Curriculum Report Card

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PREFACE

Children have a right to an education, a quality education. Quality education in schools is delivered through a thoughtful curriculum that is based on learning outcomes and mediated through skilful, well-prepared teachers. UNICEF curriculum priorities are for all children to learn to read and write, to develop numeracy skills, to develop behaviours through peace education and Life Skills that promote the development of well-rounded human beings, especially those in difficult situations, and to learn all these things and more through a gender-inclusive curriculum.

For this study, UNICEF Education Program Officers (EPOs) from nearly 60 countries answered questions about Life Skills, peace education, gender, reading and writing skills, and learning outcomes in national curricula. The responses consisted of official government information, information on UNICEF-related curriculum projects, and EPOs' interpretations and impressions. This working paper draws from their responses in order to:

(1) present a baseline of information on curriculum in UNICEF countries in these specific areas

(2) describe the curriculum development and implementation process

(3) provide a means for Education Programme Officers in countries where UNICEF supports education programmes to continue to engage in advocacy and programme development in curriculum

The report is organized to:

(1) show the linkages between curriculum, teaching, and learning outcomes

(2) outline UNICEF priorities in supporting curricular programming

(3) describe the ways in which three key areas can be integrated into or mainstreamed across the curriculum, and

(4) discuss the processes of curriculum change that contribute to improved education quality for children in schools

This paper engages critical curriculum issues. It identifies 'principles' for working with curriculum, which serve as an important framework for all practitioners. The perennial debate about the meaning of 'curriculum' is described in detail, making important distinctions between the official/intended and the actual/taught/learned curriculum. Equally important is the fact the writers show that curriculum goes beyond official statements of intention whether these be syllabuses or teachers guides. Curriculum is what happens to students (either as a result of direct or indirect school action) within the fluid context of schooling and for which schools can be held accountable. Curriculum

development means changing behaviour. To that extent training, especially of teachers, for purposes of changing attitudes, skills and knowledge is key in curriculum change.

Overall, this paper is an important addition to the professional repertoire of UNICEF Education Officers. It is written in simple readable language. The format is user-friendly and enjoyable. It will certainly make an important contribution to the professional work of Education. As we move to a focus on what is learned, think about how you may be able to apply the principles which are outlined in this paper in teacher education, in education reform processes, in sector reviews and other contexts where curriculum is a central issue.

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Executive Summary

During the past two decades UNICEF has brought curriculum to the forefront of its agenda for children's education. Countries that are signatories to the Convention on the Rights of the Child desire and are obligated to provide quality education for all children. A sound curriculum is at the heart of a quality education. The categories of intended, official, taught and learned curriculum discussed in this working paper capture the interactive, dynamic nature of the curriculum process.

National education goals provide a framework for developing a nation's intended and official curriculum. Once those goals have been established, curriculum can be organised around key learning areas rather than divided into many discrete and seemingly unrelated subjects. Key learning areas are big ideas that focus on learning, learners, and content rather than on subjects as ends in themselves. They target behaviours, attitudes, values, and skills, as well as knowledge, as desired outcomes of children's learning. Learning outcomes in key learning areas are established at the beginning of the curriculum process, curriculum design and instructional methods follow.

Many actors need to be involved in the curriculum development process: exemplary female and male teachers, other educators with recent teaching experience, curriculum experts, and members of the wider community. Curriculum lays out the scope (breadth) and sequence (order) of what is to be taught and learned. It also must specify adequate instructional time for key areas, especially for language development and mathematics in primary classes.

Textbooks are written to follow the scope and content of the curriculum. They need to be evaluated and updated according to a regular curriculum cycle, pilot tested before they are widely distributed, and available to all teachers and pupils when a new curriculum is adopted and implemented.

Curriculum needs to be responsive to emerging issues as they arise, for example, HIV/AIDS prevention and peace education. The principal way to do this is to integrate (or mainstream) skills, attitudes and knowledge that will bring about desired behaviours related to these issues into the key learning areas of the curriculum. This working paper examines baseline data from 59 countries on the ways in which they integrate peace education, Life Skills, a gender-inclusive curriculum, reading and writing/listening and speaking into the curriculum.

Several countries have well-developed peace education curriculum, many are making plans to include it in existing curricula, and several have not yet identified peace education as important. Integrating a Life Skills approach into curricula involves interpersonal skills, coping and management skills, and skills for building self-awareness, critical and creative thinking, and making decisions. At present countries interpret what Life Skills are in many ways, frequently focusing on knowledge acquisition or livelihood skills rather than on enabling students to think critically and actively make good decisions.

A gender-inclusive curriculum takes into account social constructions of gender and involves consciously selecting, reflecting upon, and addressing choices about curriculum implementation and evaluation. Three-fourths of the 59 countries responding to the survey questionnaire sent out in advance of this study reported that they are working on gender inclusive curriculum at some level or at several levels. As for reading and writing, most countries do not yet view reading and writing as processes that are integrated throughout the key areas of the curriculum. Rather they tend to focus on teaching the language as an end in itself.

Teachers are central to curriculum implementation. They design how they will teach a lesson and they construct the actual lesson with students as they teach, based on how students seem to understand a lesson. Based on decisions about design and construction over the course of the year teachers map out the actual taught curriculum. The ways in which teachers' use textbooks in this process are complex and varied and require careful consideration.

Using a child's first language or mother tongue for initial literacy instruction in school enhances pupils' achievement, yet the majority of children in sub-Saharan Africa and many other regions of the world must first learn a second or third language when they enter school. For pupils to achieve, teaching must be effective. This means that education systems must support teachers in developing appropriate teaching strategies for helping all children to achieve, regardless of the language policy or language proficiency levels of teachers or pupils.

The learned curriculum consists of what sense children make of the written and taught curriculum and how they are able to organise, apply, and represent their new understandings. Learning outcomes put the focus on what students know and can do, not merely what they have been taught. Once countries establish a link between curriculum and learning outcomes, they set performance standards that define to what level learners should progress and by which grade or class--targets at which students should aim--and they develop systems of assessing the degree to which intended outcomes are achieved.

