
In-Progress Reflection No.2 on *Current and Critical Issues in Curriculum and Learning*

WHAT MAKES A QUALITY CURRICULUM?



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IBE Director	Dr. Mmantsetsa Marope
Coordination and Production Team at the UNESCO IBE	Massimo Amadio, Renato Operti, Lili Ji, Émeline Brylinski
Author	Philip Stabback

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Open Note

The IBE has launched the series In-Progress Reflections on *Current and Critical Issues in the Curriculum and Learning* to open a communal space for a global conversation, collective production and discussion on those issues of high concern for Member States. It intends to support country efforts in mainstreaming challenging issues within the processes of curriculum renewal and development across different levels, settings and provisions of the education system.

Initially, the focus areas of the In-Progress Reflections series encompass, among others,: (i) Early Childhood Care and Education (ECCE) as a foundation of holistic child development and learning; (ii) Reading and writing in early grades to support the development of essential competencies; (iii) Youth Culture and competencies for Youth in the early 21st century (covering formal, non-formal and informal education); (iv) ICT curricula and inclusive pedagogy contributing to relevant and effective learning outcomes; (v) STEM (Science, Technology, Engineering and Mathematics) curricula to foster sustainable development; (vi) Curriculum for Global Citizenship Education (peace, human rights, sustainable development, values, ethics, multiculturalism, etc.); (vii) Assessment to enhance and support learning opportunities and (viii) Inclusive education as an over guiding principle of education systems.

The series of reflections covers a wide array of knowledge products, among them: discussion papers, policy briefs, frameworks, guidelines, prototypes, resource packs, learning tools and multimedia resources. These materials are discussed, refined, used and disseminated engaging education and curriculum agencies / institutes, and in particular curriculum developers and specialists, development experts, policy makers, teacher trainers, supervisors, principals, teachers, researchers and other educational stakeholders. Also, they serve as reference materials for the IBE menu of capacity-development training on curriculum, learning and quality education – namely masters, diplomas, certificates and workshops –, to forge policy and technical dialogue involving a diversity of stakeholders and to support sustainable country field work.

Through blogs and e-forums, we encourage the audience to actively interact and bring in diverse perspectives. Effectively, the online space for reflection allows us to stay connected, facilitates exchange between experts from different regions of the world, and truly fosters continuous reflection on the issues concerned. The blog is structured to gather diverse resources, which include tools and documents (as previously mentioned) under specific themes so as to provide a complex and rich set of materials targeted to the specific needs of Member States. The In-Progress Reflections will capture relevant visions, views and comments shared by the audience, and serve as a key resource to support Member States' efforts in mainstreaming relevant findings and effective practices in national policies, curriculum frameworks and developments and in professional practices.

Dr. Mmantsetsa Marope : Director, International Bureau of Education



What Makes a Quality Curriculum?

Abstract: Sustainable Development Goal Four has to do with education in the post-2015 development agenda. It aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”.

Given the essential role of curriculum in enabling quality learning and in articulating and supporting education that is relevant to holistic development, our purpose in this paper is to identify what makes a quality curriculum, so as to support curricular innovation in UNESCO Member States to the end of the realization of Sustainable Development Goal Four.

In this we are assuming that curriculum, given its essential role in the provision of quality learning for all children and young people, and in articulating and supporting education that is relevant to holistic development, is critical in the realization of SDG 4. It is the curriculum that determines to a large extent whether education is inclusive, thus playing a significant role in ensuring that provision is equitable. It is the curriculum that provides the structure for the provision of quality learning, especially where teachers might be under-qualified and inexperienced, their classrooms under-resourced, and their students lacking the prior frameworks within which to situate their learning. And it is the curriculum that articulates both the competencies necessary for lifelong learning and the competencies needed for holistic development. We thus argue that curriculum lies at the crossroads of these four key aspects of SDG 4: that education should be (1) inclusive and equitable, (2) characterized by quality learning, (3) promoting lifelong learning, and (4) relevant to holistic development. Curriculum, in other words, provides the bridge between education and development – and it is the competencies associated with lifelong learning and aligned with development needs, in the broadest, holistic sense of the term, that span that bridge.

Given the nature of the audience for which we are writing, the paper is necessarily pitched at a general level. A challenge in writing a paper such as this is how best to make it relevant to all countries when education systems, and particularly teachers’ skills and qualifications, vary so widely across the world. Curriculum development needs, after all, to take into account where any country is in terms of the current breadth and depth of curriculum; attainment levels; the quality of teachers; the range and effectiveness of teaching, learning and assessment practices; the quality of the infrastructure at local education authority level and at national level; and the like. Our audience is world-wide, with actors at many levels of the education system and in very different national, economic, political, historical, social and cultural contexts. That said, our primary intended reader group would include curriculum policy makers at various levels, and curriculum developers. We invite colleagues in Member States to contextualize the generalities of this paper. The IBE and its partners stand ready to work with Member States to respond innovatively to the challenges associated with the effective realization of SDG 4.

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Introduction

Knowledge and education are considered among the major factors contributing to the reduction of poverty, sustainable development and economic growth – and it is the curriculum that is increasingly viewed as foundational to educational reforms aimed at the achievement of high quality learning outcomes. The curriculum represents a conscious and systematic selection of knowledge, skills and values: a selection that shapes the way teaching, learning and assessment processes are organized by addressing questions such as what, why, when and how students should learn.

More broadly, the curriculum is also understood as a political and social agreement that reflects a society's common vision while taking into account local, national and global needs and expectations. The curriculum, in other words, embodies a society's educational aims and purposes. Contemporary curriculum reform and development processes therefore increasingly involve public discussion and consultation with a wide range of stakeholders. Curriculum design has evolved into a topic of considerable debate – with frequently conflicting perspectives – engaging policy-makers, experts, practitioners and society at large. The complexity of curriculum development processes and the range of issues informing the 'what' and the 'how' of teaching, learning and assessment present major challenges for policy-makers and curriculum developers. Since curriculum development processes are influenced both by local needs and by broader, transnational trends, a comprehensive international perspective on curriculum issues, trends and approaches is critical.

The International Bureau of Education has such a global mandate to support the development of good quality curricula in the Member States of UNESCO, and it has a long and successful history of doing so. The IBE works with countries seeking to improve their curricula with the broad aim of enabling young people to acquire and develop the knowledge, skills and values that will help them lead successful lives.

A core challenge for all countries, however, is how to make these changes in an era of rapid and diverse social and global change. Never before has humankind experienced an era of such rapid change or had to deal with such a range of practical and ethical risks as a consequence of this change. Never before have educators needed to prepare young people for lives in such an unpredictable and challenging global context.

In confronting these challenges, curriculum developers need to answer many fundamental questions, including:

- Which knowledge, skills and values should we include in our curriculum?
- Would the acquisition and development of such knowledge, skills and values, and of the associated capabilities and competencies, enable our young people to lead meaningful and productive lives?
- Is our current paradigm of a set of ‘subjects’ constituting a curriculum adequate?
- How can we make learning relevant and interesting to students?

Box 1: Knowledge, skills and values in the curriculum

The development in students of broadly defined competencies or capabilities, such as critical and creative thinking, depends on the integration of three broad learning domains: knowledge, skills and values.

1) Knowledge

When used in this limited sense and contrasted with skills and values, the term, ‘knowledge’, refers to content knowledge, or to propositional, or declarative, knowledge, including, for example, both theoretical and empirical knowledge: knowledge ‘that’, as in “I know that ...”.

2) Skills

‘Skills’ refers to procedural knowledge, and includes, for example, cognitive and non-cognitive skills, ‘hard’ and ‘soft’ skills: knowledge ‘how’, as in “I know how...”.

3) Values

‘Values’ refers to dispositional knowledge, and includes, for example, attitudes (which are consequent on the values we hold), moral dispositions, and motivation, will and commitment: knowledge ‘to’, as in “I know to ...”.

In this paper the terms knowledge, skills and values are principally used, and by each is intended the range of concepts and descriptors indicated above.

Central to curriculum change is the notion of *quality*. The aforementioned questions are all related to this notion. But what does ‘quality’ mean in a curriculum context? What is the quality framework within which curriculum developers can set goals, develop and implement change processes, and eventually gauge their success? Some useful indicators of a quality curriculum have to do with its relevance, consistency, practicality, effectiveness and sustainability – descriptors which we explore in greater depth throughout the paper.

I. In Other Words, What Makes a Quality Curriculum?

The purpose of this paper is to provide both specialists and non-specialists in the field of curriculum with some criteria and guidance to help them define the quality of a curriculum at national, local or school level. The paper is not intended to be prescriptive. It is intended to provide a conceptual framework within which to judge the quality of existing and proposed curricula.

