportunity to take responsibility for their own learning and to learn with and from one another as well as from their teacher(s),

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through purposeful dialogue. By encouraging learners to make choices and elaborate on and make ideas meaningful in their own terms, both learners and teachers are co-agents in the learning experience.

Cognitive dissonance (as a learning approach)

Learning-processes to foster learners' self-awareness of psychological conflicts between their personal beliefs, ideals, and values and the reality of contradictory facts and information. The approach requires learners to defend their personal beliefs. Afterwards, learners are supported to objectively perceive new facts and information to resolve the psychological stress of the conflict between reality and the learner's value system (Guzzetti et al., 1993).

Cognitive engagement

Learner willingness to exert the necessary effort required to comprehend complex ideas and to develop complex levels of competence.

Cognitive flexibility

Habits of mind associated with high quality thinking, for example, being adventurous, curious open-minded and persistent in pursuit of clarity and truth (McGuinness, 2018).

Cognitive skills

Sets of thinking approaches and strategies comprising verbal, non-verbal and higher-order thinking, information retrieval, data management and critical and creative thinking, to solve problems and make informed and responsible decisions based on evidence, and 'big-picture' systems thinking (McGuinness, 2018).

Cognitive neuroscience

Study and development of mind and brain research aimed at investigating the psychological, computational, and neuroscientific bases of cognition (OECD-CERI, 2007).

Cognitive science

An interdisciplinary science that draws upon many fields including neuroscience, psychology, philosophy, computer science, artificial intelligence, and linguistics to develop models that help explain human cognition – perception, thinking, and learning (OECD-CERI, 2007).

Collaboration

The capacity of an individual to effectively engage in a process whereby two or more people attempt to solve a problem by sharing the understanding and effort required to come to a solution and pooling their knowledge, skills and efforts to reach that solution.
See also 'Problem solving'.

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Collaborative learning	A process through which learners work together in small groups toward a common goal. It is a learner-centered 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 (Seel, 2012). 'Collaboration' is frequently included among key competences/competencies and 21st century skills.
Collaborative problem-solving	The capacity of an individual to effectively engage in a process whereby two or more agents attempt to solve a problem by sharing the understanding and effort required to come to a solution and pooling their knowledge, skills and efforts to reach that solution. OECD (2017), PISA 2015 Assessment and Analytical Framework: See also 'Problem solving'.
Communication	The act or process of using words, sounds, signs and/or behaviors to express or exchange information ideas, thoughts, feelings, etc., to someone else. (Merriam-Webster's Learner's Dictionary, n.d.).
Competence	A narrow interpretation of competence is the application of expertise and skillfulness to do something successfully/proficiently to meet certain assessment criteria to achieve mastery. In this interpretation, competence is interpreted as domain-specific, e.g. relating to knowledge, skills and attitudes within one specific subject or discipline. A broader interpretation that has become prominent in recent curriculum discourse interprets competence as much more than just the deployment of knowledge and skills to meet specified requirements.

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Competences

'The developmental capacity to interactively mobilize and ethically use information, data, knowledge, skills, values, attitudes, and technology to engage effectively and act across diverse 21stcentury contexts to attain individual, collective, and global good' (Marope, M., *et al*. (2017:2).

This definition recognizes that future curricula have to reflect competences that prepare learners for an unknown future. It is no longer sufficient to enable learners to acquire discrete knowledge, skills, values, etc. It is critical that learners can intelligently make connections across elements of a competence, integrate and interactively apply them to respond to contextual demands as well as to change their contexts. What is most critical is how learners can apply and use what they have learned across fast-changing, unpredictable, and even disruptive 21st century contexts, demonstrating adaptability, agility and resilience (ibid).

In this broader conception, 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). The emphasis is on the application/mobilization of prior knowledge, cognitive skills and psychosocial dispositions, attitudes and values in order to act competently in a particular context. In this broader sense competences are primarily general/transversal across all or several domains/subjects and are deployed to address diverse complex challenges and demands in diverse contexts,

See also 'Key competences/competencies'.

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. The distinguishing attributes of a competency-based curriculum include enhanced emphasis upon: a) *structuring and sequencing curricula around competences,* rather than subjects, which are used as instruments through which competence acquisition can be facilitated and demonstrated so that progressing relates to the competence rather than individual subject matter b) *Transdiciplinarity* – developing competence across a range of disciplines, c) *Context* – structuring/adapting curricula *to* meet the specific demands of the learners' context and the changing needs of learners and society.; d) *learner-centeredness*, designing learning environments and activities and environments so that learners can acquire and apply competences to everyday life; e) *Assessing* the

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application/mastery of competences f) *outcomes and impact* such as: productivity, efficiency, fulfilment, enjoyment and sustainability (Marope, M., *et al*. (2017:2).

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 renewal — A process to refresh the concepts, knowledge, skills, values, attitudes, topics, themes etc., within each subject or broader curriculum to satisfy new demands for example, for relevance.

Content standards — 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 (Wilson & Bertenthal, 2005). See also 'Achievement standards', 'Standards-based curriculum'.

Construct — An idea or theory containing various conceptual elements, typically one considered to be subjective and not based on empirical evidence.

Context — The topic or issue chosen to help students to explore a concept.

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'.

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Creativity	The ability to bring something new into existence purposefully and/or to respond adaptively to the needs for new approaches and new products. In recent years, the concept of creativity has expanded and shifted from an emphasis on individual genius in some fields (e.g. fine arts, advanced science) towards collaborative creativity, with new implications for learning and education. It involves developing learners, use of imagination and questioning; exploring and investigating; playing with possibilities; making connections; using intuition; challenging assumptions and established ways of doing things; persisting in the face of difficulty; tolerating ambiguity and uncertainty; collaborating; giving and receiving feedback; reflecting critically; crafting and improving drafts and prototypes and seeking solutions, leading to the development of novel ideas, approaches, products, processes and/or solutions that create new value. See also 'Creative imagination'.
Creative imagination	The ability to think of something (for example, an object, place, time, etc.) that is not immediately present in the senses and to consciously represent and use the image or idea to act creative.
Creative thinking	A skill/ ability that can be nurtured and practiced involving looking at something in a new way, perceiving patterns or uses that are not obvious, and/or thinking laterally or 'outside the box'.
Criterion-referenced assessment	Assessment of a learner's progress and achievement against a pre-determined of criteria.
Critical thinking	The application of cognitive skills of analysis, interpretation, inference, explanation, evaluation, and of monitoring and correcting one's own reasoning. It involves effective questioning, gathering and sorting relevant information, relating new information to existing knowledge, re-examining beliefs and assumptions, reasoning logically, and drawing reliable and trustworthy conclusions. Its development requires persistent effort to apply theoretical constructs to understanding a problem, to considering evidence, and to evaluating methods or techniques for forming a judgement (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.

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Cross-cultural competence	The ability to adapt and behave effectively in cross-cultural environments and to form the human relationships necessary for achieving shared goals, involving the deployment of relevant knowledge and understanding, language and/or communication skills and open attitudes and values.
Cross-curricular approach	An approach to curriculum planning, teaching and learning, which respects and builds on individual discipline/subject cultures/epistemologies while embracing and exploring links and connections between them in order to strengthen and enrich student learning. It involves a conscious effort to simultaneously develop linked knowledge, skills, and/or values in more than one academic discipline through the dynamic use of relevant topics, themes, issues or experiences.
Cross-curricular teaching	A planned means through which teachers collaborate to support the development of shared aims, objectives, knowledge, skills, attitudes and values that enrich teaching learning and assessment and the transfer of learning.
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 program content across disciplinary boundaries; enrich the curriculum without overloading it through shared topics or themes; to facilitate interdisciplinary thinking and collaborative learning. Examples include human rights, gender issues, peace education, and education for sustainable development. See also 'Curriculum structure'.
Culture	Distinctive spiritual, social, linguistic, material, intellectual and emotional features of society or a social group that encompasses, not only art and literature, but lifestyles, ways of living together, value systems, traditions and beliefs (UNESCO, 2001:1).
Culturally responsive curriculum	A curriculum that values and promotes cultures and prior experiences of all learners, not just the dominant culture and incorporates intercultural considerations and the promotion of mutual understanding and respect as an intrinsic part of the curriculum, rather than seeking to address these matters within extra or separate modules or courses.

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Culturally responsive pedagogy	Teaching methodologies, which address the need to be sensitive and responsive to cultural differences within the classroom.
Curiosity	A predisposition to search for new knowledge and experiences and the inquisitiveness to find out more.
Curriculum	The term curriculum is not universally used and there is no single agreed definition. It is generally interpreted as a political and social agreement that reflects a society's common vision for the education of its young people, taking into account local, national and global needs and expectations. IBE defines curriculum as '*A dynamic and transformative articulation of a society's collective expectations of the purpose, and relevance of education and learning, which aims to foster a holistic, inclusive, just, peaceful and sustainable world and contributes to the well-being and fulfilment of current and future generations'.* Curriculum is not confined to education institutions or pre-tertiary, general education. Rather it applies to all levels and types of education and learning, all types of learners and settings that support the transition of learners throughout their lifelong learning journey. IBE's reconceptualization repositions curriculum: 1) at the core of education systems; 2) as a primary operational tool for sustaining the relevance of education and learning systems to development; 3) as a catalyst for innovation and social transformation; 4) as a force for social equity, justice, cohesion, stability and peace; 5) as a determinant of the quality of education and learning; 6) as a key cost driver of education and learning systems; 7) as an enabler of lifelong learning; and 8) as a lifelong learning system in its own right. These eight dimensions imply the need to reposition curriculum at sectoral, national and global levels and to engage the support and ownership of a broad base of stakeholders (Marope, 2017:1).
Curriculum adaptation	A process of adjusting the existing curriculum to meet the diverse needs of learners of all abilities and/or to meet the articulated needs of individuals, society, the economy and environment, including sustainability.
Curriculum aims/goals	Descriptions of curriculum purposes and outcomes stated in general terms, that relate to educational aims and philosophy and are broad enough to assist the design of more specific curriculum objectives. They are

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programmatic and normally do not delineate 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. 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 intended outcomes, as specified in the formal curriculum and teaching methods, assessment tasks, and learning activities and support materials used in the classroom.

Curriculum area See 'Learning area'.

Curriculum and SDG4 Sustainable Development Goal 4 is one of 17 internationally agreed goals 'to transform our world'. SDG4 emphasizes equity of educational opportunity, quality, sustainable relevance and lifelong learning for all, as key enablers of development. To achieve these aspirations requires a fundamental paradigm shift to reconceptualize and reposition curriculum to effectively impact education and development in the 21st century. A country's curriculum determines the quality of education through its power to guide what is learned and how it is learned. It is also through curricula that countries identify and package competences that are relevant to their development contexts. Curricula also guide the quality of teaching, learning and assessment. SDG4 therefore demands heightened effort from curricula to ensure its achievement (Marope, 2017:1).