Most respondents to the curriculum survey indicated that learning outcomes are still viewed primarily in terms of content knowledge and assessed using a traditional paper-and-pencil test. Some countries have a clear, technical view of performance standards and are exploring alternative means of assessment in which students not only take tests but also have opportunities to actively demonstrate and apply what they have learned.

Improved quality education brought about through the processes of curriculum described in this paper is centred in the classroom. For improved quality education to reach children in all classrooms, the entire education system must support and provide enabling conditions for curriculum change.

The twenty-one principles below provide a way of thinking about the curriculum change process that capture UNICEF's educational priorities to enable all children to live and act as responsible citizens of their local communities and of the world.

Principles for Curriculum Design

1. Curriculum is a process, not just textbooks and other learning materials. It includes intended, taught and learned curriculum.

2. National goals for education need to be linked with national assessment, pupils' learning outcomes, school curriculum, and teacher training curricula.

3. Curriculum needs to extend beyond an emphasis on acquiring fact-based knowledge to include skills, attitudes, and values.

4. Curriculum must specify adequate instruction time for basic subjects, especially language development and mathematics in primary grades.

5. Professionals with current teaching experience need to be involved at all levels of writing, developing, and evaluating curriculum.

6. Curriculum should be widely validated by parents, community members, teachers, ministries across sectors and the business community. This will build understanding, support and confidence in schools and teachers.

Textbooks and Materials

7. Textbooks need to follow the clear, well-organized scope and sequence of the curriculum and to be available when a new official curriculum is published.

8. Textbooks and materials need to be piloted before they are distributed widely.

9. National investments need to make provision for updates and changes to textbooks and learning materials.

Curriculum Review and Evaluation

10. The curriculum review and development cycle must proceed expeditiously to ensure that the curriculum is relevant and current. For example, a ten-year cycle is too long.

11. Effective curriculum evaluation examines and makes judgments on the value of intended, taught, and learned curriculum according to pre-set standards. Summative evaluation should precede curriculum revision.

Curriculum Integration

12. Curriculum needs to be responsive to emerging issues as they arise, for example, Life Skills approaches, whether they relate to HIV/AIDS prevention, Environment Education, Peace Education, or Education for Development. It will often be necessary to incorporate new agendas into curriculum.

Teaching and Teacher Education

13. Pupil achievement is enhanced if pupils first become literate in their mother tongue, but investments in first language texts of increasing complexity may be prohibitively expensive. However, whatever the languages policy may be, teaching must be effective for pupils to achieve.

14. Curriculum also consists of how the teacher teaches and makes links with what children already know. Direct improvement of teaching and learning at the classroom level can contribute to better learning outcomes, even in the face of a less than optimal curriculum.

15. Teacher education and professional development need to include a curriculum development focus that helps teachers understand both curricula content and the processes involved in supporting learning (e.g., how to teach reading and writing and how to assess student learning).

Learning Outcomes

16. The curriculum development process is most effective when learning outcomes and performance standards are established first and then linked to what teachers must do to ensure that learning takes place.

17. Learning outcomes should describe what children should know and can do, and they should be observable in the course of classroom life through a variety of mechanisms. Learning outcomes, not written tests, should drive the curriculum.

18. Establishing clear learning outcomes provides the context for practical assessment.

Assessment

19. Assessing student ability to perform specific learning outcomes needs to be viewed as a tool which helps teachers to know whether learning is occurring or not.

20. Assessment is more than testing children's understanding. It also involves assessing the entire educational system's ability to provide learning opportunities for children.

Curriculum Change

21. System-wide support is necessary for true curriculum change, especially for change at the most important level, the classroom.

Introduction

Four Decades of Curriculum Work in UNICEF

Historically UNICEF has assisted countries in general curriculum reforms in broad terms. In the 1960s, in its role as promoter of children's health and nutrition, UNICEF emphasized science teaching, health and nutrition education, pre-vocational training, and the "living skills" required for a more productive life in the context of the local environment. Pilot schools that implemented a curriculum for rural schools were established with UNICEF aid. Practical agricultural teaching was introduced in Djibouti, and in other countries such as Viet Nam schools also experimented with food production in school gardens. By the end of the decade more schools used textbooks with a practical orientation prepared with due regard for the local environment.

Curriculum development encountered many obstacles. Attempts to replace a traditional curriculum with one that incorporated modern concepts and techniques often resulted in crowding additional subjects into over-burdened syllabi in schools that had insufficient materials and teachers who had minimal teaching skills. Long debates took place in UNICEF over whether education should be practical or general, or how to create a balance between the two.

In the mid-1980s UNICEF reaffirmed its commitment to basic education, literacy, and the education of women and girls. International conflicts and the ongoing need for educating children in emergency situations elicited an interest in and commitment to Peace Education. Life Skills Education emerged from the field of health education out of a heightened concern for containing the AIDS epidemic. In the 1990s the concept of Life Skills expanded to an approach that is skills-based, oriented toward behaviour change, and integrated into in all areas of curriculum. The need for increased attention to girls' and women's education that was recognized in the 1980s evolved into a much larger commitment following the Education for All Jomtien conference in 1990 and advocated a gender-inclusive curriculum for all. Implications of testing and assessment for pupil learning and teacher improvement generated new attention to this area. UNICEF's commitment to reach and educate all student populations presently excluded from an education remains at the heart of the organization's systematic efforts to see that in the new millennium all children are provided with a quality basic education.

1.   Curriculum Definitions

What is "curriculum?"

The four commonplaces of education are that someone teaches something to someone somewhere (Schwab, 1978). Some people define the "something," the curriculum, as what is found in the textbook or teacher's guide. Others broaden the definition of curriculum to mean everything that happens with the support of the school.

Here are several other definitions:

The curriculum defines for teachers the skills that students should learn established by the state or developed by a committee (McGinn and Borden, 1995).

Curriculum, simply put, is a way of talking about what we want students to learn (Furniss, 1999).