Curriculum is, in the simplest terms, a description of what, why, how and when students should learn. The curriculum is not, of course, an end in itself. Rather, it seeks both to achieve worthwhile and useful learning outcomes for students, and to realize a range of societal demands and government policies. It is in and through the curriculum that key economic, political, social and cultural questions about the aims, purposes, content and processes of education are resolved. The policy statement and technical document that represent the curriculum reflect also a broader political and social agreement about what a society deems of most worth – that which is of sufficient importance to pass on to its children.

A principal objective of a quality curriculum is, in a fair and inclusive manner, to enable students to acquire and develop the knowledge, skills and values, and the associated capabilities and competencies, to lead meaningful and productive lives. Key indicators of curriculum success include the quality of the learning achieved by students, and how effectively students use that learning for their personal, social, physical, cognitive, moral, psychological and emotional development. A quality curriculum maximizes the potential for the effective enhancement of learning. Underlying this paper is the premise that educational quality should be understood primarily in terms of the quality of student learning, which in turn depends to a great extent on the quality of teaching. Of prime importance in this is the fact that good teaching and learning are greatly enhanced by the quality, relevance and effectiveness of the curriculum. That is a key rationale for this paper.

Learning in schools occurs of course in a range of intended and unintended ways. Intended learning (frequently referred to as the ‘planned’ or ‘formal’ curriculum) most often occurs in the classroom and other ‘controlled’ settings. Its focus is the ‘state-endorsed’ curriculum as implemented by teachers. The outcomes of the formal curriculum are normally assessed in various formal ways by teachers and examination authorities.

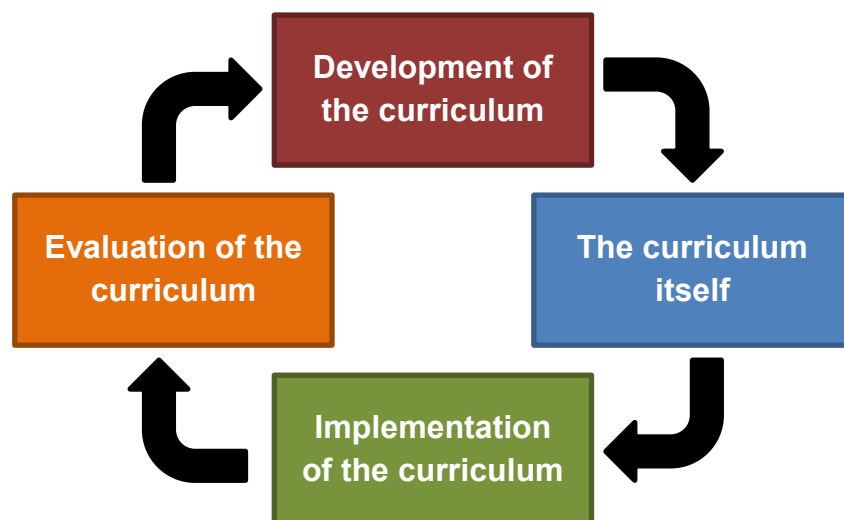
Unintended learning (such as through the ‘hidden’ curriculum) can occur anywhere –inside or outside the classroom – and is largely ‘uncontrolled’. It can emanate from, for example, the ethos or culture of the school, from unintended features of the intended curriculum (such as gender or cultural bias), from relationships between students and teachers and between students themselves, from societal power structures and existing social arrangements and patterns, from economic, political, social and cultural relationships in the broader society, and, at the broadest level, from how students understand the way things are in their world. If, for example, students see only male teachers in positions of superior authority in their school,

they may conclude that positions of power are reserved for men, or that women have a diminished capacity for leadership.

Curriculum is typically a phenomenon which includes many dimensions of learning, including rationale, aims, content, methods, resources, time, assessment, etc; which refers to various levels of planning and decision-making on learning (for example, at the supra-, macro-, meso-, micro- and nano-levels); or, international, national, local, classroom and individual levels; and which relates to multiple representations of learning (for example, as already mentioned, ‘intended’, ‘implemented’, ‘attained’, etc). Curriculum can be understood as the totality of what children learn while at school – including what they learn through classroom activities; in interdisciplinary tasks; across the school, for example, in the playground, at lunch time when eating (civic responsibilities, etc.). This curricular totality also includes opportunities for wider achievement through sport, music, debating, and the like. For the purposes of this paper, curriculum is defined in a holistic, process-oriented way. This definition is based on the belief that, while curriculum might commonly be perceived as a set of documents, the quality of those documents is closely connected to the processes used to develop them and to the means through which they are put into practice. In other words, judging the quality of the curriculum itself cannot be done in isolation from the broader processes of *curriculum development, implementation and evaluation*.

The paper therefore considers criteria for judging the quality of curriculum in *four main categories*, as illustrated in Figure 1.

Figure 1: Categories of criteria for judging curriculum quality



The criteria to be considered within these four categories are summarised in Table 1.

Table 1: Summary of criteria in categories

Category	Description
Development of the Curriculum	<ul style="list-style-type: none"> Planned and systematic
	<ul style="list-style-type: none"> Inclusive and consultative
	<ul style="list-style-type: none"> Led by curriculum professionals
	<ul style="list-style-type: none"> Cyclical in nature
	<ul style="list-style-type: none"> Sustainable
The Curriculum Itself	<ul style="list-style-type: none"> Values each child and holds that every child matters equally
	<ul style="list-style-type: none"> Comprises high quality, relevant and appropriate 'content' and contributes to the development of competence
	<ul style="list-style-type: none"> Is well organized and structured
	<ul style="list-style-type: none"> Is underpinned by a set of assumptions about how children learn
Implementation of the Curriculum	<p>New expectations placed on:</p>
	<ul style="list-style-type: none"> Students
	<ul style="list-style-type: none"> Teachers
	<ul style="list-style-type: none"> Schools / learning environments
	<ul style="list-style-type: none"> Education systems and authorities
Evaluation	<ul style="list-style-type: none"> Systematic and planned
	<ul style="list-style-type: none"> Regular
	<ul style="list-style-type: none"> Conducted by qualified and experienced people

In any discussion of curriculum development, it is difficult to avoid Ralph Tyler's classic statement¹ of four fundamental questions which need to be addressed in the process:

1. What educational purposes do we seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How should these educational experiences be effectively organized?
4. How should we determine whether these purposes are being attained?

In addition to these questions, this paper also takes account of the fact that UNESCO, through a process to which the IBE contributed, has addressed the question of 'what makes a quality curriculum?', listing the following as criteria:²

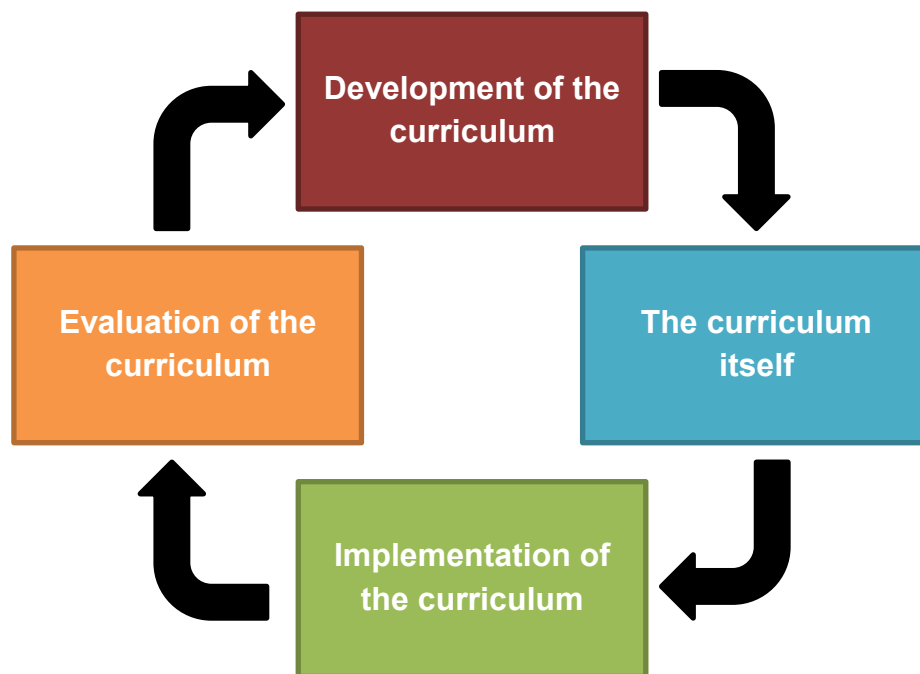
- Are there clear aims for the curriculum?
- Is the curriculum up to date?
- Is it relevant to students' current and future lives, experiences, environments and aspirations?
- Does it create a socially and economically prosperous future while respecting the country's past – its cultural history and traditions?
- Is the curriculum equitable and inclusive? (i.e. does it take into account the diversity of learners and the different learner needs; does it cater for marginalized groups; does it avoid biases)
- Is the curriculum learner-centred and learner-friendly? (i.e. does it take learner needs into account; does it avoid biases and discrimination; is it well sequenced with regard to the learners' age; does it contribute to personal development and life skills; does it make sense – is it meaningful for learners; does it avoid overloading learners)
- Is the curriculum open and flexible, so that it can address new challenges and opportunities by integrating new/emerging issues?
- Is the curriculum coherent and consistent across different education stages/grades/streams and learning areas/subjects?