Curriculum change Modifications to a curriculum, to ensure that it remains current and relevant, reflects new developments in society and adequately prepares learners for life. This can be done through minor adjustments that do not affect the curriculum structure but that encourages innovation, new approaches and solutions or large scale, system-wide reform that reshapes the structure and content of the existing curriculum.

Curriculum coherence The extent to which the curriculum aims and content, teaching, learning and assessment methods and support materials and are aligned coherently and reinforce one another. Research findings suggest that a high level of curriculum coherence is associated with high performing systems (Oates, 2010).
See also 'Curriculum alignment'.

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Curriculum conceptualizations

Conceptualizations of curriculum have changed over time, driven mainly by contextual factors and intellectual perspectives. From the Latin verb 'currere' meaning 'a 'course' or 'track', curriculum has come to be variously understood as, for example:

- *'A plan for learning'* (Taba, 1962)
- *'All student learning planned and directed by schools to attain educational goals'* (Tyler, 1949),
- '*An attempt to communicate the essential principles and features of an educational proposal in a form capable of effective translation into practice, yet remaining open to critical scrutiny'* (Stenhouse, 1975);
- *'The totality of the experiences a pupil has, as a result of the provision made and the values that underpin and guide it in practice'* (Kelly, 2008);
- *'An expression of what society values and what it therefore expects from its education system* (ibid);
- *'A roadmap for achieving socially agreed development and education goals'* (IBE-UNESCO, 2015).

Many of these conceptualizations highlight the proactive role of curriculum as an agent of change.

Curriculum continuum

Curriculum is also viewed as a continuum spanning

(i) the official curriculum as intended, written, planned and specified
(ii) the curriculum as implemented, mediated, taught, and operationalized
(iii) the curriculum as experienced, learned, received, achieved, internalized, and
(iv) (iv) the assessed curriculum (Cuban, 1992; Harland et. al., 2002).

An alternative continuum describes curriculum as operating at a range of levels:

1) at *'supra'*/international level, involving research-informed curriculum design principles and recommendations (for example, IBE provides normative principles to inform the design of_competence-based curricula at regional and national level).;
2) at *'macro'*/nation state level (curriculum as designed and 'specified' by governments and its agents as a political and social agreement that reflects a society's common vision, while taking into account local, national and global needs and expectations.);
3) at *'meso'/* school level (curriculum as 'planned' by departments or groups of teachers, usually summarized in schemes of work);

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4) at *'micro'/* classroom level (curriculum as planned and 'mediated' by teachers through pedagogical approaches, usually summarized in lesson plans);
5) at *'nano'* level (curriculum as 'experienced' by learners in their day-to-day responses to classroom learning activities and 'internalized' from their experiences, i.e. the 'totality' what students take away in the form of learning outcomes, knowledge, skills, attitudes, values, awareness, insights and so on of experiences during their education, including 'hidden' aspects of the formal or informal curriculum (Van Den Akker, 2010).

Curriculum design — The process of meaningfully constructing and interconnecting the components of a curriculum to clarify what needs to be learned and assessed, how and why, and the resources required to support this.

Curriculum development — The process of designing a national, local or school curriculum. In order to produce a quality curriculum, this process should be planned and systematic and should cater for coherence, effective implementation, evaluation, sustainability and long-term impact. In contemporary educational practice curriculum development is seen as a comprehensive cycle of development, implementation, evaluation and cyclical revision to ensure that the curriculum is kept up-to-date and relevant (IBE-UNESCO, 2011).

Curriculum evaluation — The process of measuring and judging the extent to which the planned courses, programs, learning activities and opportunities, as expressed in the formal curriculum produce expected results. Effective evaluation should provide insights into the kinds of actions, improvements, resources and training that need to be made available to ensure future progress.

Curriculum differentiation — The process of modifying or adapting curriculum content, teaching, learning and assessment methods to the needs and abilities of individual learners, with a view to providing meaningful learning experiences for all learners. It may focus on input, task, outcome, output, response, resources and/or support (UNESCO, 2004b).

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Curriculum guidelines Guidance intended to help teachers and in-service trainers to make informed decisions about the selection of content, skills, approaches and procedures for the effective planning and implementation of the curriculum at school, local or national level. Guidelines may focus on, for example: specific learning areas and/or subjects (e.g. health education curriculum guidelines); particular educational levels (e.g. curriculum guidelines for preschool education); specific group(s) of learners (e.g. learners with special educational needs, minorities, immigrants); and/or more broadly on the curriculum (e.g. curriculum, instruction and assessment guidelines). Curriculum guidelines can or be either prescriptive and detailed, specifying the content, activities, tasks, and materials to be used by teachers and trainers, or non-prescriptive, providing ideas, suggestions and recommendations.

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 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, for example: school development and improvement processes; fostering school leadership and ethos; pre- and in-service teacher training; the development/adaptation of textbooks, teaching and learning materials, resources and guidelines to the needs of the new/revised curriculum; sustaining support for implementation; monitoring and evaluating the implementation process and outcomes; and refining the curriculum as necessary in the light of research and feedback.

Curriculum in action See ‘Implemented curriculum’.

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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-centered (e.g. traditional or discipline-based curriculum), learner-centered, and problem-centered models.

Curriculum monitoring A process of gathering information to evaluate the effectiveness of the curriculum aimed at ensuring that the curriculum as intended, as implemented and as attained are aligned and commensurate with the diverse needs of all learners. This process typically focuses on issues such as relevance, consistency, practicality, effectiveness, scaling-up, sustainability support and impact (i.e. whether learners are achieving the expected learning outcomes).

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 the knowledge and skills that 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 organization The way in which the curriculum is organized to align with specific philosophical and/or design principles, for example, breadth, balance, coherence, continuity, depth, enjoyable, relevance etc.

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Curriculum organizers	Elements of the curriculum used as the main reference or basis for defining the curriculum architecture and selecting and organizing learning experiences. These can be subjects, themes, instructional time, learning outcomes, etc.
Curriculum overload	The imbalances or incongruities between curriculum requirements and system and teacher capacity to enact and meet those requirements. Curriculum overload is often caused by increasing and unrealistic demands and expectations of parents, society, higher education and employers. The impact on teachers and learners typically involves: curriculum overcrowding as a result of new demands; the reduction of time for aspects of the curriculum; 'teaching to the test' to meet targets and parental expectations; giving superficial coverage to "more learning" rather than quality engagement with "deep learning" often resulting in pressure on teachers and learners with potential impact on mental health and learner disengagement.
Curriculum planning	The process concerned with making decisions about what to teach and why, and how to organize the teaching and learning process, taking into account existing curriculum requirements and the resources available. At the school level, it involves developing course and assessment plans for the totality of subjects, learner activities and their assessment. At subject level, it involves collaborative teacher planning for year groups of learners. At individual teacher level it involves developing individual lesson plans and assessment activities. Increasingly, learners are influencing curriculum planning as a result of being given a greater say and influence over their own learning.
Curriculum policy	Formal decisions made by government or education authorities normally recorded in a range of official documents that have a direct or significant effect on the design, development implementation and assessment of the curriculum.
Curriculum relevance	Applicability and appropriateness of a curriculum to the needs, interests, aspirations and expectations of learners and society in general.
Curriculum relevance to development	Curricula produce the human resources that drive development and that contribute to long-term human capital accumulation. This 'development-relevance' implies the need to re-position curriculum beyond the confines of the education sector, anchoring it within the core of national and global development dialogue, policies and interventions. To attain and sustain

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development-relevance curricula should encompass all sectors on the demand-side of education, including education specialists, development specialists, the voices of youth and children as well as public, parastatal, private, and civil sectors and society society at large.

Curriculum review cycle A systematic cyclical approach which involves evaluating, reviewing and revising curricular areas and programs within a specific timeframe with a view to addressing gaps and weaknesses and improving curriculum effectiveness and student learning experiences. Normally it involves several phases including: research and selection; revision and development; implementation; monitoring and evaluation.

Curriculum strands Structural elements of the curriculum around which student learning is organized and planned. The term 'strands' may 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 may include, for example, strands such as: *'number sense and operations', 'algebra', 'geometry', 'measurement', and 'statistics and probability'*.

Curriculum structure The way in which the curriculum is framed and organized, for example into core and elective subjects or learning areas, 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 (Kridel, 2010).

Curriculum trends Important influences and shifts currently affecting the field of curriculum and its enactment in the classroom in

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response to educational research and current or anticipated developments in society and education.

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Data literacy

The ability to read, work with, analyze and argue with data involving a) reading, comprehending and deriving meaning from data, b) working with and presenting data in multiple forms (including charts, graphs, tables, visualizations etc.); c) verifying and critically appraising the data, asking probing questions and drawing analytical insights from it, recognizing the potential for cognitive bias, that data may be limited or incomplete, and that insights can have multiple meanings and interpretations; d) arguing with data and balancing it with experience to inform effective and responsible decision-making, recognizing when data is being manipulated, wrongly applied or used in misleading or inappropriate ways (Carlson et al., 2011; the Data Literacy Project).

Declarative knowledge

Information that a person who has such knowledge generally can convey to others in words and other symbols, Declarative knowledge can be divided into episodic knowledge - memory for "episodes" (i.e. the context of where, when, who with etc.); and semantic knowledge - memory for knowledge of the world, facts, meaning of words, etc.

Deep Learning

Associated with intrinsic motivation and with meaningful engagement, is required to arrive at real understanding of underlying theories/concepts. It is also associated with the ability to recognize key ideas; distinguish principles from examples; and link ideas in order to construct personal meaning (Marope et al., 2017:3).

Democracy

A system of government by the whole population or all the eligible members of a state, through which power is vested in the people and exercised directly by them or by their elected agents under a free electoral system.

Development

'A complex and holistic concept that includes economic growth, peace, political stability, social equity, sustainability, human capabilities and conditions, human rights and freedoms, culture, politics, ethics, morals, religion, knowledge, and technology among others' (Marope et al., 2015) underpinned by core values of equity, inclusion, justice and reconciliation.

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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, neuro-genetics, computational modelling 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 (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. It tends to be used as is a form of pre-assessment that helps a teacher to diagnose a learner's difficulties and to appraise the learner's readiness or level of achievement, in order to guide curriculum and lesson planning and the level of differentiation and/or individual or group support that may be needed.

Didactics

Derived from the Greek noun for 'teaching' and also stems from the German tradition of theorizing classroom learning and teaching. Didactics is a major theory in teacher education and curriculum development, especially in German-speaking and Scandinavian countries, and in the Russian Federation (Seel, 2012). In French, German and Scandinavian educational contexts, the term relates to the theory and practice of teaching and learning, and is concerned with: 'what' should be taught and learned (the content aspect); 'how' something should be taught and learned (the aspects of methodology or pedagogy); and for what purpose or intention something is taught and learned (the goal/aims aspect) (Kridel, 2010).
See also 'Pedagogy'.