Curriculum is the organization of teaching and learning. (Moyles, Hargreaves, and Moyle, 1998)

Curriculum is a planned, composite effort of a school to guide students toward predetermined learning outcomes (Inlow, n.d.).

Miller and Seller (1985, p. 3) place the various definitions of curriculum along a spectrum:

At one end, curriculum is seen merely as a **course of study;**

at the other end, curriculum is more broadly defined as **everything that occurs under the auspices of the school.**

The word "curriculum" is derived from the Latin word *curriculum* meaning "the course or circuit that a race is to follow, [it] implies the path or track to be followed or the course of study to be undertaken" (Barrow, 1982, p. 3). Some people understand curriculum as everything that runs or occurs under the auspices of the school.

In the middle of the spectrum, curriculum is viewed as an **interaction between students and teachers that is designed to achieve specific educational goals. . .** [emphasis ours]

Curriculum, then, is much more than what we see in curriculum guides, textbooks, and teachers' guides. To show the interconnectedness of written materials with teaching, learning, and learning outcomes, this paper will discuss three areas of curriculum emphasis: the intended curriculum, the taught curriculum, and the learned curriculum. In addition, we will consider the hidden curriculum and the null curriculum.

Three Areas of Curriculum Emphasis

Principle 1. Curriculum is a process, not just textbooks and other learning materials. It includes intended, taught and learned curriculum.

The Intended Curriculum. The intended curriculum refers to the formal, approved guidelines for teaching content to pupils that is developed for teachers and/or by teachers.

A nation's goals often shape or direct the broad set of guidelines for the overall curriculum. The Ministry of Education intends that teachers will teach and students will learn what the guidelines set forth (also called the "official" curriculum). When the guidelines for the intended curriculum have been prepared, curriculum writers are selected to prepare textbooks, teacher guidebooks, and other curriculum materials (i.e., the written curriculum) with the expectation that teachers will use the textbooks and teachers' guides to teach the intended curriculum to children and thus meet the nation's goals.

The Taught Curriculum. Teachers mediate the intended curriculum. That is, they master the material, consider how their pupils learn, take into account the particular learning environment of their pupils, and then adapt the curriculum materials and textbook information in ways that will enable all students to learn. The teacher is a professional educator who must make well-informed decisions. If the written curriculum is not adequate, teachers develop strategies and find materials that will help pupils learn and reach specific standards of performance.

The Learned Curriculum. What is it that pupils actually take in and make sense of from the intended and taught curricula? What skills learned in school can they use? What knowledge and attitudes do students acquire? What do they absorb or ignore? Educators try to answer these questions by establishing desired learning outcomes in advance of teaching and by assessing student performance afterward.

Pupils learn other things in school besides the intended curriculum. They also fail to learn certain skills, knowledge, and attitudes if these are not included in the curriculum. The former is the hidden curriculum; the latter the null curriculum.

The Hidden Curriculum. Teachers, administrators, and the ways in which schools are organized often communicate messages that are not officially included in the formal curriculum; for example, how to follow orders or the belief that boys are smarter than girls (see, for example, Anyon, 1981; Van Belle-Prouty, 1991). These messages constitute the hidden curriculum and they can serve to advance the agendas of various groups in society, thus reproducing social inequalities.

The Null Curriculum. Some content and skills are intentionally or unintentionally ignored in the curriculum. For example, instruction about HIV/AIDS or women's contributions to society throughout a nation's history may not be included in the intended or taught curriculum. Several countries in this study reported that Peace Education is not in their curriculum since their nations have not been involved in cross-border conflicts. Others report that a gender-inclusive curriculum is not a national priority and not part of the curriculum. If students do not and cannot learn about particular concepts from curriculum materials or teachers, these learning areas fall into the category of the null curriculum.

What are the links between the above curriculum areas? curriculum and textbooks? teaching choices and performance standards? student learning and learning outcomes? If

links are not made between these levels, how can we address this need? Answers to these questions follow.

THE INTENDED CURRICULUM

Principle 2. National goals for education need to be linked with national assessment, pupils' learning outcomes, school curriculum, and teacher training curricula.

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2.   National Goals for Education

A nation's goals for schooling are broad, general statements, which are expected to inform policy and practice at all levels of the education system. As Coombs (1985, p. ii) notes

> Curriculum arises out of the social, religious, political and economic context of society. It is these factors in combination that influence the society's determination about which are the appropriate parts of the culture to be transmitted to students through the organisation of the school.

The national education goals of most countries relate to all or several of the following categories: economic efficiency, political cohesiveness, social responsibility, and moral values (which may be religious in nature).

Through the curriculum development process, these broad education goals are refined into useful statements that give direction to teaching, learning, and curricular materials development in the nation's schools. These statements may also include criteria for achievement.

These are examples of national goals:

Nigeria (1976)

- the inculcation of national consciousness and national unity;
- the inculcation of the right type of values and attitudes for the survival of the individual and the Nigerian society;
- the training of the mind in the understanding of the world around; the acquisition of the appropriate skills, abilities, and competencies, both mental and physical, as equipment for the individual to live in and contribute to his [sic] society.

Turkey (1995)
♦ to provide opportunity for every Turkish child to develop necessary skills, knowledge and habits to be good citizens and to educate them according to moral values of Turkey;
♦ to prepare and orient every Turkish child for life and for higher levels of education considering his/her interests, abilities and capacities.

Iraq (1968)
♦ to develop personality through interaction with the community (from Iraq's Twelve Objectives of Education).

South Africa (1997)
♦ to enable all individuals to value, have access to and succeed in lifelong education and training of good quality.

Education planners and curriculum developers need to actively keep in mind the relationship between macro-level educational goals and pupils' learning outcomes. In 1992, Sri Lanka's National Education Commission established overt linkages between the common national goals, the common competencies that students are expected to achieve at the end of the learning-teaching process, and the general aims of the syllabus.

National education goals also need to be linked with national assessment, pupil learning outcomes, and teacher training curriculum. In this way teachers become aware of the "big picture" and of their place in it as they enact curriculum in the classroom. Linking national assessment with national goals can give a country an indication of how its goals are being met.