All of these criteria are included within the four broad areas considered in this paper. In the sections which follow, each of the four broad groups of criteria is discussed in turn.

¹ - Tyler, Ralph (1949) *Basic Principles of Curriculum and Instruction*. University of Chicago Press.

² - <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/quality-framework/technical-notes/what-makes-a-quality-curriculum/>

II. Development of the Curriculum



A good quality curriculum is most likely to be achieved as a result of good quality curriculum development processes. Good processes are:

- Planned and systematic
- Inclusive and consultative
- Led by curriculum professionals
- Cyclical in nature
- Sustainable

1. Planned and systematic

The development of curriculum should follow a transparent and publicly known process and be well-managed in terms of focusing on the curriculum vision, conducting effective development activities, and adhering to timelines and budgets.

The development of curriculum should take account of good research and practice in and beyond a particular country. This would imply looking *inwards* (at the current curriculum), *outwards* (at what others are doing – locally, nationally and internationally), and *forwards* (at what we need to do to prepare young people for their futures).

There should be well-considered and contextually appropriate plans for the development of curriculum which allow for expert inputs, specialist drafting and consultation. Plans should include (at least):

- Sequenced workshops, drafting and consultative activities;
- Timelines;
- Required expertise; and
- Anticipated costs.

2. Inclusive and consultative

Curriculum documents are important national statements. They should reflect broad social values and the country's aspirations. They are documents in which a range of groups have a legitimate interest and in the development of which they should therefore have a voice. It is accordingly not appropriate for curriculum documents to be developed by education experts 'behind closed doors'. Good quality curriculum development processes not only acknowledge these legitimate stakeholder interests, but also, in an open-minded manner and in a spirit of plurality, seek their insights. Open and participatory curriculum processes also serve to enhance social and cultural sustainability. If the views of each stakeholder group are sought and recognized during the curriculum development process, there is a greater chance that the curriculum itself will be inclusive and practical, and that it will meet the needs of the diverse range of students it seeks to serve. School principals and teachers should be regarded as particularly important stakeholders: their participation substantially enhances their commitment to the realization of the curriculum in schools and classrooms.

Equally, parents, students themselves, and employers should be regarded as important stakeholders, if for different reasons. Parents have a critical role to play in supporting the learning of their children, and engaging the parent community from these initial stages fosters parental commitment both to what is in the curriculum and to their children's learning. Parental involvement in their children's learning makes a significant difference, moreover, not

only to the children, but to the parents themselves. Students are of course central in the success of their learning, and their participation in curriculum development processes will enhance, similarly, their engagement in the curriculum and their commitment to their own learning. Employers can enrich the curriculum development process with regard to the relevance of learning to the world of work. Employers can also help to raise the ambitions of learners.

Inclusive and consultative curriculum development processes will help in finding appropriate balances among a range of stakeholder aims that sometimes, but not always, compete: individual aims *versus* social ends; academic *versus* vocational aims; economic *versus* democratic purposes; social conservatism and continuity *versus* social reform and change; local *versus* global priorities.

The range of stakeholders to be found in most contexts and the rationale for their inclusion can be found in Table 2.

Table 2: Stakeholders in the curriculum development process

Curriculum is important to ...	Because they have a right to ...
Students and their families	... a curriculum that will provide them with life opportunities.
Teachers	... contribute to a process in which they are among the acknowledged experts, and to know what is expected of them and their students.
Employers	... know that students are being prepared to enter the world of work.
Tertiary education institutions	... know that students are well prepared for post-school study.
Communities	... know that students will be aware of their social and community responsibilities.
Governments	... know that schools are contributing to the development of a national consensus on economic, political and social goals such as equity, inclusion and sustainable development.

In this discussion of stakeholders, it is worth noting that the curriculum in any particular country is also important to that country's regional community, and to the global community as a whole. While the regional and global communities would not have any right to interfere in what is a sovereign process, they would, in our increasingly interconnected and environmentally fragile world, appreciate knowing that a country's schools are preparing its students for peaceful coexistence and for their responsibilities as global citizens and planetary stewards committed to development that is sustainable.

The consultation process should accordingly seek to build consensus, as the foundation of any curriculum conceptualisation or design, on a statement of curricular purposes, on whose interests the curriculum serves, and on the values it reflects. These are profound political, cultural, social and economic questions which need to be addressed. In doing so, it should be noted that curricula will always reflect particular purposes and values, and serve the interests of some stakeholders more than they do those of others. It is best, therefore, to clarify these issues and to acknowledge them openly.

In addition, the priority issues that should be addressed in the curriculum will vary from country to country. A country in a post-conflict situation may, for example, prioritize the end of social reconstruction; another following a period of autocracy and inequality may prioritize democratic participation, equity, social inclusion and the needs of the poor. Another, faced with increasing unemployment and a lack of global economic competitiveness, may prioritize skills development and vocational aims in education.

The key issue is that these interests and purposes are identified, agreed upon (ideally, in a process of national consensus) and rendered transparent throughout.

3. Led by curriculum professionals

Curriculum development is a specialist field within education, and curriculum development processes should accordingly be led and managed by qualified and experienced professionals. Curriculum specialists in tertiary education institutions should assist in ensuring that curriculum development takes account of research and trends nationally and internationally.

Capacity development may be necessary to ensure that those responsible for curriculum development have the technical and process-oriented skills, knowledge and experience to undertake the task.

4. Cyclical in nature

Good quality curriculum development is an on-going and continuous process, not least because curricula need constantly to respond to change. Good curricula need to keep pace with a world in which knowledge is rapidly expanding, communication technologies are broadening access to information, and, as a result, the skills needed by students are constantly changing or being invented.

A well-planned and systematic curriculum development process is therefore best conceived as a continuous dynamic cycle of development, implementation and evaluation, which leads to and informs a new cycle.

There are implications for adopting this cyclical approach to curriculum development, particularly those related to:

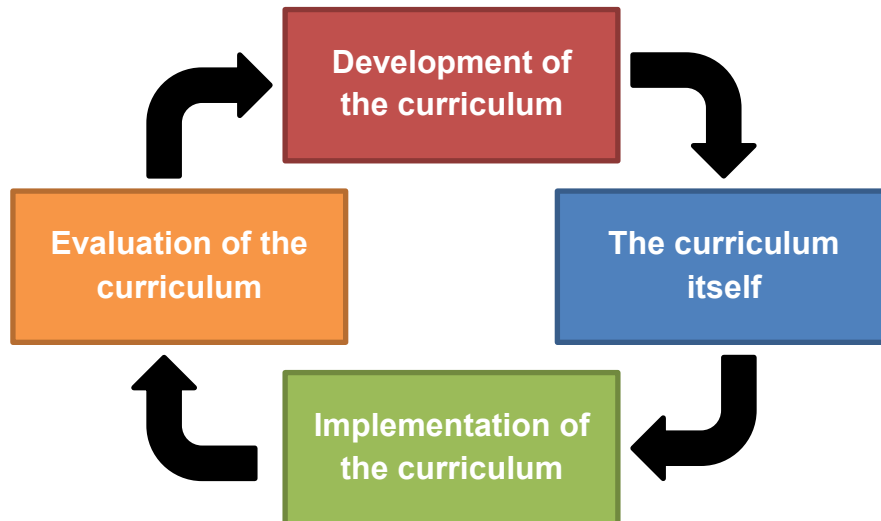
- development costs;
- teacher education and professional development; and
- resource and support materials development.

Governments ought accordingly to view curriculum development as a continuous process of updating and improvement. This is not to say that there should be a new curriculum every three years. But it does mean that curricula should be sufficiently flexible to allow for adaptation, and that periodic, large scale re-development should be anticipated and planned for.

5. Sustainable

Curriculum development processes should be sustainable. As indicated above and further discussed in the following section, curriculum development is a dynamic and continuing process, and educational systems should ensure that they provide the leadership, resources, and expertise to ensure that the curriculum can be regularly evaluated and improved.

III. The Curriculum Itself



A good quality curriculum:

- Values each child and holds that every child matters equally
- Is comprised of high quality ‘content’ which is
 - Up-to-date and relevant
 - Suitably demanding
 - Appropriately sequenced and progressive
 - Balanced
 - Integrated
- Is well-organised and structured
 - Clearly documented
 - Comprises a number of inter-related components expressed in consistent and coherent documents
- Is underpinned by a set of theoretical and philosophical beliefs about how children learn

1. Values each child and holds that every child matters equally

Accepting that ‘every child matters equally’ means accepting the principles of equality and of equity, or fairness. In developing and implementing the curriculum, all need to commit to these principles, while also understanding that each child is better at some things than at others, and has, for example, different interests, aspirations, histories and preferred ways of learning. Principles of equality and equity will at times mean treating ‘unequals’ unequally: every child should be given the best opportunities possible to achieve his or her full potential, which may mean compensatory curricular provision for those who are at an educational disadvantage. This is what is meant by a curriculum that values each child.