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Differentiation	An approach to teaching that involves proactively addressing varied learner needs by offering modified or different learning experiences to specific individual or groups of learners to maximize their learning opportunities. It requires teachers to be flexible in their approach and adjust the curriculum and presentation of information to learners of different abilities.
Digital curriculum	A comprehensive, customizable collection of resources in a variety of formats (digital texts, video, images, audio and interactive media, including real-time digital collaboration and personal learning networks) accessed on-line and or digital/electronic format and used for individual or collaborative teaching, learning and assessment purposes. See also Blended learning and Personalized curriculum.
Digital literacy	Extends beyond functional ICT skills to embrace the critical, collaborative and creative use of new technologies for employability and societal inclusion (European Commission, 2006). The components of digital literacy included information management, collaboration, communication and sharing, creation of content, and problem-solving (European Commission Joint Research Center-IPTS, 2013). See also ICT literacy
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 characterizes teaching practice within one subject and encourages teachers for specialization, depth of content knowledge, and integrity to the conventions of their discipline (Kridel, 2010). See also 'Subject/subject area'.

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Disciplinary knowledge	Knowledge of subject specific concepts, skills and processes gained through the study of disciplinary content, such as math and language. See also 'Epistemic knowledge'.
Dispositions	The tendency to act in a certain way in given circumstances. In the context of learning and thinking, disposition implies being motivated to act habitually in a certain way, while being sensitive and responding appropriately to the demands of the context, taking account of the values associated with the action. Seven broad 'thinking dispositions' have been identified by researchers including: to be adventurous in thinking; to be curious and oriented towards problem finding; to seek understanding and build explanations; to be plan-ful and strategic; to be intellectually careful and to give reasons; and to be metacognitive (Perkins et al., 1993; Costa & Kallick, 2014; McGuinness, 2018). See also 'Learning Dispositions'.
Drive	See 'Initiative', 'Motivation'.

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E-assessment/ ICT-based assessment

All forms of electronically supported assessment, which 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 programs 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 (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 (Naudeau et al., 2011).

Early childhood care and education (ECCE)

A holistic approach to support young children's early cognitive, physical, social and emotional development provided through organized instruction outside of the family context. It aims to develop the social and 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 (UIS, 2012).
See also 'ISCED'.

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Education

The process of facilitating the acquisition internalization and deployment of learning, including the acquisition of knowledge, skills, attitudes, values, beliefs, and habits. Formal education is commonly divided into age-related stages, such as preschool or kindergarten, primary school, secondary school and further or higher education or apprenticeships.

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 programs; (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 (World Education Forum, 2000).

Educational goals

Statements that describe the competences, knowledge skills and attributes which all or most learners should have developed upon completion of a course or program.
See also 'Curriculum objectives'.

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Educational technology	The study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resource (Januszewski & Molenda, 2008).
Efficiency	A measurable concept, determined by the ratio of useful output to total input including the avoidance of wasting materials, energy, efforts, money, and time in doing something or in producing a desired result.
Efficient use of resources	The optimum generation, combination, allocation, organization, management and utilization of available resources to achieve a desired outcome with minimum waste.
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 behaviors related to these issues into the existing learning areas or subjects, thereby engaging learners in the process of solving 'real-life' problems (UNICEF, 2000).
Emotional engagement	Learner willingness, to engage, including the quality of their engagement and their intrinsic motivation and fulfilment in learning; entailing positive (and negative) reactions to teachers, classmates.

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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 (Mayer, Salovey & Caruso, 2004).
Emotional skills	A set of individual developmental capacities associated with affective maturation manifested in consistent patterns of thoughts, feelings and behaviors.
Empowerment	The "process by which individuals and groups gain power, access to resources and control over their own lives. In doing so, they gain the ability to achieve their highest personal and collective aspirations and goals" (Robbins et. al., 1998). Empowerment in learning provides opportunities for learners to exercise choice and control over their own learning and assessment, which results in an increase to the individual's self-efficacy and motivation. See also 'Intrinsic motivation', 'Learner agency', 'Self-efficacy'.
Empathy	The ability to understand and share the feelings of another and/or sense or imagine other people's emotions. Types of empathy include cognitive empathy (the largely conscious drive to recognize accurately and understand another's emotional state), emotional empathy (the automatic and often unconscious drive to respond appropriately to another's emotions) and compassionate empathy (feeling someone's pain, and taking action to help).
Endurance	The strength to withstand something challenging and act with acceptance. fortitude, forbearance, patience, resignation, sufferance and/or stoicism, See also 'Grit', 'Resilience'.
Entrepreneur	A French term that describes someone with initiative who identifies gaps and business opportunities in their environment and brings together the necessary resources in an innovative way to fill these gaps, bearing the risks involved and, in the process, gaining personal rewards.
Entrepreneurialism/ Entrepreneurship	In more recent times, the meaning of these terms has been expanded to include a specific mindset (see also entrepreneurial mindset) that contributes to entrepreneurial initiatives not necessarily related to business ventures, for example, social entrepreneurship, political entrepreneurship, knowledge entrepreneurship etc.

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Entrepreneurial mindset	A mindset involving a dynamic interrelationship of personality traits, motivation, cognition, needs, emotions, abilities, learning, skills and behavior, on the basis of which an individual or a group of individuals interact with their environment in order to identify, generate and convert opportunities into new value.
Epistemic knowledge	Knowledge about how practitioners of disciplines work and think. For example, knowing how to think like a mathematician, historian or scientist, as well as how that subject contributes to solving complex problems. This knowledge will enable students to find the purpose of learning and extend their disciplinary knowledge (OECD, 2019).
Epistemology	The philosophical study of the nature, origin, and limits of human knowledge. The term is derived from the Greek *episteme* ("knowledge") and *logos* ("reason"), and, accordingly, the field is sometimes referred to as the theory of knowledge (Encyclopedia Britannica). All academic disciplines aspire to their own specific epistemic approach to knowledge, for example, science relies on well-reasoned arguments based on empirical evidence that can be universally shared.
Equity and equality	In education, the term equity refers to the principle of fairness. While it is often used interchangeably with the related principle of equality, equity encompasses a wide variety of educational models, programs, and strategies that may be considered fair, but not necessarily equal. It has been said that "equity is the process; equality is the outcome," given that equity—what is fair and just—may not, in the process of educating students, reflect strict equality—what is applied, allocated, or distributed equally.
Ethics	Derived from the Greek word ethos which can mean custom, habit, character or disposition, ethics is a moral philosophy or code practiced by individuals and/or groups that governs individual and/or group behavior and the types of actions, consequences, and limits of acceptable human behavior, It is concerned with what is good for individuals and society while respecting the principles of autonomy, justice, beneficence and non-maleficence.
Ethics and values education (EVE)	The term applies to structured approaches which explicitly or implicitly relate to ethical dimensions of life and which aims to build a classroom or school environment as an ethical community, with a mission to: 'stimulate ethical reflection, awareness, responsibility, and compassion in learners; provide them with insight

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into important ethical principles and values; equip them with intellectual capacities (critical thinking and evaluation, reflection, discovery, understanding, decision-making, non-cognitive abilities like compassion) for making responsible moral judgments; overcome prejudice, discrimination, and other unethical practices and attitudes; steer children towards the search and commitment to fundamental values, meaning and purpose in their lives; nurturing respectful attitude towards others (both individuals and communities alike) and put one's beliefs, attitudes and values into practice contribute to the common good. As such EVE cannot be limited to one school subject or a set of subjects, since the initial all-encompassing nature of ethical reflection and awareness calls for a trans-curricular, integrative approach'. (Ćurko et al. 2015)

Evaluation (in teaching and learning)

A systematic process aimed at judging the effectiveness of any teaching and learning program and illuminating actions for improvement.

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.

Experienced curriculum

Refers to how learners engage with, respond to, and learn from the experiences, materials, and social or emotional environment of the classroom and school and the impact and significance of what learners gain from and take away from the totality of their experiences, in terms of educational value.
See also 'Curriculum', 'Intended curriculum', 'Taught curriculum', 'Achieved curriculum', 'Evaluated curriculum'.

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'.

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Extrinsic motivation	Behavior motivated by receiving something from others and/or to avoid certain negative outcomes - Research suggests that the effectiveness of extrinsic motivators varies depends on factors like self-esteem, locus of control (the extent to which someone believes they can control events that affect them), self-efficacy (how someone judges their own competence to complete tasks and reach goals). See also ‘Fixed mindset’, ‘Growth mindset’, ‘Intrinsic motivation’, ‘Goal orientation’.

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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)'.

Financial Literacy

The knowledge and understanding of financial concepts and risks and the skills, motivation confidence and experience to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts. The aim of financial literacy is to improve the financial well-being of individuals and society, and to enable participation in economic life. Thus, financial literacy refers to the need for both knowledge and significant experience of effective financial behavior.

Fixed mindset

An individual's belief that qualities, like intelligence or talent, are fixed traits; and that talent alone creates success, without effort (Dweck, 2006).
See also 'Mindset', 'Fixed mindset', 'Self-Efficacy'.

Flexible curriculum

Responds to the needs of individual learners by giving teachers greater flexibility to decide upon educational objectives, teaching strategies and means of assessment and evaluation within schools, or with particular students in a particular context.

Flipped classroom

Refers to a variety of pedagogies through which the traditional roles of teacher and learner are altered. Learners are required to take greater ownership by learning information before class, through a series of miniature lectures often accessible on line, and then coming to the session ready to engage in more interactive experiences and to apply and evaluate what they know. Preliminary research indicates that attendance, learning, and the perceived value of learning increases, resulting in more higher-order critical thinking and richer, deeper learning experiences (Woods & Rosenberg, 2016).

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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 programs 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 (UIS, 2012).
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 (CCSSO, 2008). See also 'Assessment for learning'.
Framework curriculum	A curriculum designed at a high level, which outlines the underpinning rationale (for example, overarching aims, objectives and key competences to be taken into consideration) and allows considerable flexibility for the content and approach to the curriculum to be customized at regional, local and/or school level. The framework is then used as a supportive structure used as a guide to help schools interpret, plan and develop their own curriculum, learning, teaching and assessment strategies. See also 'Curriculum Framework'.
Foundational/enabling competences	These include basic literacy, knowing how to learn and mastery of fundamental disciplines like language, sciences and mathematics (Marope, 2017:2).
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 et al., 1996), namely: learning to know, learning to do, learning to live together, and learning to be. See also 'Curriculum design'.