National goals need to be directly linked with learning outcomes for pupils. For example, Nigeria's national goal of "training of the mind in the understanding of the world around," may be partially met through a learning outcome such as this: "pupils will be able to describe how foods produced and eaten in one part of the country relate to the predominant religious and cultural beliefs of that area, and compare this to patterns in another part of the country." As they expand on this, curriculum developers will establish integrated learning outcomes (which reach across subject areas) that ask students to demonstrate their understanding of the world in other ways. In turn, national assessments administered to a sample of students every two or three years will help to show how students across a district, region, or nation can perform in the area of understanding the world. Those data will provide information on making decisions about improving an education system and its curricula for pupils and for teacher training programs.

National goals and goals for education are not static; they shift in the course of a nation's unique history. Benavot (1988, pp. 154-155) notes

> Following national struggles for independence, the school curricula of
> newly independent nations, once largely shaped by the interests of

European colonial powers and missionary groups, were re-evaluated and often restructured in the light of a diverse array of new purposes: forging national identity, training highly skilled manpower [sic], spreading literacy throughout the population, promoting 'modern' values and attitudes, and advancing the cause of economic development.

In a contemporary example, South Africa's new Curriculum 2005 demonstrates a dramatic shift in goals for the nation and its education system:

> The curriculum is at the heart of the education and training system. In the past the curriculum has perpetuated race, class, gender and ethnic divisions and has emphasised separateness, rather then common citizenship and nationhood. It is therefore imperative that the curriculum be restructured to reflect the values and principles of our new democratic society (Curriculum 2005, p. 1).

National goals, once established, are not always based on national consensus. With the linguistic, socio-cultural, economic, and regional diversity that exist in many nations, competing goals may arise. For example, in national capitals and urban areas that have access to computer technology, leaders desire advanced technological capability for the country and computer literacy for their own and for the country's children. However, for rural areas in the same country where electricity or clean water are lacking, technological goals may aim not for computers but for sufficient boreholes for access to water so that children can attend school.[1] These competing goals and their implications directly affect the implementation of national goals and of related curriculum choices that must be made. It is important that education goal statements derived from national goals be broad enough to acknowledge and encompass this diversity rather than ignore competing goals.

In this same manner, Algeria describes two "competing and conflicting models" of education that exist within the country.

> First, the dominant traditional model…[is] founded on the transmission of knowledge and values, with an expectation of obedience and discipline from the students.

> In contrast to this, a second model that grows out of modern educational theories is emerging, especially at the official level. In this model, education and teaching are considered to be a process of construction, implying action on the part of the children that leads to greater awareness, learning, or a change in attitudes or values.

Many other countries explicitly or implicitly referred these same tensions. This paper attempts to bridge the gap between the two in the area of curriculum.

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[1] If children, usually girls, must walk long distances to fetch water, they may routinely be late for school. If schools do not have a clean water supply, children may have to walk a considerable distance home for a drink, and not return to school.

Some curriculum theorists hold that curriculum is not only subject to competing ideas, but that it can affect the educational and occupational life chances of different groups of students by assigning them to academic programs with access to different kinds of knowledge. Apple (1979) and others also argue that certain cultural assumptions, such as a society's orientation toward competition and the meritocratic character of social inequalities play a major role in maintaining the existing social order (Benavot & Karmens, 1989).

Education in Emergencies

Conflicting and competing goals within and among nations can lead to armed conflict and to war. Despite the acceptance of the Convention on the Rights of the Child and education as a basic right for all children, education in emergencies has been considered a low priority, when considered at all. However, critical thinking concerning education in crisis situations has taken a radical shift over the past few years. It has been recognised that education cannot be seen as a stopgap or relief effort, but has to take a more developmental approach, with longer-term goals in mind from the outset. (Lindsay).

Given the significance of school in emergencies, educators – particularly teachers, school directors, and pedagogues – have to rely on different sets of knowledge and skills than previously required in pre-emergency contexts, as the problems schools confront are more diverse and acute. Issues of curriculum, while different in these circumstances, are still significant. Schools not only must stimulate and sustain learning – difficult in war – but also must cope with the consequences of war – disrupted learning, emotional stress and trauma, breakdown in peer and family relationships, loss of positive communication skills, and displacement (Esperanza Vivas).

Key issues for Education in Emergencies

(1) Curriculum developers need to ensure continuity with the former curriculum and continuity with what children will face in their new classrooms.
(2) Education for repatriation must use the curriculum of the country of origin.
(3) Sometimes the issues of conflict are embedded in the curriculum and need to be uncovered (e.g., Ethiopia's rejection of a feudal system described in the curriculum).
(4) Language issues are real issues in most conflict situations, and what to choose as the language of instruction is of utmost concern to the whole community (e.g., Language as an issue of debate in East Timor).

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3. Curriculum Categories: Key Learning Areas

Some people divide curriculum up into subjects such as history, music, and mathematics. They are at one end of a continuum. Further along the continuum are those who think curriculum should be organised around big ideas such as 'change' or 'power'. At the other end are people who think curriculum is not divided or broken up at all but is unified in the mind of the child; that is, curriculum is the amalgam or blend of everything about which the child has made sense.

Historically, primary curriculum has been divided into subjects and each subject is allotted a prescribed amount of time in which teachers are to deliver the curriculum. In 1989 Benavot and Karmens conducted a comprehensive survey of curriculum content and time devoted to instruction in developing countries. Some of their findings about

how subject areas are treated in different regions of the world are summarised in the box below.

SUBJECT AREA FINDINGS
Benavot & Karmens, 1989

- In the main subject areas of primary education **– language, math, science, and social science** – there is relatively little variation among regions

Nation states

- tend to have a high degree of consistency in curriculum emphasis over time, but differ sharply from each other, reflecting unique historical patterns.