Inclusive

A good quality curriculum needs to be inclusive – to assist all students, regardless of ability, ethnicity, cultural background, gender, socio-economic circumstances or geographical location, to reach their individual potential as learners, and to develop their capabilities to the full. It is all too often the case that children are excluded, in whatever sense of the term, on grounds of their socio-economic circumstances, their ethnicity and/or cultural background, their gender, their geographical location, or their ability (or, more accurately, on account of a disability). The curriculum is an important means of redress, inclusion and compensatory provision, a means through which a society might give practical expression to a commitment to inclusion.

Further, each student is different. Not all are academically gifted; some will do better in one domain than they will in another; but all students can be encouraged and supported to do their best. A good curriculum makes space for the recognition of each learner’s personal, social and cognitive capacities, and respects differences in the ways in which children prefer to learn. It will support teachers in leading, assisting and encouraging each student to achieve his or her potential.

Differentiated

A good quality curriculum enables and encourages learning differentiation. In other words, it provides space for teachers to adapt the curriculum to suit the students in their classes. It does not demand that every student learn the same content in the same way and in the same number of hours. It provides teachers with the flexibility to ensure that their treatment of the content is appropriate to their students’ needs and capabilities.

In developing approaches to differentiation, the curriculum and the pedagogy it promotes will acknowledge that students learn in different and individual ways, with their own learning styles and strategies. Some students, for example, are effective and skilled listeners; others require visual stimulation; and others learn best through practical exercises. A good quality curriculum will encourage teachers to get to know their students individually and ensure that their teaching styles and their classroom behaviours are directed towards achieving the best learning outcomes for each of them.

Promotes new roles for the teacher

A good quality curriculum describes and promotes new roles for the teacher. The teacher's approach shifts from 'I am here to teach' to 'I am here to lead and enable effective learning'. With this approach come new, personalized teacher-student relationships – a move away from lessons dominated by teachers in the role of sole authority, to lessons in which the teacher recognizes, values and teaches to differences between students, encourages effective learning in each individual, and promotes discussion, inquiry and curiosity.

Personalized learning is, essentially, learner-centred education: teaching, learning and assessment that place considerable importance on the background, prior knowledge, needs, current stage of development and potential of each learner. Teachers need accordingly to know what each student is thinking, so that they can provide specifically targeted feedback to each student. They need to help learners to develop the capacity to reflect meta-cognitively on their learning, and to articulate their current level of understanding. Learner-centred education and personalized learning thus demand of teachers that they play a particularly active role in the classroom. Learners are, equally, required to play an active role in taking responsibility for their learning, for their participation in and contributions to group work and to project-based and experiential learning, and for their preparation of their learning portfolios and other demonstrations of their understanding.

2. **Comprises high quality 'content' and contributes to the development of competence**

In recent decades, there has been a trend away from curriculum content being understood primarily in terms of knowledge or information; or, more formally, as propositional (or declarative) knowledge, to use Gilbert Ryle's distinction of propositional from procedural knowledge.³ Curriculum content has all too frequently been perceived as lists of 'facts' or information which students needed to memorise and repeat in examinations. This information and knowledge content was to be found primarily in textbooks, which meant that the textbook became a *de facto* syllabus.

This model has a number of obvious shortcomings, some of the most important of which are:

- The nature and extent of human knowledge is expanding at a rapid rate: knowledge prescribed in the curriculum can thus soon be superseded, rendered irrelevant, or disproved.
- An undue emphasis on knowledge and information does not prepare students well for their future lives. Students need also to develop the skills, values and attitudes that are important for life and work, and fundamental to their continued personal, physical, social and cognitive growth, as well as to their general well-being. Memorizing information

³ Ryle, Gilbert (1971) *Teaching and Training*, in: *Collected Papers*, Vol. 2 (London, Hutchinson).

alone is of limited help in dealing with challenges and problems encountered in later life. Dealing with challenges and problems by applying knowledge requires broader competence, and is based on ‘understanding’ rather than just ‘knowing’.

- The knowledge and information is usually presented in discrete subject areas and little attempt is normally made to demonstrate and build links between subjects.
- Traditional models of knowledge as subjects or discrete disciplines do not acknowledge sufficiently the importance of cross-cutting or cross-curricular issues and themes, such as learning to live together peacefully, the environment and sustainable development, the impact of technology, and media literacy.

How have curriculum developers responded to the challenges of an over-emphasis on propositional knowledge? A number of strategies have been followed, including:

- Curriculum development is now seen as a cycle of development, implementation, evaluation and revision. Curriculum cannot afford to be static. It should be a continuous process of monitoring, evaluation and updating.
- There is more of an emphasis in an increasing number of education systems across the world on preparing learners through the development of broad competencies or general capabilities. This acknowledges that, while still important, the learning, retention and repetition of knowledge is not enough. Our contemporary world is increasingly uncertain: constantly changing and presenting new challenges. It requires people to develop and apply new understandings and to adapt to new ways of doing things. To address these challenges it is increasingly being proposed that, across subjects and learning areas, the curriculum needs to develop student competency in such areas as:
 - **Communication;**
 - **Collaboration;**
 - **Critical thinking;**
 - **Problem-solving;**
 - **Creativity;**
 - **The management and appreciation of diversity; and**
 - **Learning to learn.**

Many examples of these generic competencies can be found. While they have been developed largely within separate countries, it is important to note the degree of commonality between countries in the areas of competency that are being given priority.

This degree of commonality notwithstanding, there is still considerable debate about who defines what competencies are most important, and why; and about the extent to

which they are applicable to all learners in all places: hence they are frequently distinguished from each other by qualifiers such as ‘core’, ‘personal’, ‘generic’ and ‘transferable’.

Competencies or capabilities are sometimes described in the field as skills or abilities, or, more broadly, as attributes or characteristics. Not least to avoid confusion with the use of the term, ‘skills’, on a prior learning level, it is our position in this paper, as indicated in the Introduction, that the development in students of broadly defined competencies or capabilities, such as critical and creative thinking, depends on the integration of three broad learning domains: knowledge, skills and values (see *Box 1: Knowledge, skills and values in the curriculum*).

- Students are encouraged to acquire ‘learning skills’ so that they know how to learn and how they learn best. They should know that knowledge in every subject domain will continue to develop and expand, and they should be aware of the varying degrees of reliability of different sources of information. They are therefore encouraged to acquire research skills such as analysis, synthesis and evaluation, and to develop the dispositions of a love for learning and a motivation to continue learning throughout their lives.
- Textbooks still play a critical role in classrooms, and it is clear that in many countries they are the main source of material support to the curriculum, particularly where teachers might be under-qualified or insufficiently experienced. Carefully developed textbooks may be an important means of enhancing consistency, equity and quality in schools until teachers are sufficiently qualified and experienced not to rely entirely on them. Textbooks can, after all, be a static and relatively inflexible means of learning support. Wherever possible, curriculum should encourage teachers to look for contexts and examples beyond the textbook to make learning still more relevant and meaningful. For example, the natural environment can provide a range of support to the teaching of Biological Science.
- Content can be made more relevant by using teaching, learning and assessment activities that reflect students’ personal interests. For example, skills of research, such as information-gathering, analysis, synthesis and evaluation can be learned through subject-based projects for which students choose their own topics. In the Social Studies area, for example, a broad topic of ‘Local Community’ could allow students to research issues related to the politics and government, history and geography, local environment, or commerce of the local area. It can also call upon a range of knowledge and skills from other subjects (such as Mathematics, Language and Biology) in analysing and presenting results.
- Relevance can also be enhanced by ensuring that content is linked to current issues of concern, whether personal, local, regional or global.

- Learning about cross-cutting themes and issues can be encouraged through cross-curricular projects and assignments, and by ensuring that each subject syllabus contains specific reference to these priority themes and issues.

The curriculum should also be *suitably demanding*. While one key aim of curriculum is to enable every student to achieve his or her potential (as discussed in section 3.1 above), it is important that the curriculum extend children's capabilities, not least by promoting higher-order thinking and stimulating the development of curiosity, critical questioning and the imagination.

The content of the curriculum should be *appropriately sequenced and progressive*. It should be included in syllabuses or subject statements in age- and grade-appropriate levels, and take account of the stages of children's development, with particular attention to their cognitive and emotional growth. It should be sufficiently flexible to enable individualized learning (for more and less able learners).