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Functional curriculum	A curriculum designed to teach skills deemed essential for living and working independently to learners with cognitive impairments. See also ‘Developmental curriculum’.
Future curricula	Reflect competences that prepare learners for an unknown future.

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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 behavior modification and rote learning to supporting learning in complex domains such as evaluation or creativity (Seel, 2012).

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 (ILO, 2007).

Gender mainstreaming (in the curriculum)

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

General capabilities

Similar to competences, capabilities encompass aspects of knowledge, skills, attitudes, values and dispositions that operate across the whole curriculum. Together with curriculum content and cross-curricular priorities, these capabilities assist students to live and work successfully in the twenty-first century. The encouragement of positive behaviors and dispositions underpins general capabilities. When combined in learning area contexts, general capabilities enhance and complement each other (ACARA, 2013).
See also 'Key competences/competencies or skills', 'Twenty-first century skills'.

General education

Education programs 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 programs and to lay the foundation for lifelong learning. General education includes education programs 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 labor market-relevant qualification (UIS, 2012).

General or generic competences

See 'Foundational/enabling competences ', 'Twenty-first century skills'.

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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.
Global citizen	Someone who is aware of and understands the wider world and their place in it and takes an active role in their community, working collaboratively with others to support equality, fairness and sustainability.
Global Citizenship Education	Aims to empower learners of all ages to assume active roles, both locally and globally, by instilling in learners the values, attitudes and behaviors that support responsible global citizenship: creativity, innovation, and commitment to peace, human rights and sustainable development in pursuit of more peaceful, tolerant, inclusive and secure societies (UNESCO 2019).
Global competence	The capacity to analyze global and intercultural issues critically and from multiple perspectives, to understand how differences affect perceptions, judgments, and ideas of self and others, and to engage in open, appropriate and effective interactions with others from different backgrounds on the basis of a shared respect for human dignity. Aims to empower learners to assume active roles to face and resolve global challenges and to become proactive contributors to a more peaceful, tolerant, inclusive and secure world (OECD, 2018).
Global mind-set	A personal, social, economic and environmental identity and way of thinking that goes beyond one's own cultural, national, or ethnic borders to embrace global values and concerns for the generic good.
Goal orientation	A psychological need that drives learners toward a goal or behavior, for example a need for achievement, and/or a need for affiliation with others and/or a need for attention or approval. Research suggests that individuals can entertain multiple competing goal orientations at the same time, striving to both outperform competitors and improve their own performance. This led to the conceptualization of separate continuums, one associated with learning and two associated with performance. a) A learning or mastery orientation tends to be associated with intrinsic motivation, a growth mindset and with the satisfaction of mastering something, gaining control, proficiency, comprehensive knowledge, or sufficient skill in a given area, rather than concern about performance relative to others. Mastery orientation has been

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found to be more effective than performance goals in sustaining students' interest in a subject.

b) A performance or grade orientation tends to be associated with extrinsic motivation to gain approval from peers and teachers, seeking to demonstrate and validate the adequacy of their competence in order to 'prove performance' and receive favorable judgements and/or avoid negative judgments. Learners with performance goals often tend to get higher grades than those who primarily express mastery goals; however, there is evidence that performance-oriented students do not actually learn material as deeply or permanently as students who are more mastery-oriented (Midgley et al., 2001).

c) A performance avoidance orientation, associated with a fixed mindset, which may cause learners to choose less challenging tasks to avoid failure and negative judgment from others. This tends to be associated with extrinsic/external, as opposed to intrinsic/internal motivation (Dweck, 1986, 2006; VandeWalle, 1997).

Research suggests that learners can move between orientations, depending on context, circumstances and motivation.

Good governance

The preferred way to conduct public affairs and manage public institutions and resources efficiently for the public good. It refers to the leadership, direction and control of an organization, including: its strategic direction; its accountability to the public for performance; and the management of its resources with probity and integrity. Good governance in education is considered as a way of improving performance in the education sector.

Grit

A positive, non-cognitive trait (that can be developed as a skill) based on an individual's conscientiousness, effort, endurance, perseverance, resilience and/or need for achievement, combined with the passion to achieve a longer-term objective.

Growth mindset

A belief that abilities can be developed through dedication and hard work; emerges from understanding that effort and willingness to take risks and to learn from failure, are key to success. This view creates a love of learning and a resilience that is essential for accomplishment. Learners who embrace a growth mind-set believe that they can learn more or become smarter if they work hard and persevere and view challenges and failures as opportunities to improve their learning and skills. Learners (Dweck, 2006).

See also ‘Mindset’, ‘Fixed mindset’, ‘Intrinsic motivation’, ‘Extrinsic motivation’, ‘Self-efficacy’.

Guided learning

Refers to the level of support given to a learner over time until they become sufficiently competent and confident to undertake a specific task independently. The underpinning pedagogical idea is that teachers use cooperative learning strategies to afford learners the opportunities to learn from, and to develop competences, in cooperation with their more advanced peers. Guided learning can be: *highly structured:* where teachers present the issue, structure, and sources for investigation; *Loosely guided:* where teachers provide questions to stimulate enquiry but learners use their own approaches and find their own sources of information to investigate; or *Open-ended:* where learners and teachers co-construct the enquiry, formulating questions and modes of assessment as they go (Marope et.al., 2017:3).
See also ‘Scaffolding’.

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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'.

Health education

The principle and educative processes by which individuals and groups, learn to behave in a manner conducive to the promotion, maintenance, and/or restoration of health.

Health literacy

The ability to gain access to, understand and use information and resources in ways which promote and maintain good health (i.e. to make sense of communication and make effective use of facilities and resources which support the maintenance of personal health and wellness, including nutrition, diet, exercise, mental health, public health and safety.

Heuristic methods

Systematic thinking plans and problem solving strategies used for a variety of different types of thinking, such as critical thinking, creative thinking, systems thinking, etc. to help analyze and transform problems, for example, breaking a problem into parts or making graphic representations of it, which can increase the probability of finding the correct solution through a systematic approach to the task.

Hidden curriculum

Unofficial norms, behaviors and values arising from 'school-related factors' that are directly/indirectly transferred by the school culture or ethos, and through teaching and learning, 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.

Higher-order thinking

'Taking new information and information already stored in memory and interrelating, rearranging and/or extending the information to achieve a purpose or find possible answers in perplexing situations', involving cognitive processing skills such as analysis, evaluation and synthesis (Lewis & Smith, 1993).
See also 'Bloom's Taxonomy'.

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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'.
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 program 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 (Queensland Department of Education and the Arts, 2004).
Humanities	A branch of science that is considered to be more philosophical than the social sciences dealing with heritage and the question of what makes us human. It includes areas of study such as ancient languages, anthropology, modern languages, the visual/performing arts, history, law, philosophy, and religion.

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ICCS (International Civic and Citizenship Education Study)	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.
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, vision/video-conferencing, etc.) (UIS, 2009).
ICT Literacy	Using digital technology, communications tools, and/or networks to access, manage, integrate, evaluate, and create information in order to function in a knowledge society. (International ICT Literacy Panel, 2002, p. 2)
ICT and Information Literacy	"An individual's ability to use computers to investigate, create, and communicate in order to participate effectively at home, at school, in the workplace, and in society" (Fraillon, Schulz, & Ainley, 2013, p. 18).
ICT Skills	The capability (knowledge, skills and aptitude) to effectively identify, search and present specific information in order to build knowledge and develop critical and creative thinking pertinent to a field of study.
Impactful use of resources	The most effective use of available resources for the greatest good and impact.

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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 (UNESCO, 2009). Inclusive schools are based upon a child-centered 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 (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 (UIS, 2012).
Initiative	The ability and to assess situations and the willingness to take to act independently or take charge before others do to get things done, with the hope that it will continue. See also 'Motivation'.
Innovation	Devising researching testing and applying new or better solutions that meet new unarticulated or existing needs, to create new value.

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Integrity

Maintaining ethical standards and socially accepted norms such as honesty, respect, responsibility, and human dignity and keeping to these principles even when it is challenging to do so.

Inquiry-based learning

An approach to learning used in field-work, case studies, investigations, individual and group projects, and research projects which generally starts by posing questions, problems or scenarios rather than simply presenting material to learners and provides opportunities for learners to construct their own understanding of the complexity of the natural and human world around them.

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 (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 (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'.

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Interacting with others	Involves communication, reacting, responding and working effectively with others, asking open-ended questions, building on ideas, making suggestions and contributing to solutions and collaborating with others to resolve complex problems and create integrated solutions across contexts (Such solutions ideally go beyond productivity to take account of humanity, social cohesion, harmony, justice to achieve a peaceful, reconciled future) (Marope et.al., 2017:2)
Interacting with the world	Effective interaction spans the totality of personal, social, economic, environmental and behavioral interactions and their impact from local to global levels. Effective interaction requires: awareness of differences in access to knowledge and resources; being appreciative of, and sensitive to, multicultural, multi-faith and multi-lingual perspectives; embracing diversity as an enriching asset; and positive and impactful advocacy for collective local and global well-being and sustainability (Marope et.al., 2017:2)
Interactive use of tools and resources	The effective, efficient and interactive use of a range of tools and resources relevant to the task at hand (including cultural linguistic, intellectual, material, physical, technological and virtual resources etc.) to influence and/or achieve sustainable outcomes (Marope et.al., 2017:2) See also 'Efficient use of resources', 'Impactful use of resources', 'Responsible consumption', 'Sustainability'.
Intercultural competence	The knowledge, skills, attitudes and values to think and act appropriately, and to communicate and work with people from different cultural backgrounds in cross-cultural settings at home or abroad, demonstrating cultural understanding and sensitivity.
Intercultural understanding	Awareness, understanding and appreciation of one's own and other cultures. It implies openness towards and respect for other cultures.

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Interdisciplinary approach

An approach to learning that draws substantive/propositional and procedural knowledge from two or more disciplines in a connected way. It 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. One theoretical model for the development of inter-disciplinary curriculum offers a continuum of practice, including:

- *Fragmented* – no joint planning or link making between subjects
- *Sequenced* – arranging teaching so that related topics are taught concurrently within different subjects (e.g. allowing the study of the First World War in History to coincide with the study of war poetry in English).
- *Shared* – joint planning of related disciplines (e.g. identifying commonalities between Science and Geography).
- *Webbed* – the use of thematic approaches to bring content from different disciplines together (e.g. an Africa week when all curriculum areas focus on this single theme).
- *Threaded* – a cross-curricular approach where big ideas (e.g. citizenship, thinking skills) are coherently planned across the curriculum.
- *Integrated* – largely an interdisciplinary organizational approach, which breaks down traditional subject boundaries – either partially (e.g. hybrid subjects) or fully (e.g. the US middle school approach) (Fogarty & Pete, 2009).