- in Latin American and the Caribbean offer more instruction in **social studies** and less in **history and geography** than other regions, except for Asia which offer the least instruction in history and geography

- in Asia offer more courses in **moral education** than countries in other regions

- in the Middle East/North Africa (MENA) and Sub-Saharan Africa (SSA) offer many more courses in **religion**

- devote about one-third of total instruction time to language instruction, one-sixth to math, one-tenth each to science, art and music, and social science, one-twentieth each to moral and religious education, physical education, and pre-vocational subjects. Hygiene receives only the minimum of instructional time

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Dividing knowledge into school subjects can be seen as putting ideas into boxes, forcing us to see separations between things we learn instead of exploring the connections between them. The number of pupil textbooks published can be one indicator of the number of "boxes" into which countries divide knowledge. The curriculum of Sao Tome and Principe is composed of four subjects only: Portuguese, Math, Social Environment, and Sports. Others have ten or as many as 17 subjects. As new needs develop and new mandates are issued a school system can end up in another curriculum area: the crowded curriculum.

It is not the number of subjects that is inherently better or worse, however, but the thinking behind them. This paper focuses on the idea of curriculum as organised around key learning areas, that is, big ideas that focus on learning, learners, and content rather than on subjects as ends in themselves.

A number of countries have redefined the categories of curriculum so that the categories fit better with overall education goals and respond to issues and concerns of everyday life. Thailand's primary education curriculum is now divided into four clusters: life experience, character development, work orientation, and special experience. Cambodia's curriculum consists of three learning areas: communication, social

experience, and personality. Bhutan's primary curriculum consists of seven major learning areas:

- Languages
- Mathematics
- Science and technology
- Human society and its environment
- Health
- Physical education
- Personal development

South Africa's restructured Curriculum 2005 has established Eight Learning Areas to meet its newly articulated national goals. These learning areas are:

- Language, Literacy and Communication
- Human and Social Sciences
- Technology
- Mathematical Literacy, Mathematics and Mathematical Sciences,
- Natural Science
- Arts and Culture
- Economics and Management Science
- Life Orientation

Key Learning Areas are often defined by statements which describe each area of learning, outline its essential elements, show what is distinctive about the area, and describe a sequence for developing knowledge and skills within it. These statements describe the scope (breadth) and sequence (order) of a curriculum. They show the groupings of understandings of content, processes and concepts.

Principle 3. Curriculum needs to extend beyond an emphasis on acquiring fact-based knowledge to include skills, attitudes, and values.

Statements about key learning areas also indicate the broad stages in the sequence for developing knowledge, understandings, and skills in a learning area. These stages roughly correspond to stages of schooling: lower primary, upper primary, junior secondary and upper secondary. The statements also provide a framework of what might be taught to achieve learning.

3. The Written Curriculum

This paper began by examining the Intended Curriculum, looking at national education goals and their relationship to broad educational goals. The educational goals are

accompanied by useful statements that give direction to curricular materials development in the nation's schools, and, thus, to teaching and learning.

From broad goals within key learning areas, one moves to learning outcomes. Based on what is known about how children learn at different ages and what is known about content matter, what is it that an education system wants pupils to know and do when they have completed the first, second, third years of basic education? when they have completed a basic education?.

Principle 4. Curriculum must specify adequate instruction time for basic subjects, especially language development and mathematics in primary grades.

Curriculum must also address time spent on learning and how long children at a particular age and/or skill level should spend in school studying a particular subject. For example, how many minutes in a day and hours in a week should be devoted to developing language and literacy? How much time in learning Mathematics? Again, these decisions will be based on what is known about children's developmental levels and about the skills, knowledge, attitudes and values to be learned in a particular area, based especially on what has been learned in current research.

Principle 5. Professionals with current teaching experience need to be involved at all levels of writing, developing, and evaluating curriculum.

Often these decisions are made by subject matter "experts" from universities without teacher participation. University researchers and curriculum specialists have an important role in curriculum development; however, teachers--especially those who have been identified by their peers and communities as effective or "expert" teachers-- must be key actors, not merely token voices, in the curriculum development process. Recent teaching experience in classrooms should be an important consideration in selecting the other educators who will work on curriculum development as well.

Teachers can and should be involved in written curriculum development at various levels: (1) at the national level, writing learning outcome statements and preparing materials and textbooks; (2) at the regional and local levels for use in area schools, such as language specific and culturally relevant materials; and (3) at the classroom level, preparing lessons and instructional materials for the daily lessons they teach, in response to current student needs.

Principle 6. Curriculum should be widely validated by parents, community members, teachers, ministries across sectors and the business community. This will build understanding, support and confidence in schools and teachers.

Specific criteria for gauging quality and effectiveness must be established, and an appropriately diverse audience included to give feedback on the textbooks and curriculum should then be incorporated into a final revision of the textbooks prior to their final publication.

Textbooks

Once the curriculum has been decided, how does the curriculum transfer into material for textbooks, teacher guides, pupil exercise books, and other teacher and pupil resource materials?

Textbooks need to match closely and not deviate significantly from the curriculum and specified learning outcomes. But since curriculum does not dictate what goes into textbooks (e.g., story lines and exercises), textbook authors have the important responsibility of deciding how material is to be presented as well as selecting the teaching methods for the accompanying teachers' guides.

Textbooks and reading materials need to be a regular feature of the teaching-learning process. Textbook content needs to present situations from daily life drawn from the local environment. When countries represent diverse groups, addressing all audiences becomes problematic, but should be a challenge to achieve. In turn, the educational system needs to continually assess student achievement and the appropriateness of textbooks and reading materials for accuracy, the organization and sequencing of topics, the level of reading difficulty and interest to students, and other factors cited in the box on "Textbook Evaluation".