A good quality curriculum also needs to be *balanced*. This means that the curriculum should give appropriate emphasis to:

- the various traditional categories of content – the natural sciences, technology, the social sciences, the humanities and the arts – so that students are exposed to the broad nature of human experience and endeavour;
- each of the various subject or learning areas (in terms of time allocation and status);
- the personal, social, affective, aesthetic, physical/motor and cognitive development of students; and
- each of the elements of curriculum content – knowledge, skills and values – in developing desired levels of competency.

In some education systems, a prescriptive balance is required to ensure that learners have access to appropriate time allocations as well as content. In others, the balance can be left to the local level so that high quality teachers can decide the best balance for classes, groups or individuals.

A good quality curriculum also promotes *integrated* learning. As discussed earlier, the curriculum has traditionally been structured or ‘organized’ by subjects or learning areas, which themselves have developed and changed over time. In many cases, school subjects also reflect to some extent the structure of university courses. However, the ways in which we use or apply knowledge and skills in our lives is of course seldom based on separate disciplines. In most cases, we use our learning from a range of areas to respond to a social or work situation, or to solve a problem. In reality, we use all the means at our disposal (multi- and inter-disciplinary knowledge, skills and experience) to find the best way to respond to new circumstances by creating connections between existing knowledge and new information, and searching for meaning and relevance. Learners benefit from opportunities to apply their learning in new contexts: through this they make connections, and strengthen and deepen their knowledge and understanding.

Curriculum developers should therefore seek ways to demonstrate connections between subjects and to integrate students’ learning. This can be achieved through, for example:

- ⇒ Grouping subjects into broader Learning Areas through which links between similar subjects can be demonstrated and used. In some circumstances, hours of study might be allocated to the Learning Area rather than the subject, thus providing teachers and students with some flexibility and choice within the Learning Area. Within the Learning Area, teachers can be encouraged to teach co-operatively and to set common projects.

There are many ways in which education systems group subjects. One common example of this broader ‘Learning Area’ approach can found in Table 3.

- ⇒ Presenting students with challenges which require a multi-disciplinary response. This can be done through inter-disciplinary research assignments or other independent projects.
- ⇒ Ensuring that each subject syllabus contains appropriate cross-references to similar content in other syllabi, and provides guidance to schools about how this cross-referenced material can be integrated.
- ⇒ Overlaying subjects or Learning Areas with learning themes. This approach is particularly relevant in primary school curricula where themes such as ‘My Family’ and ‘My Village’ can encourage learning in various disciplines to be integrated within the theme.

Finally, to reiterate a key point raised in the discussion on curriculum stakeholders in section 1.2 above, curriculum developers should recognize their responsibility to the global community. They should ensure that students are aware of the range of issues and challenges that confront the world today (such as those related to increasing rates of globalization, inter-

and intra-national conflict, poverty and exclusion, and the sustainability of an increasingly fragile natural environment). Curriculum developers, as well as teachers and others, have a responsibility to prepare students to be informed and responsible global citizens.

When curriculum developers embed cross-cutting themes such as globalization, employability, entrepreneurship and leadership, teachers understand better the totality of what learners are required to learn. This helps to avoid the possibility of cross-cutting themes being viewed as extras and additional pressures on teachers.

Table 3: A common example of Learning Areas as groupings of traditional subjects

Typical Learning Area Name	Subjects
Creative and Performing Arts	<ul style="list-style-type: none"> ✓ Dance ✓ Music ✓ Visual Arts ✓ Media Arts ✓ Drama
Social Sciences <i>or</i> Social Studies	<ul style="list-style-type: none"> ✓ Geography ✓ History ✓ Citizenship ✓ Economy/Commerce ✓ Anthropological and Cultural Studies ✓ Philosophy ✓ Psychology ✓ Sociology
Natural Sciences / STEM subjects	<ul style="list-style-type: none"> ✓ Mathematics ✓ Physics ✓ Chemistry ✓ Biology ✓ Engineering ✓ Technology ✓ Earth Sciences
Languages	<ul style="list-style-type: none"> ✓ Mother Tongue ✓ Official Languages ✓ Other Languages
Personal Development / Life Skills	<ul style="list-style-type: none"> ✓ Health and Nutrition (including Sex Education; HIV and AIDS) ✓ Physical Education ✓ Personal Growth and Development ✓ Life Skills
Technical and Applied Studies	<ul style="list-style-type: none"> ✓ Information Technology ✓ Technical Production ✓ Crafts ✓ Home Economics ✓ Entrepreneurship Education

3. Is well organized and structured

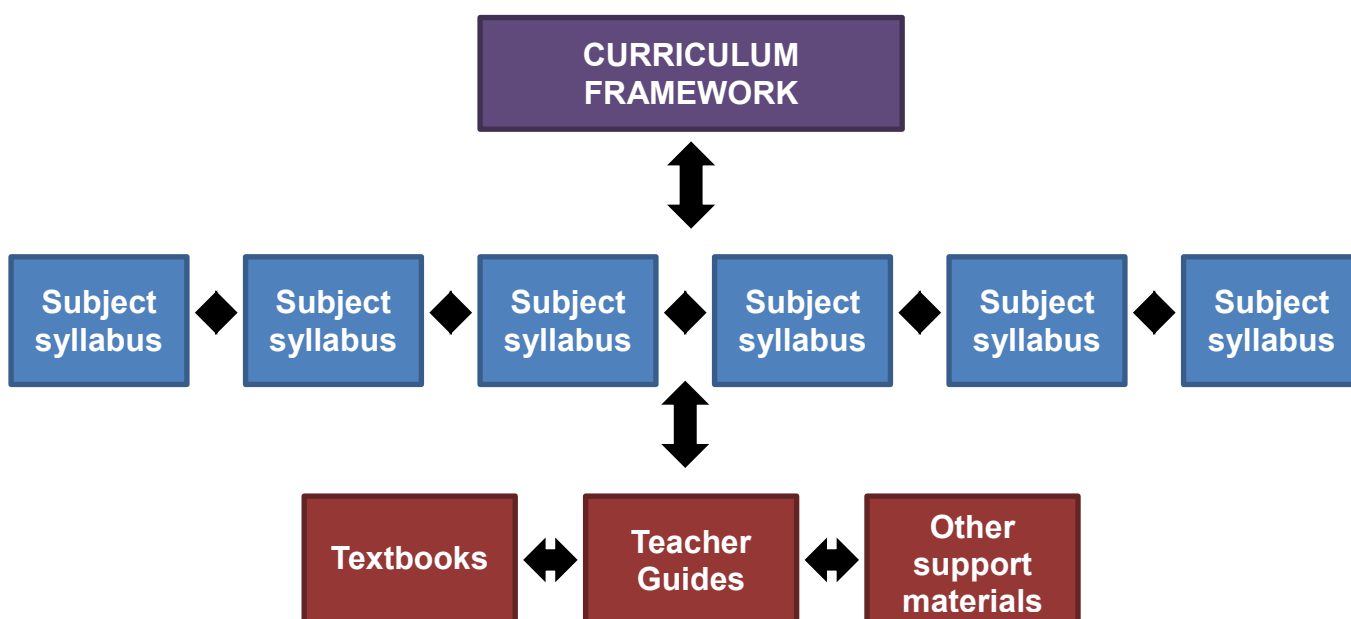
A good quality curriculum is carefully and clearly documented. The documents themselves are written with clear structure and purpose and convey consistent messages about teaching, learning and assessment. They should be user-friendly and accessible to education practitioners and stakeholders, providing policy and practical advice and guidance. Foundational to this is good and clear guidance on curriculum policy, aims and purposes.

In a good curriculum, the ‘new content’ described above will also be well organized and structured into a number of distinct but inter-related components. These components are normally expressed in documents developed and drafted specifically for curricular purposes, and are not merely adaptations of other documents (such as education policies or existing textbooks).

A high degree of alignment between the various curricular components is critical. Ideally, this alignment should be evident on a number of levels, from consistency in the underpinning philosophy and assumptions about how children learn to the structure, format and presentation of the various curricular documents. Such alignment presents the curriculum as an integrated and consistent whole, rather than as a set of disparate and even conflicting parts.

Common curriculum components and documents include those illustrated in Figure 2.

Figure 2: Common curriculum components and documents



The Curriculum Framework

A Curriculum Framework is an important overarching curriculum document, usually developed by a high-level group of curriculum and education policy experts, and reflecting a social and political consensus around a society's educational vision. A Curriculum Framework would normally include statements about underlying values, conceptions of learning, the major aims, purposes and tasks of education, about the development of school culture, and the like. It is a core policy document that describes a range of requirements, regulations and advice which should be respected by all stakeholders in the education system, and which should guide the work of schools, teachers and the developers of other curriculum documents (such as textbooks and teacher guides).

A Curriculum Framework can be viewed as a kind of 'Constitution' for the education system. In the same way as a national Constitution defines the scope of, places parameters around, and legitimizes a country's laws, a Curriculum Framework defines, constrains and legitimizes decisions within classrooms, schools and, in many cases, the education system as a whole. It is so important that open discussion and consultation are essential in its construction.