Interdisciplinarity

Harmonizes and synthesizes links between disciplines into a coordinated and coherent whole. It requires teachers from different disciplines to integrate knowledge and methods from different subject/disciplinary perspectives using a synthesis of approaches.

Interdisciplinary curriculum

A curriculum that considers the purposes of education and the competences (i.e. the knowledge, skills attitudes and values) required to become an educated person, capable of thriving in a modern, complex democratic society. An interdisciplinary curriculum requires coherent planning between disciplines to

create a coherent coordinated curriculum to meet identified shared purposes and objectives.
See also 'Multidisciplinary approach', 'Transdisciplinary approach'.

Interdisciplinary knowledge

Thematic knowledge that enables students to think across the boundaries of disciplines, by making relevant links and connections.

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 (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 programs and the resulting qualifications into internationally agreed categories. ISCED classifies education programs 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 (UIS, 2012).

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Interpersonal Skills	Social-emotional and emotional skills to sustain and enrich personal and working relationships, including listening actively, communicating effectively, negotiating with and influencing others, taking the lead as appropriate, navigating in social and culturally sensitive ways, being respectful, empathetic, caring, appropriately assertive, transactional (give and take), open to diversity, reliable, taking responsibility, fair, agreeable, trustworthy, ethical, and interdependent.
Intrapersonal Skills	Skills such as self-awareness, metacognitive thinking, reflection and emotional regulation, recognizing one's own strengths, weaknesses and biases, managing personal plans and projects, contributing and taking responsibility, persisting, making an effort, being flexible and adaptable, recognizing and managing risk, being self-efficacious, seeking autonomy, agency, fulfilment, acting with integrity. See also 'Metacognition'.
Intrinsic motivation	Behaviors associated with the satisfaction of performing an activity for its own sake. Extrinsic reinforcements, such as verbal praise, may increase intrinsic motivation. However, the effectiveness of extrinsic motivators varies depending on factors such as: self-esteem: locus of control (the extent to which someone believes they can control events that affect them); and self-efficacy (how someone judges their own competence to complete tasks and reach goals). Praise might have less effect on learners with high self-esteem because they would not have the same need for approval that would make external praise reinforcing Cameron & Pierce, 1994).

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Key/ fundamental essential competences

Important sets of knowledge skills, attitudes and values that are essential to living and working successfully in contemporary society. They are transversal in that they cut across different domains, contexts and situations and are essential components of all domains. 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 describe these competences/competencies (for example, basic, core, cross-curricular general, generic, key, or transversal competences). Several organizations, partnerships and consortia have defined and endorsed different sets of competences/skills frameworks. IBE-UNESCO has identified 6 sets of competences that it considers are central to current and future curriculum design to meet the demands of the Fourth Industrial Revolution that is characterized by the growth of artificial intelligence and a knowledge-based economy. These include the development and deployment of knowledge skills, attitudes, values and dispositions associated with:

(i) Lifelong Learning *(to promote adaptability, agility, resilience, innovation)*;
(ii) Self-Agency (*Empowerment for self-fulfilling action)*
(iii) Interactive use of tools and resources;
(iv) Interacting with Others *(Towards shared goals across contexts)* and
(v) Interacting with the world.
(vi) Multi-literateness *(including Literacy, Numeracy, Digital, Data, and Technological literacy)*; and
(vii) Trans-disciplinarity;

(Marope, 2017:2, IBE-UNESCO)

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

The knowledge, concepts, ideas and theories about the natural and human world, people and its societies and their interrelated structures and patterns that have been established through learning and/or experience.

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Knowledge-based economy	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 (OECD, 2008).
Knowledge society	A society, which generates, shares and makes available to all members of society the knowledge that may be used to improve the human condition. A knowledge society differs from an information society in that it serves to transform information into resources that allow society to take effective action, while an information society only creates and disseminates the raw data. The capacity to gather and analyze information has existed throughout human history. However, the idea of the present-day knowledge society is based on the vast increase in data creation and information dissemination resulting from innovations in information technologies (Castelfranchi, 2007). Knowledge societies therefore have 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 (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.

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Learner Agency

A form of personalized learning aimed at empowering learners to take ownership of their own learning in ways that are appropriate for their developmental level by developing learners freedom and capacity: to exercise choice over their learning and assessment experiences; to set personal learning goals; to initiate action toward achieving their goals; and to reflect on and regulate progress in their own learning with the aim of increasing their internal locus of control and greater self-efficacy. See also 'Agency', 'Teacher agency'.

Learner-centeredness

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 by which an individual acquires or modifies knowledge, skills, attitudes, values, and behaviors through experience, practice, study or instruction (UIS, 2012). Note that the definition of learning depends on the philosophical and psychological approach adopted.

Learning theory

There are at least three major theories of learning. Behaviorism views learning as a measurable change of behavior 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 (Kridel, 2010). Increasingly, insights from neuro-scientific research are informing learning theory, in particular insights into attention, memory building, motivation, cognition, emotion and collaboration as well as the conditions necessary for effective learning (nutrition and healthy physical and mental development).
See also 'Teaching'.

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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 (IBE-UNESCO, 2011). Many education systems organize the curriculum of general education around broad learning areas or fields of learning.
Learning compass	'A future-oriented framework for learning to orientate students in a world of uncertainty and rapid change and help them navigate towards the future we want' (OECD 2019).
Learning content	The topics, themes, beliefs, behaviors, 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	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 that have 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 methods	Refers to the general principles, pedagogy and management strategies used for classroom instruction.
Learning objectives	Specification of learning to be achieved upon completion of an educational program or an activity (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 behaviors a learner has mastered upon the successful completion of an education program (UIS, 2012).

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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 (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 standards

Concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. Learning standards describe educational objectives—i.e., what students should have learned by the end of a course, grade level, or grade span—but they do not describe any particular teaching practice, curriculum, or assessment method.

Learning strategies

A learner's way of organizing and using a particular set of skills in order to learn content or accomplish other tasks more effectively and efficiently in school as well as in non-academic settings (Schumaker & Deshler, 1992). See also 'Meta-cognition'.

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Learning styles

A set of behaviors and attitudes that influence how students learn and interact with teachers and peers. Learning styles are cognitive, affective, and physiological behaviors 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 conceptualization) 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'.

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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 (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 (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 programs in relation to gradations of learning experiences and the knowledge, skills and competencies, which each program is designed to impart. Levels of education are therefore a construct based on the assumption that education programs 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 program, 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); postsecondary non-tertiary education (level 4); short-cycle tertiary education (level 5); bachelor's or equivalent level (level

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6); master's or equivalent level (level 7); doctor or equivalent level (level 8) (UIS, 2012).
See also 'ISCED'.

Life skills

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 (World Health Organization 2003). 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 (UNESCO, 2004a). In some cases, the term is used as an equivalent of key 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 (CEDEFOP, 2011). Knowing how to learn affords individuals the regenerative capacity to remain current and to demonstrate the agility, adaptability innovation and resilience to reinvent themselves to meet changing contextual demands (Marope et al: 2 2017:2, IBE)

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 (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.
Where previously the term literacy was confined to reading and writing, it is now used to reference high quality performance or know-how in a range of domains

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or aspects of learning, as in science literacy, or with the use of tools, as in media literacy or digital literacy. When used in the context of cultural literacy, or financial literacy, or civic literacy, there is very little difference between that use and the meaning of essential or key competences (McGuinness, 2018).
See also 'Multiple literacies'.

Localization of curriculum

The process of defining and interpreting components of the curriculum at community/local and/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 programs 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 programs at this level to provide individuals with skills relevant to employment. Programs 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 (UIS, 2012).

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M

Macro-competences

The IBE-UNESCO (Framework of Competences' identifies seven 'macro' or 'universally applicable' competences that are considered relevant across all contexts which, because of their over-arching nature and universal application, provide stability across transformative reforms. They include: i) Life-long learning; ii) Self-agency; iii) Interactively using diverse tools and resources; iv) Interacting with others; iv) Multi-literateness; and vii) Trans-disciplinarily. Collectively they provide the rationale or overarching "why" of a competency-based curriculum, which promotes life-long learning by enabling learners to develop self-agency and the ability to interactively use diverse tools and resources to become multi-literate across transdisciplinary contexts in order to interact effectively with others and the world for personal and collective benefit. The framework also identifies a non-exhaustive list of micro-competences/literacies that contribute to the macro-competences. The framework therefore balances the need for dynamic curriculum adaptability/change with the equal need for curriculum stability (Marope et.al. 2017:2 IBE-UNESCO).
See also 'Macro-competences', 'Personal and Public good'.

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.

Mastery

Comprehensive knowledge and/or skill or and demonstration of excellence in a particular subject or activity, involving the ability to attend to the small details of a process and to be able to complete an action to the level of mastery required or described.

Mastery motivation

A psychological force that stimulates an individual to attempt independently, in a focused and persistent manner, to solve a problem or master a skill or task which is at least moderately challenging.

Mathematical literacy

The 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 a constructive, concerned and reflective citizen. It involves analysis, reasoning, and communicating ideas effectively to formulate, solve, and interpret solutions to mathematical problems in a variety of situations (OECD, 2009).
See also 'PISA'.

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Meaningful learning

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'.

Media literacy

The ability to access, analyze, evaluate and create media in a variety of forms. Media literacy involves developing a critical understanding of the role of media in society as well as essential skills of inquiry and self-expression necessary for citizens of a democracy. It is concerned with helping learners develop an informed and critical understanding of the nature of the mass media; its role in society; the techniques used by different types of media, and the impact of these techniques, including an awareness that: a) all media messages are constructed; b) media messages utilize a creative language with its own rules; c) people can experience and interpret the same media message differently; d) media and their messages often have embedded values and ideological/political points of view; e) most media messages are organized to gain influence and profit.

Media literacy education

Aims to help learners of all ages develop the habits of inquiry and skills of expression that they need to be critical thinkers, effective communicators and active citizens in today's increasingly digital society. The purpose of being information and media literate is to effectively access, organize, analyze, and critically evaluate information in order to create and communicate messages in a variety of forms.

Mentoring

A supportive learning relationship between a less experienced 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.

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Metacognition

"The process by which learners become awareness of and increasing in control of habits of perception, inquiry, learning, and growth that they have internalized" (Maudsley, 1979).

This involves developing the ability to think about one's thinking or cognitive processes, 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 behavior); 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 (Seel, 2012).

See also 'Learning to learn'.

Mindfulness

Awareness that emerges from paying attention in a particular way: on purpose, in the present moment, and non-judgmentally, leading to the development of a mental state, trait or disposition to be mindful (Kabat-Zinn, 1994).