Textbook Evaluation
Characteristics and Properties of Good Textbooks

This checklist may be helpful in evaluating textbooks.
1.   The textbook contributes to helping teachers and students attain curriculum goals.
2.   The text has a recent copyright date (within five years).
3.   The content of the text:
- o covers all or most of the course to be taught;
- o is up-to-date;
- o accurately portrays minority groups, [boys and girls];
- o accurately reflects ethnic cultures and lifestyles;
- o is free of racist and sexist connotations;
- o presents controversial issues objectively, and accurately reflects representative points of view; and
- o provides material or examples of how the concepts or contents are correlated with other subjects.
4.   Concepts, generalizations, and relationships are clearly and accurately presented. They are developed from concrete to abstract where it is appropriate.
5.   Students find the textbook interesting to read.
6.   Most students find the textbooks easy to read.
7.   The textbook highlights new and difficult words.
8.   Graphs and tables are clearly illustrated and easy to read.
9.   Diagrams and scale drawings are clearly illustrated and easy to read.
10.   The text has
- ♦   a table of contents;
- ♦   an index;
- ♦   main ideas at the beginning of each chapter or subsection;
- ♦   directions that are clear and complete;
- ♦   summaries appropriately placed throughout the chapter; and
- ♦   chapter summaries and reviews of the concepts, generalizations, and relationships.
11.   New ideas are introduced through motivating social or personal situations or issues.??
12.   Quotations or other authoritative sources are used to highlight concepts or content.
13.   The textbook contains recommended readings for students.
14.   End-of-the-chapter activities:
- ♦   are interesting and stimulating;
- ♦   require students to apply concepts or contents;
- ♦   emphasize creative problem solving;
- ♦   provide for immediate practice of a skill; and
- ♦   include several forms of questions.
15.   The textbook is attractive, colourful, and well-designed, with a type-size that is easy for students to read.
16.   The textbook binding and page-paper is strong enough to withstand student use over a number of years.
17.   Concepts, information, and examples given in the textbooks should match the sequence and content of the Learning Outcomes.
18.   The amount of information to be covered by lesson in textbooks must match the number of hours of instructional time in the day, week, month, and year.

Based on DeRoche, 1987 in McGinn & Borden, 1995

The ways in which textbooks are used needs to be considered *as textbooks are being prepared.* Although the general expectation may be that teachers will instruct by referring to textbooks and that pupils will learn by reading and referring to textbooks, Moulton's (1997) review of how teachers use textbooks (see section 5, "The Taught Curriculum") indicates that this assumption is often false. While the availability of textbooks to pupils in developing countries is associated with positive student achievement, studies on how textbooks are used suggest that, in fact, textbooks are used in a variety of ways--or not used at all.

Textbook production

Principle 7. Textbooks need to follow the clear, well-organized scope and sequence of the curriculum and to be available when a new official curriculum is published.

The processes of curriculum development and textbook publication must be co-ordinated. When a Ministry of Education publishes a new curriculum with a new scope and sequence, textbooks must be available soon thereafter so that education quality does not suffer. Teachers need the textbooks to assist them in delivering the new curriculum. Pupils need the new textbooks so that teaching and learning efforts are co-ordinated. It is not unheard of that textbooks are published one, two, or more years after a new curriculum has been released. When this happens, old textbooks are no longer published and the supply dwindles. New textbooks are not available yet teachers are expected to teach the concepts and ideas from the new curriculum without delay. Under these circumstances, education quality cannot improve and can be expected to deteriorate.

Pilot-testing Textbooks

Principle 8. Textbooks and materials need to be piloted before they are distributed widely.

After curriculum has been evaluated and textbooks have been revised, the process of field-testing the texts, workbooks, and teachers' guides is critical. In this pilot test phase, a sample of teachers in various locations—urban, semi-urban, rural—try out the materials and systematically review them as they use them with pupils. Curriculum writers then evaluate the information provided by these teachers and incorporate necessary changes into the new textbooks and materials before they are widely distributed. Many factors need to be considered in the printing and distribution of materials.

Principle 9. National investments need to make provision for updates and changes to textbooks and learning materials.

Whether textbook development is government-controlled or commercially regulated is important to the textbook development process. In the United States, textbooks are typically developed by private sector publishers in response to what they perceive as a need, or at least an opportunity for profits. Often the decisions made by publishers can guide the curriculum of a state or a school district. Educational authorities select books on the basis of what is available in the marketplace. In developing nations, with a few exceptions, the marketplace will not be able to produce textbooks because the publishing industry is not sufficiently well developed. Thus, it is important to ensure that textbooks are seen as a key part of any strategy for educational development and to ensure that funds are allocated for textbooks as they are for other aspects of education (Altbach, 1987, p. 104). One textbook for every pupil is the ideal, and allowing pupils to take textbooks home for reading, review, and homework facilitates learning. At a basic level, students are able to learn from textbooks through self-study when the teacher is absent or is not able to present the lessons due to lack of content knowledge.

Despite a one textbook per child ideal, in some countries with very limited resources a 1:2 textbook to pupil ratio has been established and children are expected to share. If there are problems with textbook publication, costs, distribution, etc., the actual ratio may be much higher.

For respondents to the curriculum questionnaire sent out to gather baseline data for this Working Paper, lack of sufficient reading materials, especially in Reading and Writing, was a recurrent theme. Textbooks and reading materials were not available as a result of lack of finances, or textbooks were available but teachers did not give them out for fear of pupils' damaging or losing the books. Students therefore, had little exposure and instruction time with their books.

These trends need to be taken into account when including textbooks in the strategy for educational development and in the design of the textbooks themselves.

Other Curriculum Materials

While textbooks are important, so is the availability of other learning materials. Wherever possible, establishing and maintaining school libraries and classroom reading corners is an important part of school curriculum. Elley (1996) analysed the 1988 data collected by the International Association for the Evaluation of Educational Achievement (IEA) in 32 countries and concluded that several factors were very important to student achievement in literacy both in developing and developed countries. These factors included school resources for literacy and the size of the school library or number of appropriate books available for students to read. In the study of textbook use in Ghana, findings also indicated that written materials are needed to supplement the textbooks, both remedial materials and enrichment materials, for pupils who need extra help and for those who need extra intellectual stimulation (Harris, Okyere, Mensah and Kugbey, 1997).

Even if published materials for learners are available, some of the most effective materials that facilitate pupil learning are teacher-made products from local materials.