A Curriculum Framework can perform a range of specific functions, such as:

- placing national statements of vision, socio-economic context and development, educational values and education policy in a curriculum context;
- setting out the vision, aims and objectives of the curriculum at the various stages of schooling, the transitions between each and links to further education, higher education, work and lifelong learning;
- explaining the educational philosophy underlying the curriculum and the approaches to teaching, learning and assessment that are intrinsic to that philosophy;
- prescribing requirements for curriculum implementation, monitoring and evaluation, including the provision of clear advice
 - to teachers about appropriate pedagogy and assessment methodologies; and
 - to policy makers across the education system about the requirements of the curriculum and how they can contribute to the realization of the curriculum vision;
- providing guidelines to teacher educators and, if appropriate, textbook writers;
- outlining the curriculum structure – its subjects or Learning Areas and the rationale for the inclusion of each in the curriculum; and
- if appropriate, allocating time to various subjects and Learning Areas in each grade or stage.

Depending on how well developed teaching and teachers are in any particular country, a curriculum framework and guidance need to have more or less prescription – and countries need to know when they can move to less prescription to free up teachers to make local decisions.

The Subject Curriculum (or Syllabus)

A subject curriculum (syllabus) describes the learning required in a specific subject at various grades or stages. It is normally drafted by subject specialists who are familiar with the knowledge, skills and values associated with the subject. Subject syllabus writers also have expertise in pedagogy and child development.

In all respects, each syllabus should meet the requirements of the Curriculum Framework. In particular, it should:

- be consistent with its educational philosophy and respect its approaches to teaching, learning and assessment;
- contain the elements of a syllabus as prescribed in the Framework (which might include, for example, the rationale, aims, objectives, anticipated learning outcomes, content, advice on teaching and assessment, and so on);
- take into account, and make space for, demands for integrated learning across the curriculum; and
- contain a breadth and depth of content that is achievable at defined standards within the time allocation prescribed in the Framework (if this is set).

One significant component of many curricula is the space given in the curriculum model to schools and other local authorities to include topics that are of particular importance to the local community. If this possibility is available, the local material should meet similar quality standards to those expected of a centrally developed syllabus. This possibility depends of course on how prescriptive any curriculum is. Curricula that are very prescriptive (perhaps for good reason, such as to support a developing teaching corps) will not easily allow space for locally relevant topics. Relevance being the vital component of any curriculum that it is, it might be a good idea to design curricula that are less prescriptive (even though prescriptive curricula generally provide more structure for under-qualified and less experienced teachers) and that allow more space for the inclusion of locally relevant topics (given the distinct advantages of relevance for learners and learning). Guidance at the national level could show how this balance might be realized.

The fundamental purpose of a subject syllabus is to provide a coherent and consistent programme of learning, which takes account of the way young people learn, and which has the flexibility to adapt to local circumstances and students' needs, and to be adapted over time. A syllabus should ensure that:

- a planned and progressive programme of learning activities is constructed to develop understanding over time;
- this programme is consistent with the way children's cognitive, emotional and physical abilities develop;
- there is consistency of approach between subject areas, and with the values and principles that have been articulated;
- inter-disciplinary links are established between the subject areas;
- the development of the competencies articulated in national curricular aims is integrated into subject areas;
- the curriculum takes account of, or is capable of being adapted to, local circumstances and interpreted relevantly in different contexts;
- the curriculum is capable of being adapted to the needs and expectations of different students; and
- the curriculum is constructed to be dynamic, and is capable of being adapted, amended and improved over time.

The first two bullet points above underscore the importance of curriculum design that takes into account the age and stage of the learner. Syllabi in early years need to be broad and thematically oriented – to reflect the ways young children learn. Syllabi are then best organized into very broad disciplinary areas (perhaps when children are young teenagers), and then become more disciplinarily specific as children reach examinations at the age of 16 to 18: for example, Science changes to Physics, Chemistry and Biology, or Social Sciences become History, Geography and Modern Studies, as the depth of content in each area increases.

It is important to note that the emphasis on subject-specific curricula in this section should not be understood to minimize opportunities for realizing more cross-curricular aims.

Textbooks, Teacher Guides and other support materials

The Curriculum Framework and subject curriculum (syllabus) documents contain important information for teachers, but normally do not help them directly in their day-to-day planning of classroom activities. This is the function of textbooks, teacher guides and other materials that provide teachers with the resources and ideas to translate the curriculum into interesting, effective, relevant and inclusive teaching plans and activities.

It is an unfortunate legacy of many education systems that almost the only tangible and visible curriculum documents are textbooks. Most contemporary curriculum models do not view textbooks as core curriculum documents, but as just one of the resources, which would include new media, for example, used by teachers to implement the curriculum.

In particular, textbooks should be inclusive, relevant, lively, engaging and stimulating, so as to maximize the possibility of the effective enhancement of learning by all. As well as covering the content of the syllabus, they should excite curiosity and promote inquiry and creativity. They should not just provide information, but should describe activities that will challenge students, and encourage them to question, research and find answers of their own.

As mentioned above, it is critically important, and also a characteristic of a good quality curriculum, that there is a high level of consistency between the Curriculum Framework and learning support materials so that the curriculum as a whole is coherent and clear. Lack of consistency can lead to confusion, dispute and poor learning outcomes for students. A good curriculum should not be driven by textbooks and/or assessment, but by the vision that is defined by a Curriculum Framework and implementation by skilled professional teachers, supported where required by advice and materials in textbooks, other learning materials and assessment practices.

4. Is underpinned by a set of principles about how children learn

Underpinning a good quality curriculum is a sound and consistently applied set of assumptions about how children learn. Summarized in this section are some of the assumptions about how children learn on which this paper is based. These assumptions are in turn based on the premise that teachers are critical in the realization of each of these principles about how children learn. Teachers are, in the first place and in the light of the concerns of this paper, the mediators between the Curriculum Framework, the curriculum itself, teaching and learning guides, specific subject syllabi, textbooks – and learners. (See Section 4.2 on other key aspects of the importance of teachers.)

Each student is different. Implementation of a good curriculum accordingly makes space for teachers to recognize learner's individual capacities, and respects differences in the ways in which children prefer to learn.

Students learn by **making connections between what they know and what is new** to them, seeking, in the process, meaning and relevance, and reinforcing the connections by applying

the newly acquired knowledge and skills to real or simulated situations. In this manner, learners develop more complex cognitive relationships and structures, and ultimately, competencies and capabilities in and across different domains.

Students' **prior knowledge**, which includes preconceptions about how the world works, needs accordingly to be engaged – built upon, or challenged if necessary – in order to develop new learning. Personalized or learner-centred approaches to learning thus place considerable importance on the background, prior knowledge, needs and current stage of development and potential of each learner.

Students learn best when new material is at least in some way **relevant** to their prior knowledge and experience, or to their goals. Relevance is also motivational.

Students learn best when they value what they are learning, when they are motivated to learn. A **love for learning and a motivation to continue learning** are critically important in sustaining learning and in developing a lifelong commitment to learning.

Students learn best when they **play an active role in their learning**, helping to set their learning goals and taking responsibility for their participation in and contributions to the classroom.

Learning is thus also a **social activity**, and importantly so: classroom learning experiences should be organized accordingly.

Students learn best when they **reflect metacognitively⁴ on their learning, and can articulate their current level of understanding**. Such reflection on their learning helps students to take responsibility for their learning, not least by setting goals, understanding how they learn best, and assessing their progress.

Students learn best in **warm, safe and supportive environments**, and in which learning is appropriately challenging and enjoyable. Classroom regimes based on fear, excessive pressure or monotonous drilling serve only to alienate learners.

Good relationships, between teachers and students and among students themselves, are critical for learning.

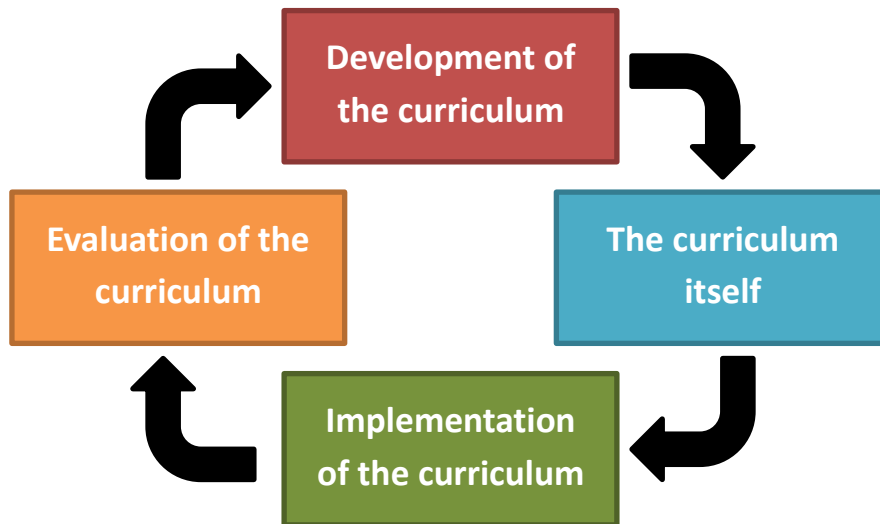
⁴ -A student reflecting metacognitively on her learning would be 'thinking about her own thinking' (from the Greek preposition and prefix, meta-, meaning 'beyond' or 'after'). Such metacognitive reflection is understood as a higher order thinking skill. Metacognition can refer both to knowledge about cognition (as in 'thinking about one's thinking') and to regulating or controlling one's cognition. Effective learners do both. They think about how they are learning and about how they might learn better; and they actively regulate the cognitive processes they use in their learning. They will, for example, choose particular strategies for learning and for solving problems that are, for them, most effective, depending on what is to be learned or solved. They will monitor their understanding and evaluate their progress toward the achievement of a learning goal or the solution of a complex problem.