Micro-competences/ literacies

These contribute to macro-competences and are adaptable to changing contexts, which may demand different literacies at different times. For example, Industry 4.0 emphasizes digital, data and ICT literacies. Cross-cultural communication emphasizes cultural literacy alongside multi-lingualism etc. The non-

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exhaustive list of adaptable micro-competences/literacies identified by IBE within the competence framework balances the need for dynamic curriculum adaptability/change alongside the equal need for curriculum stability.
(Marope et al.,2017:2 IBE-UNESCO)
See also 'Macro-competences', 'Multiliterateness'.

Mindset

A self-perception or "self-theory" held about self, for example, in relation to learning, believing that they are either intelligent or unintelligent. Learning mindset can have profound effect on skill acquisition, learning achievement, personal and professional success, and many other dimensions of life (Dweck, 2006)

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 (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 (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 (OECD, 2013).

Monitoring

A systematic process of observing, checking and reviewing the progress or quality of an initiative, project or program over a period of time to detect underlying problems before they have an adverse effect.

Monitoring and evaluation

A process that to improve current and future management of outputs, outcomes and impact.

Monitoring tools

Processes and mechanisms used to continuously keep track of the status of an initiative, project or program in use, in order to have the earliest warning of defects or problems and to improve them.

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Moral education	Moral education is often focused on exploring and learning about the belief systems, values and practices of other traditions and viewpoints, in order to develop understanding, respect for other perspectives to promote peaceful coexistence. Moral education encompasses both “moral socialization” - training and nurturing learners in key societal norms, values and virtues; and developing the intellectual resources, skills and competencies, to enable learners to make informed and responsible moral judgments, decisions and actions. Ćurko et al. (2015)
Moral Thinking	“The capacity to make decisions and judgments which are moral (i.e. based on internal principles) and to act in accordance with such judgments” (Kohlberg, 1964).
Motivation	The inner attitude and drive that affects the initiation, direction, intensity and persistence of behavior. It helps to determine the goals toward which learners will strive and affects the choices learners make. It directs behavior towards particular goals and can lead to increased application, effort, energy, and initiative. See also ‘Initiative’, ‘Growth mindset’, ‘Intrinsic motivation’, ‘Extrinsic motivation’.
Motor skills	A learned ability to cause a predetermined movement outcome with maximum certainty. Gross motor skills, like walking, balancing, and crawling require the use of large muscle groups and generally develop during early childhood. Fine motor skills are precise in nature and require the use of smaller muscle groups to perform smaller movements with the wrists, hands, fingers, and the feet and toes, such as writing or playing a musical instrument. The development of motor skills is age-related but not age dependent. Continuous practice of a specific motor skill will result in a greatly improved performance.
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. It therefore draws on knowledge from different disciplines but stays within their boundaries.
Multidisciplinary curriculum	A multidisciplinary curriculum is one in which the same topic is studied from the viewpoint of more than one discipline. Frequently multidisciplinary and cross-

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disciplinary are used as synonyms describing the aim to cross boundaries between disciplines.
See also 'Interdisciplinary approach', 'Transdisciplinary approach'.

Multidisciplinarity

Drawing on knowledge from different disciplines while staying within their boundaries.

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 (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 (ASCD, n.d.).

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Multiple literacies

A concept calling for a broader view of literacy, also referred to as 'new literacies' or 'multi-literacies'. 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 multi-literacies 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 (Seel, 2012).

Multi-literateness

The acquisition and deployment of fundamental 21st century literacies that go beyond the three "R's" (of reading, writing and arithmetic) to include 'micro' competences such as digital, cultural, financial, health and media literacies. (Marope et.al., 2017, IBE-UNESCO). It involves the flexible and strategic ability to understand and use a range of literacies and literate practices, together with a range of texts and technologies, in order to fully participate in a socially, culturally, and linguistically diverse world as an active and informed citizen. A multi-literate learner, for example, is likely to understand the many ways that technology interacts and intertwines with life, and to discern and take advantage of appropriate technologies, including managing, processing, and interpreting a constant influx of information, filtering what is useful, and utilizing the most appropriate applications for his/her own purposes in socially responsible ways.
See also 'Literacy', Digital literacy; ICT literacy etc.

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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 (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. A way of structuring existing and new qualifications, which are defined by learning outcomes. 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 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, including all learning achievement and pathways, or it may be confined to a particular sector, for example, initial education, adult education and training or an occupational area. Some frameworks may have a tighter structure than others; some may have a legal basis; whereas others may represent a consensus of views of social partners. All qualifications frameworks, however, provide a basis for improving the quality, accessibility, linkages and public or labor market recognition and transferability of qualifications within a country and internationally. Individual countries may choose to define 'qualifications framework' in a more specific way (Tuck, 2007).

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Negotiation Discussion aimed at resolving differences and reaching a compromise or agreement and to foster goodwill despite difference in interests.

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

Non-cognitive skills Personality traits or attributes the importance of which for cognitive achievement and labor market outcomes is increasingly recognized 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 (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 programs contributing to adult and youth literacy

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	and education for out-of-school children, as well as programs on life skills, work skills, and social or cultural development (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'.

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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 emphasizes 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 (Kridel, 2010).

Open mindset — A willingness to consider different ideas, critiques, challenges, and opinions as well as to try new experiences, engage with others, and respect for others especially those who may be from different backgrounds (OECD, 2018).

Opportunity to learn — The provision of learning conditions, including suitable adjustments, to maximize a student's chances of attaining the desired learning outcomes (CCSSO, 2005).

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 (ASCD, n.d.). 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' and 'Twenty-first century skills'.

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P

Passion (in learning)	Love of and enjoyment in learning driven by an inner conscious or unconscious sense of purpose to achieve create learn or discover something that is meaningful to the individual.
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. 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 (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 (ASCD, n.d.).
Performance standards	See 'Standards-based curriculum'.
Perseverance (in learning)	Persisting with tasks until the end; not being put off; not giving up easily, remaining tenacious. See also 'Self-discipline'.
Persistance (in learning)	The capacity to engage consistently in challenging tasks without losing focus or becoming irritable in the presence of internal and external distractions (Drake, Belsky & Fearon, 2014).
Personal and public good/impact	The IBE-UNESCO 'framework of future competences' suggests examples of the individual, collective and public good that should accrue from the development, demonstration and impact related to certain categories of competences. N.B. These good effects are likely to accrue from multiple categories of competences. (Marope et.al. (2017, IBE/UNESCO)

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Personalized learning

A process of tailoring education to learners' current capacity, characteristics, interests and needs in order to help learners bridge gaps in their learning and meet learning challenges to achieve the best possible learning progress and outcomes. Ideally, each individual's learning challenges are identified to enable the learner to be adequately supported, thus ensuring that his or her current life situation does not constrain the breadth or depth of learning.

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 (Seel, 2012).

See also 'Learner centeredness'.

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 Cooperation 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

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	and the ability to function in various situations within each domain (OECD, 2009).
Planned curriculum	See 'Intended curriculum'.
Performance-based assessment	Measures learners skills based on a tasks, activities, exercises, or problems that require students to show what they can do.
Perspective taking	The ability to perceive a situation or understand a concept from an alternative point of view, such as the thoughts, feelings and actions of another individual and her/his motivation and/or behaviors. See also 'Empathy'.
Philosophy for children (P4C)	A contemporary philosophical and pedagogical approach that can be used across the curriculum, in every subject, and with all ages and abilities, to develop critical thinking, concept-formation, judgment, reasoning and argumentation skills. A stimulus, such as a story, video clip or image, is shared with a group of learners who are then encouraged by a trained facilitator, such as a teacher, to come up with big, engaging, contestable, philosophical questions of shared concern among the learners. Through a vote, the learners then choose the question they would most like to discuss. The facilitator/teacher gives them time to think and reason individually and in groups before facilitating a wider exchange of ideas and opinions (known as 'a community of enquiry' which is considered of equal importance to the philosophical enquiry). Over time, learners are encouraged to think more deeply and philosophically, and in the process developing critical, creative, collaborative and caring thinking skills. The approach is intended to be a regular activity so that learners develop their skills and understanding over time. As learners become more skilled they learn to listen more carefully to each other, explore differences of opinion respectfully, and value others' ideas. The role of the facilitator is crucial to ensuring quality dialogue and progress, as well as integration with the curriculum. (Lipman 2001).
Philosophy with children (PwC)	A comprehensive curriculum designed to engage children and teenagers in philosophical inquiry. Often referred to as the "Lipman approach," LS-P4C is better understood as the result of an extensive and equal collaboration between Matthew Lipman (1922–2010) and Ann Sharp (Oyler, 2016).

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Physical skills	Sets of abilities and capacities to use the human frame (cardiovascular/respiratory endurance, stamina, strength, flexibility, power, speed, coordination, agility, balance, and accuracy) and physical tools to perform operations and functions.
Practical skills	Skills performed by hand or using equipment, tools or technology, often requiring an understanding of principles, processes and sequences, and the ability to utilize and manipulate materials, tools and artefacts precisely to achieve particular kinds of outcomes.
Proactivity	Anticipatory action or intervention to control an expected occurrence or situation, taking control and causing something to happen, rather than just adapting to a situation or waiting for something to happen.
Productivity	The effectiveness of productive effort, as measured in terms of the rate of output per unit of input.
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 (UIS, 2012). See also 'Early childhood education'.

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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 (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 (Kridel, 2010).
See also 'Project-based learning'.

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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 (Seel, 2012). Increasingly referred to as a key competence/competency and 21st century skill.
Procedural knowledge	Involves knowing 'how' to do something - the series of steps or actions taken to accomplish a goal.
Project-based learning	A process that fosters learners' engagement in studying authentic problems or issues centered 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 taught through textbooks or rote learning and memorization. Assessment is commonly performance-based, flexible, varied, and continuous (Kridel, 2010). See also 'Problem-based learning'.
Program of study (in/for a subject)	See 'Syllabus'.
Psychomotor skills	Physical skills such as movement, coordination, manipulation, dexterity, grace, strength, speed - actions which demonstrate the fine or gross motor skills, such as use of precision instruments or tools, and walking.
Purpose	An intention to accomplish something that is meaningful to the self and consequential to the world beyond the self (Damon et.al., 2003).
Professional Learning Community	See 'Teacher Professional Learning Community'.

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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 labor market and in education and training, and can be a legal entitlement to practice a trade; and (b) job requirements: knowledge, aptitudes and skills required to perform the specific tasks attached to a particular work position (CEDEFOP, 2011).
See also 'National Qualifications Framework'.

Quality curricula

Quality curricula are: inclusive and equitable; characterized by quality learning; promote lifelong learning; and are relevant to holistic development in the broadest, holistic sense of the term (Stabback, 2012, IBE-UNESCO). Quality curricula are lifelong learning systems in their own right, capable of constant self-renewal and innovation which enable learners to develop competences for meeting the challenges and opportunities inherent in 21st century waves of change, the most immediate of which is Industry 4.0. (Marope 2017: 1, IBE-UNESCO)

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R

Reading literacy

Within the framework of the OECD Program 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 (OECD, 2009).
See also 'PISA', 'Literacy'.