Teachers can prepare flash cards for words, syllables, characters, or mathematics problems by writing on dried banana leaf bark or a similar substance. Counters for mathematics class can be made of bamboo; small piles of stones, sticks, and seeds can also be used.

In review and to assist with linking the curriculum with textbooks and materials, here is another set of questions to consider:

- What is the pedagogical state of current textbooks and workbooks? What assumptions are made about what is important and about how children learn? Is the focus completely on content or are skills, behaviours and attitudes also addressed?

- How do the textbooks connect to the curriculum goals, learning outcomes and syllabi?

- Who writes the textbooks, workbooks, and teachers' guides—the same people or two or three different groups of people? What are the implications of this?

- For whom are the texts written—urban, economically advantaged children, the rural poor in isolated areas, or both?

- How are teachers trained in the use of the texts?

- How are textbooks actually used in teaching and learning? Is this documented through research? How can these answers be retrieved so textbooks are prepared appropriately?

- What are the physical characteristics of current textbooks/workbooks?

- What is the availability of current textbooks/workbooks, especially for disadvantaged children?

- In what ways is the development of high quality learning media ensured?

- How often are texts, workbooks and teachers' guides evaluated? modified? How extensive are the modifications? What process is used to decide about whether and how to modify materials? Is this process effective and satisfactory to all stakeholders?

The Curriculum Review Cycle

Principle 10. The curriculum review and development cycle must proceed expeditiously to ensure that the curriculum is relevant and current. For example, a ten-year cycle is too long.

Curriculum needs to be evaluated on a regular cycle, not more often than every three years, but certainly less than every ten years. A system will usually evaluate two or three key curriculum areas each year, so that a sufficient amount of time can be dedicated to each area.

Principle 11. Effective curriculum evaluation examines and makes judgments on the value of intended, taught, and learned curriculum according to pre-set standards. Summative evaluation should precede curriculum revision.

Evaluation can build on assessment work that has been done, but e*valu*ation makes a value judgment on the curriculum and recommends changes to be made. This summative evaluation "sums up" the strong and weak points of a curriculum at the end of a review cycle and provides information to make decisions about future curriculum. Stakeholders who have an interest in curriculum change should be included in this evaluation process, and proper measures must be selected for making the evaluation. Following an evaluation of these measures, new research on teaching and learning are considered, and information from both help to shape the new curriculum. The curriculum cycle begins again.

4. Integration as a Strategy of Curriculum Development

What is curriculum integration?

Curriculum integration can mean different things: (1) Integrating particular concepts into existing subject matter. (2) Including certain skills, knowledge, attitudes, and behaviours that cut across curriculum categories into traditional subject matter areas or key learning areas. (3) Reframing what we want children to learn so that learning connections are emphasized rather than divisions of knowledge.

Questionnaire responses from UNICEF Education Officers demonstrated that people use the term integration very differently.[2] What is meant here is "integrated learning outcomes." That is, what children know and can do demonstrates the connections that exist between knowledge, skills, attitudes and values in "content areas," for example, mathematics, science, and environmental studies.

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[2] "Mainstreaming" is another term that is sometimes used for integration.

What does curriculum integration look like?

When pupils read about rock formations or write an essay on electricity in science class, literacy skills are being integrated into the curriculum. (It is important to remember that students' ability to read and write are critical to their success in many different learning areas and that literacy is being taught through science, social studies, and other topics, as well as during the language period called "French" or "English.") When representations of girls and women in illustrations and stories--including story problems in mathematics—show equal numbers of girls, women, men and boys engaged in traditional and non-traditional activities, attention to gender is being integrated into the curriculum. When educators teach conflict resolution in one class and problem solving in another class, they may be integrating Life Skills approaches in the form of Peace Education and Education for Development into key learning areas. In South Africa the entire curriculum has been redesigned so that Life Skills, numeracy, and literacy each constitute 25% of the entire curriculum (25% is designated flexible time) and integration is the underlying philosophy.

Pigdon and Woolley (1992) provide a model of the nature of curriculum integration which makes sense at the classroom level:

> Once learners become engaged in exploring and expressing ideas, their learning is relevant and purposeful. In these learning situations, the ideas (content) and the ways they are processed (sorted out) become linked. [Teachers] need to plan and organise topics containing ideas about how we live, how we work, the influence of technology and media on our lives, the market system, the natural and built environment, energy and force, the nature of matter, space and time, life cycles, what it means to be healthy, and personal relationships. These topics are drawn from subjects which we classify as **content** subjects. They include social education, media studies, science, technology studies, environmental education, and personal development.
>
> In developing their ideas and understandings about the way the world works, learners use a variety of means (visual, mathematical, linguistic, performance) to explore, organise and represent their understandings. We classify these as **process** subjects. They include language, art, mathematics, music, movement and drama (pp. 7-8)

Not all teachers see themselves as teachers of integrated learning, but this distinction may provide a new and clear way of thinking about the relationships between aspects of the curriculum.

Language skills are part of nearly all key learning areas, as are Life Skills approaches. Hence, all teachers *are* teachers of language skills, and of Life Skills whether it be in relation to HIV/AIDS Education, Peace Education or Education for Development. It is

important to train educators to see explicitly and to understand teachers' multiple roles in teaching, for example, science *and* language. This will enable them to explicitly understand their role and responsibility for teaching language skills, in the context of other subjects, rather than resisting the concept.

Integration requires a certain level of understanding about the teaching-learning process, child development, and content knowledge. The teacher must be able to synthesize information and concepts while helping children learn. In some countries, a teacher who has completed only primary grade three and six weeks of teacher training, who must teach pupils in primary grades one, two and three all at once and who has only two or three textbooks to use will struggle to understand basic concepts in some of the key learning areas, much less be equipped to intentionally integrate topics or skills into the curriculum (Dykstra, 2000). One way of introducing the concept of integration is by developing themes. For example, if teachers select the theme "the water around us" they can explore numeracy, reading, and science concepts, thus emphasising connections between these areas. (Murdoch & Hornsby, 1997). UNICEF and its partners also need to do more work in this area to help education systems with large numbers of under-educated teachers deal with this.