To **develop competence** in an area of inquiry, students need a substantial foundation of factual, or content, knowledge, and they need to understand these facts and ideas, and the theories that connect them, in the context of a conceptual framework. They need also to develop the skills, values and attitudes that are associated with this content knowledge and which are also prerequisites for the development of a particular competence. (See Box 1.)

Students learn best when teachers **provide feedback on their learning through continuous assessment** of where each learner is in her understanding. Assessment is the bridge between teaching and learning. Teachers need accordingly to know what each student is thinking, so that they can provide specifically targeted feedback to each student. Effective feedback to students on their learning entails the provision of information about what they do and do not understand, and what they need to do to improve. (See the latter paragraphs of Section 4.2.)

It is worth noting at this point that there is a wide array of learning areas where learning outcomes are not easily quantified. These include dispositional, affective and behavioural changes among learners – such as in ethics, civic responsibility, global citizenship, emotional maturity, moral character, tolerance of diversity, curiosity, cooperation, aesthetic appreciation, social relations, community solidarity and environmental responsibility. That these are not easily assessed does not minimize the importance of their inclusion in the curriculum.

IV. Implementation of the Curriculum⁵



To be implemented effectively, a good quality curriculum involves and places clear expectations on:

- Students
- Teachers
- Schools / learning environments
- Parents and employers
- Education systems and authorities

⁵ - 'Implementation' in this context refers to how the written curriculum is presented to students and how teaching, learning and assessment actually happen. Education systems, schools and teachers make numerous decisions as they 'translate' the requirements and advice of curriculum documents into meaningful and effective learning activities in the classroom. 'Delivery' would thus include all the decisions taken in turning curriculum documents into practice so that student learning outcomes might be most effectively enhanced. Some would say, in other words, and in the holistic sense of curriculum espoused in this paper, that teachers do not 'implement' a curriculum: they have rather to understand and realize the curriculum in their own contexts, with their own students.

Good quality curriculum content is important to good learning outcomes for students, but this content needs to be supplemented and supported by effective implementation. A good quality curriculum not only prescribes what should be taught and learned in the various subjects and grade or stage levels, but also how that curriculum should be taught and assessed.

Good quality curricula therefore place clear expectations on students, teachers, schools / learning environments, parents, employers, and on education systems and authorities.

1. Students

In much contemporary teaching, learning and assessment practice, students are no longer seen as passive recipients of knowledge. Students should thus be engaged in and contributors to teaching, learning and assessment processes.

This transition from passive to active learners can be difficult for teachers and education systems to manage. It cannot be expected to happen immediately, and students need to be guided gradually into their roles as active learners in ways that are appropriate to their stages of development.

Real learning requires genuine engagement. To learn well, students need consciously to make connections between known and new knowledge and skills, to apply the newly acquired knowledge and skills to real or simulated situations, and to value what they have learned – being, all the while, active participants in the learning process.

A good quality curriculum encourages and expects students to:

- understand the purpose of classroom activities and participate actively in them;
- know what they will learn and why, what the expectations of them are, and how they will know that they have learnt well;
- be open to new ideas;
- be curious and willing to ask questions;
- raise what they take for granted to the level of conscious critical scrutiny;
- engage in assessing their own and other students' learning;
- as well as learning the content and associated skills, understand how they accomplished this and try to become better learners; and
- support and respect other students' efforts to learn.

2. Teachers

A key point made in Section 3.3 is that a well-articulated subject syllabus will help to ensure that the curriculum is capable of being adapted to the needs and expectations of different students. Teachers are critical here: it is teachers who decide and adapt the learning content, activities and pace that children need to move through the curriculum in ways that ensure they learn effectively. (If this professional autonomy is not accorded to teachers, it will require highly prescriptive curricula for children of differing strengths and abilities.) Teachers need accordingly relevant advice in Teacher Guides on adapting the curriculum to meet all learners' needs. They should be provided with guidance on how to plan learning and progression, and on the kinds of classroom learning activities that bring the curriculum to life. The content of any topic in the curriculum can, after all, be presented to students in an almost endless variety of ways, and teachers should be helped to create situations and activities, both in the classroom and beyond, that will make learning most effective.

Adaptation of the curriculum to meet the learning needs of all children is the responsibility, after all, of the teacher and not of the curriculum itself. If this is not the case, education systems occasionally develop special or adapted curricula for different groups of pupils. This carries great risks of inequity. All children should have the opportunity to learn the entire curriculum – it is the teacher who can make this possible by adjusting tasks, activities and pace in adapting the curriculum to the specific interests and needs of learners.

Teachers can be provided with ideas for teaching in ways that add value to the curriculum through professional development courses or written Teacher Guides which can provide:

- a clear explanation of the philosophy of teaching, learning and assessment which underpins the curriculum;
- sample approaches to learning and teaching that outline a topic or unit within a syllabus; and
- where appropriate or required, more detailed lesson notes and resources which describe how to conduct a lesson on a particular topic in a step-by-step way.⁶

6 - Of course the level and extent of such guidance and support for teachers would depend on the professional education and experience of the teaching corps in any particular country.

Teacher Guides can also provide teachers with clear guidance about assessment as the bridge between teaching and learning. This does not mean that teachers should be making students write tests every other day. Teachers need rather to be made aware of the importance of continually providing feedback to their students through continuous assessment of where each learner is in her understanding, so that each student can ask herself about her learning:

- Where am I?
- Where do I need to go next?
- How do I get there?

This is the meaning, as John Hattie and others have stressed, of genuinely worthwhile formative assessment: it is the bridge between teaching and learning, without which the two are not easily connected. Teachers should be guided to use assessment not just to test how well content and skills have been learned, but to understand the strengths and weaknesses of individual learners and to ensure that future classroom activities use this information to each student's advantage. After all, effective feedback to students on their learning means, as Hattie has shown, "providing information about how and why the child understands and misunderstands, and what directions the student must take to improve".⁷ It implies that the best teachers will make every effort to assess and evaluate their students' understanding in order that they might understand the constructions their students have made in their learning, and so that they might then match their next teaching act to this understanding. The most successful feedback will seek to correct erroneous hypotheses that students might have made, and will be linked to reinforcement aimed at the acquisition of prerequisite knowledge and skills, and at further motivating students – not least by building on their strengths.

3. Schools / Learning environments

School leaders should understand the content of the curriculum and make management decisions within their areas of responsibility to support its delivery. They should encourage and support teachers in adopting new and innovative teaching practice.

School leaders should make the space for their Learning Leaders to consider the curriculum and its implementation in some depth with the teachers in their teams. This is vital in ensuring that teachers are not guided only by the textbook but that they are co-creating the curriculum with their Learning Leaders, teacher colleagues and learners themselves.

7 - John Hattie (2009) *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement*. London & New York: Routledge.

School leaders can also use curriculum delivery as a means for professional development and for the continuous improvement of teachers' practice by asking each teacher, as Dylan Wiliam has suggested, to respond to three questions with regard to their curricular practice:

- What am I going to improve in my practice this year?
- How am I going to do it?
- What evidence of its effect on learning outcomes will I seek as an indication of the improvement?

School leaders can helpfully set up teams, within and across Learning Areas, in which teachers can provide each other with professional support in their striving for such improvements in their curricular practice.

The responsibilities of school leaders with regard to curriculum implementation and curriculum advice for their school are important roles to include in school leadership.

Within their responsibilities, schools should also ensure that learning environments are as safe and well-equipped as possible, and that the best materials to support good teaching, learning and assessment practice are provided. The objective is to provide learner-friendly environments that enable and encourage effective and enjoyable learning.

4. Education systems and authorities

A good quality curriculum also creates expectations of education systems and school authorities. These include:

- **Supporting teachers and schools in being innovative and creative**

Education systems and authorities should support teachers and schools in their efforts to understand and implement the curriculum. A good quality curriculum may require teaching approaches to be more innovative than they might typically be in a particular context – for example, to encourage students to question, discuss and debate. These strategies need to be encouraged.