Realized curriculum

See 'Attained curriculum'.

Remedial activities

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

Reflection in learning

Intellectual and affective activities in which individuals explore their thinking and experiences in order to lead to new understandings and appreciations. It may take place in isolation or in association with others. It can be done well or badly, successfully or unsuccessfully (Boud et.al., 1995, p.33).
See also 'Metacognition'

Resilience in learning

A developmental ability to cope well with learning challenges and pressures; to persevere and sustain effort in in the face of difficulties, to seek support and feedback as necessary; to overcome frustration and keep trying; to bounce back from setbacks; to treat failure as opportunities to learn from mistakes.
See also 'Growth mindset'.

Respect

Valuing and giving due regard for the feelings, wishes, or rights of self and others.

Responsible consumption

The production and use of goods and services in a way that reduces or minimizes the impact on people's health and the environment, so that human needs can be met not only in the present but also for future generations.
See also 'Efficient use of resources', 'Impactful use of resources', 'Sustainability'.

Responsibility

Being answerable or accountable or having a duty to deal with someone or something within one's power, care, control, or management or being culpable or to blame for something.

Rubrics (in assessment)

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

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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 (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.

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S

Scaffolding

Supporting and structuring of learning to reduce the number of choices a learner has to make so that they can concentrate on building the required competence.

School-based curriculum development

Curriculum developed at the level of an individual school. This notion suggests a curriculum decision-making, development and design process involving school staff, ranging from individual teachers adapting existing curricula to the whole school staff working together collaboratively 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 behavior 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 colors 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 (ASCD, n.d.).

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.

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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 (SADC & COL, 2000).
Scientific literacy	Knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity (US National Centre for Education Statistics), the ability to engage with science-related issues, and with the ideas of science, as a reflective citizen (OECD, 2017) including the ability 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 (OECD, 2009).
Scientifically literate person	One who has the capacity to: understand, experiment, and reason as well as interpret scientific facts and their meaning; ask, find, or determine answers to questions derived from curiosity about everyday experiences; describe, explain, and predict natural phenomena; read articles with understanding of science in the popular press and engage in social conversation about the validity of the conclusions; identify scientific issues underlying national and local decisions and express positions that are scientifically and technologically informed; evaluate the quality of scientific information on the basis of its source and the methods used to generate it; and pose and evaluate arguments based on evidence and apply conclusions from such arguments appropriately (NSEP, 1996, p.22).

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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 labor market entry, post-secondary non-tertiary education and tertiary education. Broadly speaking, secondary education aims at learning at an intermediate level of complexity (UIS, 2012). See also 'Lower secondary education', 'Upper secondary education'.
Self-actualization	The realization of one's full potential, for example, in acquiring new skills, taking on new challenges, and behaving in a way that will help you to achieve your life goals such as creative expression, quest for spiritual enlightenment, pursuit of knowledge, or the desire to give to society. Maslow suggested that the quest for self-actualization is an ongoing, life-long process and that only a small percentage of people actually achieve a self-actualized state.
Self-agency	The capacity and empowerment to analyze the demands of one's environment and apply all resources at hand (knowledge, skills, attitudes, values, technologies, etc.) to take action, and exercising a sense of control and independence in initiating and executing beneficial and self-fulfilling actions to achieve the conditions one desires in one's own learning (and lives) (Marope et.al., 2017: 2, IBE/UNESCO)
Self-awareness	Arising from conscious, deliberate/reflective, proactive and/or self-directive processes and self-beliefs that enable learners to develop a clear perception of their strengths, weaknesses, thoughts, beliefs, motivation, and emotions.
Self-control	The ability to delay gratification, control impulses and modulate emotional expression (Moffitt et al, 2011).
Self-efficacy	"People's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives." (Bandura et al., 1996) Individuals who are high in self-efficacy tend to set more difficult goals, exert more effort to achieve those goals, and seek to learn from the processes of pursuing those goals. Students with a strong sense of self-efficacy are likely to persist in tasks, work hard to

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	overcome obstacles and be more resilient in the face of setbacks (McGuinness, 2018). See also 'Growth mindset'.
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 (Ontario Ministry of Education, 2002).
Self-referenced assessment	Assessment of learner's progress and achievement with reference to himself/herself.
Self-regulation	Regulating one's cognitive processes/activities by monitoring, for example, ones' own problem solving processes, learning how to self-correct and regulating emotional and motivational states, to maintain attention, inhibit distractions and stay on task.
Sequencing	Structuring learning to ensure that learners have time to explore and develop the constituents of competence—i.e. relevant knowledge, skills, attitudes, technologies, etc.—before they are challenged to interactively apply them. For example, learners can be 'scaffolded' to build critical thinking by using 'thinking diagrams' (Marope et al., 2017:3, IBE-UNESCO)
Simulation-Based Learning	A technique (sometimes using technology) to replace and amplify real experiences with guided ones that evoke or replicate substantial aspects of the real world in a fully interactive - often immersive – approach, where the learner has to actively participate in the decision making of a project (Lateef, 2010)
Skill	The ability, proficiency or dexterity to perform tasks and solve problems involving the practical application of theoretical knowledge to particular tasks or situations (CEDEFOP, 2011).

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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 (Seel, 2012). See also 'Emotional intelligence'.
Soft skills	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.
Societal Attitudes and Values	The priorities of a culture including the shared principles and guidelines for practice that frame social order, institutional life and the conditions for enhancing societal well-being. They frame public debate and endure when they are enshrined in social and institutional structures and democratic practice and are endorsed through public (UNESCO, 1997)
Social cohesion	The willingness of members of a society to cooperate with each other in order to survive and prosper. ... **Social cohesion** contributes to a wide variety of **social** outcomes such as health and economic prosperity.

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Social cohesion in education	A desired outcome of schooling, and can affect the academic achievement of vulnerable students–those whose commitment to schooling is weak and is further compromised by schools with weak social cohesion.
Social justice	The distribution of wealth, opportunities, and privileges within a society, based on the concepts of human rights and equality, equity, access, participation and rights with to ensure the fair distribution of available resources across society with the aim of reducing inequalities.
Social sciences	A group of academic disciplines that study human aspects of the world, in particular those involving social behavior and society. These disciplines, focusing on the study of human social behavior, are clearly distinct from the physical sciences, that study non-living systems, by virtue of their subject matter.. The social sciences differ from the humanities not so much in the content of the subject matter but more in that they emphasize the use of the scientific method in the study of human beings. Social science subjects include for example, Anthropology, Archaeology, Economics, Geography, History, Law, Linguistics, Politics, Psychology and Sociology (New World Encyclopedia).
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 program. Education programs 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 programs can be offered to individual students within already-existing education programs or as a separate class in the same or separate educational institutions (UIS, 2012).
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.

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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 (ISO, n.d.). See also 'Standards-based curriculum'.
Standardized testing	Tests that are administered and scored under uniform (standardized) conditions (ASCD, n.d.). 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 (ASCD, n.d.).
STEM	The use of science, mathematical, technical and engineering knowledge to solve societal problems, making the learning of science, technology, engineering and mathematics more meaningful and contextual.
STEM literacy	Knowledge, attitudes, skills and values to identify questions and problems in life situations to explain the natural and designed world; and draw evidence-based conclusions about STEM related issues as well as a willingness to engage in STEM-related issues as a constructive, concerned and reflective citizen (Bybee, 2013, p.5).
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 (ASCD, n.d.).
Student Agency	See Learner Agency.
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.

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Subject-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. See also 'Competency-based curriculum'.
Subject-specific goals	Specific statements within a specific subject or learning area that set measurable expectations for what learners should know and be able to do, described in terms of broad learning outcomes Alternative terminology for subject-specific goals include aims; broad objectives as specified for each subject or learning area.
Subject-specific knowledge	Knowledge relating to discipline-based subjects that combines conceptual understanding and procedural knowledge.
Summative assessment	Assessment of learner's achievement at the end of a term, stage, course or program 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'.
Sustainable development	**"**Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (United Nations, 1987).
Sustainability	Living within the resources of the planet without damaging the environment now or in the future.
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'.

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Systems-thinking	The ability to think about a system as a whole, focusing on the way that a system's constituent parts interrelate and how systems work over time and within the context of larger systems. It perceives the world as a complex system and supports the understanding of its interconnectedness and interrelationships.

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T

Taking responsibility

Morally based obligations and duties to others and to larger ethical and moral codes, standards and traditions, including the responsibility to act responsibly for collective well-being.

Taught curriculum

See 'Implemented curriculum'.

Teacher agency

Teacher capacity, disposition and power to influence curriculum, teaching, learning, assessment and educational environment within the context of personal, institutional and system support and constraints.

Teacher appraisal

Processes to foster teacher development, to encourage professional learning and growth and to identify opportunities for additional support where required. In many countries teacher self- evaluation, reflection and engagement in on-going professional development activities is considered critical to improving teachers' practice at all career stages. Teachers are expected to self- assess their practice based on student performance data and to welcome constructive feedback from professional colleagues (and possibly also students and parents). Additionally, in some countries teacher appraisal processes are used to assess teachers' performance against the standards appropriate to the career role they are fulfilling. In some countries, teacher appraisal is taken into consideration in management decisions relating to pay-scale advancement and career promotion.

Teacher assessment (of learners)

Assessment judgements arrived at by teachers on the basis of observation and marking which provide invaluable insights into learners' progressive development of competence. Teacher assessment requires the use of a range of assessment strategies and tools which enable teachers to make judgements across the full range of learning goals and provide effective and reliable feedback to learners about what they need to do to improve, as well as feedback to other stakeholders about overall achievement.

Teacher career paths

Career paths in teaching have tended to involve taking on management roles alongside, instead of, classroom teaching. Increasingly a wider range of career paths are being introduced in many countries to retain good teachers in the classroom, for example, career paths relating to curriculum and/or pedagogical leadership. Pastoral care, support for professional learning such as mentoring and coaching as well as subject specialisms and progress to different types of leadership and management. In some countries, further qualifications

in leadership are compulsory criteria for applying for leadership roles.

Teacher certification

Processes by which teachers gain a license to teach after being recognized as having acquired the necessary qualifications and/or credentials to legally work as a teacher within a given country or state. The qualifications or credentials necessary for teacher certification vary from country to country and are generally specified by a teaching council or government department. Generally, prospective teachers need to provide verifiable evidence that they have completed a required course of study and/or have satisfactorily completed specified periods of teaching practice/induction). Provisional certification may be issued to teachers when they have successfully completed an approved initial teacher education program or been granted recognition of an overseas teaching qualification. They may then be required to undertake a structured program of induction or retraining before they are granted full certification.to demonstrate they are competent in the standards that apply in the country in which they wish to teach.