In the broader sense, a good quality curriculum may require an education system to change its definition of what constitutes a 'good' teacher, which may in turn have consequences for recruitment criteria, teacher professional development, remuneration, incentive and promotion schemes, and the monitoring of teaching effectiveness through, for example, inspection systems.

Similarly, an education system should encourage principals and head teachers to create school cultures which reflect the principles and practices of the 'good quality' curriculum.

- **Ensuring assessments, formative as well as summative, reflect the curriculum**

A good quality curriculum needs to be supported by appropriate methods and strategies for assessing student achievement as defined by the curriculum. For example, education systems usually have direct control over national examinations, and these should be constructed in ways which are aligned with and reflect the curriculum.

In particular, a good quality curriculum, as mentioned earlier, will require students to acquire a balance of knowledge, skills and values. System requirements for assessment should also reflect this balance.

- **Providing the resources and equipment necessary to implement the curriculum successfully**

To be effective and successful, a good quality curriculum requires resources and equipment. Education authorities should ensure that these are available, and that they are distributed equitably. This may frequently mean allocating resources unequally. For example, additional resourcing may be necessary to provide compensatory education for particular groups in society who might be disadvantaged on account of history, disability, gender, their socio-economic status, their ethnicity or cultural background, or where they live – whether in difficult urban or deeply rural environments.

- **Allocating time in flexible ways**

There are different approaches to specifying the time to be allocated to each subject or Learning Area. Many education systems and authorities adopt flexible approaches and allow schools some autonomy in deciding how much time should be allocated. This is often a requirement of and facilitates the development of a good quality formal curriculum.

Rather than allocating hours to subjects in a highly regulated way, it is possible to:

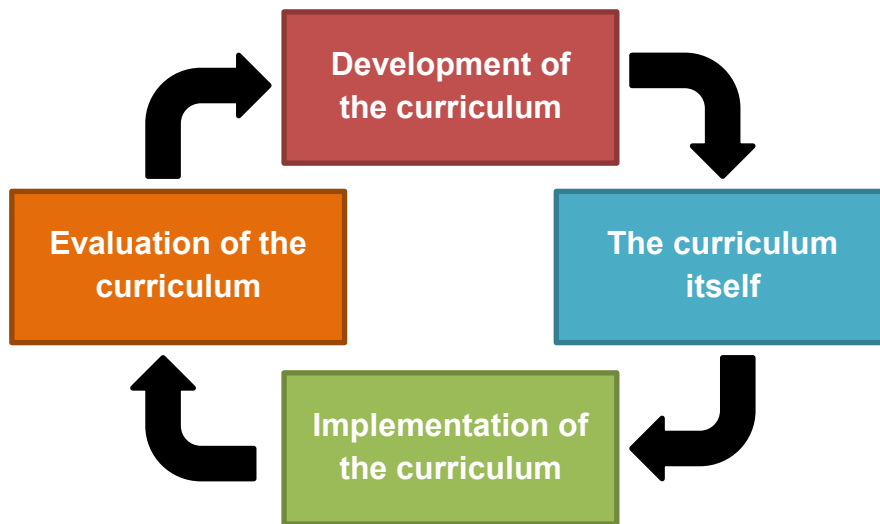
- prescribe minimum hours over a certain period of time, leaving some discretion to schools and teachers to spend more hours;
- express the time to be spent on particular subjects as percentages of the total available hours, thus acknowledging variations in the number of school days in a school year in different parts of the system;
- allocate hours to a Learning Area rather than to individual subjects, allowing some flexibility and autonomy in deciding how the time should be allocated to subjects;
- allocate notional or indicative hours which are an indication of how many hours are recommended to achieve the learning outcomes, but are not prescriptive and allow the school and teachers some autonomy to vary the time spent, according to the needs of their students; or
- write the curriculum and what students are expected to learn in terms of *outcomes* that learners will achieve by certain ages or stages. The teacher, learning leaders and school principals, education authorities, parents (and employers) then work together in deciding the balance of time allocated to different aspects of the curriculum – for different groups of learners – so that learners are helped to achieve their potential. Provided that these outcomes are described in ways that enable flexibility in the teaching and learning process, such an approach helps to give meaningful expression to personalized learning as discussed in the last paragraph of Section 3.1. Such an approach also exemplifies the principle on which curriculum for excellence is based: it depends on high quality teachers and good quality evaluation and assurance processes; but it also enables teachers to make learning more focused and motivating for learners.

Whichever approach is adopted, the time allocation should be sufficient to achieve meaningful learning outcomes. It is not, for example, realistic to allocate one hour per week to learn a language. There are international standards and expectations in this area: in Europe, for example, 1,000 hours over nine years would be considered a minimum allocation for achieving acceptable language proficiency.

In this area, the relative percentages of time allocated between subjects or learning areas should also reflect accepted international practice.

Education systems need also to maximize curriculum support budgets and to ensure that schools are provided with the best possible quality teachers and resources (including Teacher Guides, text books and other materials).

V. Evaluation of the Curriculum



A good quality curriculum is one which is evaluated:

- in a systematic and planned way – i.e.
 - based on a clear purpose and scope,
 - at different levels in the education system: classroom, school, local area, nationally,
 - using valid and reliable data, and
 - within a clear quality framework;
- regularly; and
- by suitably qualified and experienced people.

Evaluation is a stage of the curriculum cycle that is frequently overlooked or under-valued. It is not possible to approach curriculum implementation in any professional and meaningful way without considering how the success of the curriculum will be judged. While implementation and evaluation are closely connected, they do consist of different processes. However, in judging the quality of any curriculum, it is critical that criteria related to the effectiveness of evaluation processes, as well as how the information gathered from the evaluation is used, are developed. Curriculum implementation is, in sum, not a ‘once-off’ thing. It needs rather to be understood in terms of a continuous cycle – not unlike action research – of implementation, evaluation, revision,...

1. Clearly defined purpose and scope

The first task of evaluators is to ensure that the *purpose and scope* of the evaluation are clear and understood. For example, the purpose may be as narrow as to evaluate teaching practice within a particular subject domain (such as the quality of teaching Mathematics), or even to evaluate how the curriculum is reflected in the work of a particular teacher. However, the purpose may be as broad as to evaluate the extent to which the school system is producing graduates with the competencies required by the curriculum. When it comes to such evaluation, it is helpful to think in terms of inputs, outputs and outcomes.

Inputs would refer to the appropriateness of the curriculum in terms of whether it is:

- fit for its intended purposes;
- inclusive;
- relevant;
- internally aligned and coherent;
- well-articulated with other aspects of the education system; and
- consistent with broader societal goals.

Outputs would refer to the results of learning assessments and national testing: whether the curriculum is supporting effective teaching, learning and assessment both in each subject and across the curriculum. Evaluation of curricular outputs would help to answer questions whether the curriculum is supporting teachers well enough. This would require further careful analysis of whether any problems identified lie in the curriculum, in teaching practices, in learning circumstances, or elsewhere.

Outcomes would refer to whether the curriculum has actually helped to develop young people with the competencies, values, citizenship responsibilities, and the like that have been articulated in the curricular aims, and who are prepared for the workplace, for lifelong learning, etc.

2. Based on valid data and criteria

Once the purpose and scope are clear, evaluators can determine the most appropriate *sources of data* and *strategies for collecting and analysing* that data. Using the examples above, in a limited evaluation (of, for example, the work of a particular teacher), a member of the inspectorate or the school principal might use data collected from classroom observations, professional discussions with the teacher and some appropriate assessment of student outcomes. If the evaluation is of the effectiveness of the curriculum as a whole, a panel of evaluators might rely on stakeholder surveys, consultations with schools, post-school destination surveys and the results of national testing and other student assessments to collect data for analysis. Formal assessment of students provides, of course, an important source of data in any evaluation of the curriculum.

Based on the purpose and objectives, evaluators should develop a *clear and broadly agreed quality framework* within which evaluation processes can occur. The previous sections of this paper provide a range of criteria and other suggestions which might guide the development of this framework. These may be used selectively to reflect the purpose and scope.

3. Regular

Curriculum evaluation should be *regular*, although how often an evaluation of the whole curriculum should occur will depend on a range of factors, including feedback on the curriculum and the resources available. However, authorities should be alert to the need for a large scale evaluation, and to plan for how this evaluation should be administered and funded.

4. Conducted by qualified and experienced people

Within that planning process, authorities should ensure that evaluations are conducted by people who are *suitably qualified and experienced*. They should have a deep understanding of all facets of the curriculum and of evaluation strategies and processes. The education authorities might also consider issues of objectivity, and ensure that those who conduct the evaluation are ‘at arm’s length’ from the curriculum, and can report their evaluation findings in a professional, valid and transparent way.