Teacher competences

The professional knowledge, skills, attitudes, values and personal and professional code of conduct and behavior that teachers are expected to demonstrate as competent members of the teaching profession. They involve not just the deployment of knowledge and skills but also the ability to meet complex demands by mobilizing psychosocial resources (including attitudes and values) in a particular context. Teacher competences are used to design teacher preparation programs and to support teachers and trainers to develop, maintain and improve standards of teaching and learning.

Teacher competence frameworks

Generally outline the range and level of competence expected of a trainee teacher in order to be recognized as a qualified teacher. Frameworks generally include components relating to: The moral purpose of teaching and associated values, including safeguarding students and promoting well-being and equality; Knowledge of how students learn and develop; and Knowledge and skills in curriculum planning, teaching, learning (pedagogy) and assessment; self-evaluation and professional development.

Teacher evaluation	Can include two types of evaluation a) formative evaluation and constructive feedback on professional learning based on professional activities such as: classroom observation; lesson research study; learning walks; trusted colleague networking; collaborative professional development team teaching and/or micro-teaching/video analysis and b) summative evaluation usually occurs at the end of a teacher induction or retraining program when a final assessment is made about whether a trainee or retaining-teacher is should be granted full certification or license to practice. Summative evaluation is likely to involve reviewing evidence feedback provided the teacher or gathered during formative evaluation.
Teacher induction	Professional support programs specifically designed to provide beginning teachers with the necessary support and guidance (generally during the first two years of teaching) to help them meet performance standards. An effective and comprehensive induction program is generally provided during the first two years of teaching) and may include: on-going observation and/or team teaching; high quality mentoring and coaching from an experienced member of staff; ongoing professional development opportunities; release time to access external professional networks; constructive evaluation and feedback on professional practice.
Teacher professional development	Opportunities to attend workshops, seminars, lectures courses and other professional development activities, usually external to school and on a 'one-size-fits all' basis. Evidence suggests, however, that short-term one-day courses as stand-alone activities, without sustained support from colleagues, are unlikely to have a lasting impact on teachers' practice or student outcomes.
Teacher professional learning/ continuous professional development (CPD)	Sustained professional learning/continuous professional development activities are usually customized to the identified needs of teachers (often within a school). They generally involve opportunities for on-going interactive engagement and reflection with trusted colleagues to enhance, teaching, learning and assessment practices, attitudes, values and impact on learner outcomes. Key aspects of effective professional learning/CPD include: the identification of needs; well- planned and appropriate professional activities prioritized by school leadership with a clear focus on improving pupil outcomes; on-going collaborative engagement over a sustained period of time (2-6 months minimum), in activities such as, research lesson planning; resource preparation; peer observation; team teaching; mentoring and coaching, strengthened by expert facilitation and challenge as necessary; the gathering and analysis of

robust evidence; on-going reflection on context, actions, assumptions, relationships and impact on learners; critical self-evaluation and identification of next steps in on-going professional learning. (Adapted from the General Teaching Council Scotland, Professional Update (n d) and the Teacher Development Trust/DFE 2016).

Teacher professional learning communities (PLCs)

A mechanism to foster collaborative learning among teachers, often used in schools as a way to organize teachers into working groups of practice-based professional learning in which creative solutions are actively sought and reflection on impact is encouraged as an opportunity to learn. The characteristics of PLCs tend to include an ongoing quest for improvement and professional learning and working teams which cooperate to achieve common goals.

Teacher regulation

A process set in place in many counties to maintain effective standards of teaching and to promote public trust and confidence in the teaching profession. Action is taken if a teacher is not meeting the standards of professional competence and/or conduct set out in a country's competence or standards framework. Investigations take place only after a matter has been investigated at school level and if there is a realistic prospect that a teacher's 'fitness to teach' would be found to be impaired, based on an allegation or information that has been referred to a teaching council or other educational body from the police or other criminal justice agencies, or by employers or members of the public.

Teacher standards

Levels of expected teacher professional performance in relevant roles and/or relevant career stages, set out as benchmark criteria against which teacher competence and progress in professional development can be assessed over time, to assist self-evaluation and/or recognize or reward effective practice. Judgements or decisions about whether or not a teacher has met the standards to a satisfactory level need to be made on the basis of what should reasonably be expected of a teacher working in the relevant setting and circumstances, within the framework set out by the standards; and should reflect the expectation that the teacher has effectively consolidated their training, and is demonstrating the ability to meet the standards consistently over a sustained period in their practice.

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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 (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 (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

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experiences. Also referred to as ‘e-learning’ (or electronic learning) and ‘digital learning’ (Seel, 2012).

Technology

A narrow view of technology tends to confine its meaning to computers. A broader view sees technology as including not only computers, but also seven other technologies (electrification, the automobile, the airplane, water purification and distribution, electronics, radio and television, and agricultural mechanization) encompassing not just the individual, tangible artefacts but the larger systems of which the artefacts are a part. An inclusive view of technology also includes the people and infrastructure needed to design, manufacture, operate, and repair the artefacts. This more expansive view, defines technology as “the process by which humans modify nature to meet their needs and wants”.

Technological literacy

A narrow view of technological literacy defines it as ‘the ability to work independently, and with others, to responsibly, appropriately and effectively use technology tools to access, manage, integrate, evaluate, create and communicate information’.
A more expansive view consider technological literacy as having three interdependent dimensions: knowledge, capabilities, and critical thinking and decision-making is to enable learners, citizens and the workforce to use ICT to support social development and improve economic productivity.
A broader view of technology literacy involves for example: a) understanding basic engineering concepts and terms, such as systems, constraints, and trade-offs; knowing something about the nature of the engineering design process; appreciating that technology shapes human history just as people shape technology; considering the benefits and risks of technologies; weighing the risks, costs, and trade-offs of technology in a systematic way; and participating, when appropriate, in decisions about the development and use of technology; having a range of hands-on skills, such as word processing, surfing the Internet, operating a variety of home and office appliances; being able to identify and fix simple mechanical or technological problems at home or work; and using a design-thinking process to solve a problem at home, in school, or in the workplace (Ollis, 2006).

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’.

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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 (UNESCO, 2003a; IBE-UNESCO, 2006).
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 (UIS, 2012).
Thinking diagrams	Templates to help structure and scaffold learners' critical thinking by following logical steps that improve their thinking (Marope et.al 2017: 3, IBE-UNESCO).
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.
Tolerance	The ability or willingness to tolerate the existence of opinions or behavior that one dislikes or disagrees with and/or the capacity to endure continued subjection to something without adverse reaction. It can be perceived as a patronizing attitude, connected to its Latin etymology "putting up with" something we dislike or even hate. It is central to in dealing with a situation where there is strong disagreement on values, beliefs or practices.

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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' and 'Multidisciplinary approach'.

Transdisciplinarity

An approach to learning based on the belief that certain important knowledge, concepts, skills, attitudes and actions transcend subject/disciplinary boundaries to constitute a coherent transdisciplinary whole that is engaging, relevant, challenging and significant.

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 (Seel, 2012).

Transversal competence

The ability to use prior learning to support new learning or problem-solving across a wide range of contexts. The competences need to be taught in ways that make them more likely to transfer, using a metacognitive approach to teaching helps learners become more aware of the transferability of knowledge, skills, attitudes and values. If this scenario is repeated across contexts and across knowledge domains, then students begin to make connections, see similarities and

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differences between the contexts, and transfer becomes more possible.

Transversal skills — A broad set of knowledge, skills, work habits, and character traits that are widely believed to be critically important to success in the 21st century that can be applied in in all educational, career, and civic settings.

Trust — Acceptance/belief in the reliability, truth, or ability of someone or something without evidence or investigation.

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 centers 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 (CEDEFOP, 2011).

Twenty-first century skills — An overarching conception of the knowledge, skills and attitudes citizens may need to be able to participate in, and contribute effectively 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 labor 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

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requires a whole new set of competences related to ICT and technological literacy (Lai & Viering, 2012).
See also ‘Key competences/competencies or skills’.

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U

Unlearning

The ability to choose an alternative or more current, mental model or process by stepping outside that model or process and choosing a different one (or making significant updates to existing ones) to create new value. Unlearning involves a) becoming aware and accepting that the current mental model process is no longer working effectively, which may be difficult to recognize, since many mental models are unconscious; b) exploring the new mental model or process independently from the old model and c) experimenting with and applying the new model or process enough times that it becomes part of a new way of thinking and creating new value. Unlearning is an important concept in personal development in the sense of recognizing personal beliefs or habits that are limiting or unproductive and re-educating the self by letting go of those beliefs and habits by applying new knowledge routinely to break out of the rut to create new personal value.

Upper secondary

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

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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 program (UIS, 2012).

Validity (in assessment)

Refers to what is assessed and how well this corresponds with the behavior 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 theorizing 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 (Wyatt-Smith & Cumming, 2009).
See also 'Fairness (in assessment)'.

Values

Culturally defined principles and core beliefs shared by individuals and groups that guide and motivate attitudes, choices and behavior, and serve as broad guidelines for social life. Values refer to the beliefs that a person holds about what is desirable – for themselves and/or for society more generally. Like attitudes, they are emotionally laden, have an evaluative component (what is desirable or not), and motivate actions. Unlike attitudes, they tend to transcend contexts and apply to many situations. They are standards against which people judge what is desirable or not. Values can be expressed in an ongoing way through attitudes and behaviors to people and events, and of course can be in conflict with one another (McGuinness, 2018).

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).

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Vocational education	Education programs 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 programs). Successful completion of such programs leads to labor market-relevant vocational qualifications acknowledged as occupationally-oriented by the relevant national authorities and/or the labor market (UIS, 2012).
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 labor market (CEDEFOP, 2011).

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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, behavior and wellbeing, and the conditions that support these.

Wellbeing

Wellbeing comprises the cognitive, emotional, and physical components that contribute to learners' physical and psychological health and development. As such, it is strongly connected to learning. 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 (Seel, 2012).

Z

Zone of proximal development

"The distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peer" (Vygotsky). ZPD accounts for the learning potential of children when supported by appropriately timed intervention and support. The ZPD describes the current or actual level of development of the learner and the next level attainable through the use of mediating semiotic and environmental tools and capable adult or peer facilitation. The idea is that individuals learn best when working together with others during joint collaboration, and it is through such collaborative endeavors with more skilled persons that learners learn and internalize new concepts, psychological tools, and skills' (Shabani, Khatib & Ebadi, 2010).

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Note:

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Révision de la Classification internationale type de l'éducation (CITE)
Revisión de la Clasificación Internacional Normalizada de la Educación (CINE)

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