Principle 12. Curriculum needs to be responsive to emerging issues as they arise, for example, Life Skills approaches whether they relate to HIV/AIDS prevention, Environment Education, Peace Education, or Education for Development. It will often be necessary to incorporate new agendas into curriculum.

As part of or in addition to national goals, countries that are signatories to the CRC have the obligation to provide for quality education for all children. In the sections that follow, UNICEF field offices have provided some examples of what governments are doing in the areas of peace education/ education for development, Life Skills, reading and writing, and developing a gender-inclusive curriculum. The chapter on Curriculum Change suggests ways in which these areas of curriculum may become accepted at system and school levels.

Peace Education

UNICEF EPOs crafted their replies to Peace Education in response to this definition:

> As it is being developed by UNICEF country offices Peace Education may be thought of as any activity that promotes the knowledge, skills, values and attitudes needed to bring about behaviour changes that will allow children, youth and adults to prevent the occurrence of conflict, to resolve conflict peacefully and to create the social conditions conducive to peace, whether at an intrapersonal, interpersonal, intergroup, national or international level. Peace Education is a specific context for developing Life Skills.

Peace Education addresses cognitive, and affective, and behavioural changes in children. It thus promotes the development of values as the basis for behavioural change, and points to individual and group behaviour as an indicator of the individual's or group's values. In the past, peace education has reacted to problems and crises. In the future we need to think about the desired long-term effects of peace education. We must ask what we want to create together, what our peaceful world will look like, and how peace education will enable us to construct that kind of world.

The majority of countries surveyed implement peace education to some extent, primarily by integrating its components into other curricular subject areas. Morocco weaves Peace Education into Arabic and French language reading manuals. Cambodian lessons promote peace and conflict resolution through stories about the value of loving one another, being good neighbours, having tolerance for and solidarity with minority groups, and showing respect for family and school personnel. In the West Bank and Gaza Strip, Peace Education activities are integrated into language, religious education, sciences, social studies and mathematics. Peace Education was introduced in Grade 4 in 1997, Grade 5 in 1998, and Grade 6 in 1999. Workshops with curriculum teams were planned for 1999 to ensure integration of peace education lessons. In Haiti, the Life Skills approach also includes elements of peace education, with an emphasis on developing personal skills and a specific curriculum component on conflict resolution.

Across countries, the most popular subjects for integrating peace studies are civics, democracy issues, and social studies; education and democracy; language, reading, and writing; values and moral education; social studies; and Life Skills and education for life.

The themes reportedly taught most frequently are conflict resolution or management and problem solving; tolerance, respect, prejudice reduction, and non-discrimination; and rights and responsibilities. The following programmes give examples of ways in which these themes are integrated:

• Liberia's minister of education, in conjunction with UNICEF, has supported the creation of a Christian Health Association of Liberia (CHAL) peace education project in selected schools. The program offers peer education to train students as conflict managers in their
localities.

• Peace Education in Guyana is included in a UNICEF project Managing Social and Sensitive Areas, with attention to racial tolerance, prejudice reduction, problem solving, and conflict resolution.

• In Egypt, human rights and children's rights, as well as Life Skills, gender issues, and health and environmental education are integrated across the curriculum.

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                    Peace Education and
        The Convention on the Rights of the Child
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Article 29 of the Convention on the Rights of the Child
states one aim of education:

"The preparation of the child for responsible life in a
free society, in the spirit of understanding, peace,
tolerance, equality of sexes, and friendship among all
peoples, ethnic, nations, and religious groups and
persons of indigenous origin."
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Peace Education activities described by UNICEF EPOs in Sri Lanka and Burundi display a complex understanding of Peace Education and its aims, along with a breadth of approaches to educational activities.

Peace Education in Burundi aims to promote human rights and duties, peaceful conflict resolution, and psychosocial assistance to children traumatized by war. It is a tool to improve attitudes and behaviours in schools and communities through concrete actions. More than 50 percent of primary school teachers are trained to carry out Peace Education activities through lessons in classrooms and games outside classrooms, and 90 percent of headmasters and inspectors have been trained as trainers and supervisors of peace educators. Burundi is integrating Peace Education notions and learning methodologies into subjects such as mathematics, languages, sciences, environmental study, music, and sports.

The goal of the Education for Conflict Resolution (ECR) project in Sri Lanka is to create attitudes of tolerance and understanding and methods of non-violent conflict resolution. Its target group is school children and parents, and indirectly in society at large. ECR is implemented through a broad range of school-related activities, including curriculum development, teacher training and materials, and student leader training. Newsletters, an annual peace camp and Girl Guides/Scouts component, multimedia campaign, non-formal education, extend the activities beyond the school day. Begun in 1992, the program continues to expand.

Peace Education initiatives are not proceeding rapidly in a number of countries. Some responses point to the need for more curriculum work and in-service training for teachers and education co-ordinators in this area. One EPO wrote:

> Madagascar is an island and does not have a history of violence such as in mainland Africa, so a topic devoted to peace has not been thought necessary. This is a theme that we feel should be introduced however, in order to avoid future conflicts.

Another wrote,

> Children in grades 1 to 4 are too young to understand the formalized concept of peace. However, it is at this very age that the underlying principles should be firmly established (Oman).

Some countries, such as Mauritania, have not begun to include Peace Education in their teaching; two others (Guinea-Bissau and Jamaica) are planning to teach Peace Education in the future.

Afghanistan offers an example of progress in Peace Education and the difficulties faced. Textbook content that may have been interpreted as glorifying war has been replaced with neutral content; for example, illustrations now include apples instead of knives.

Another factor working against the successful adoption of Peace Education is nationalism. Although "peace at home, peace in the world" is a principle of Ataturk and is written in every textbook in Turkey, the content seems to emphasize nationalism. Students appear to be unfamiliar with the concept of conflict resolution that is reflected in their interpersonal and intra-group relations. In the face of this and myriad other challenges, increasing numbers of countries have begun to include Peace Education in the curriculum.

Life Skills

"It seems that Life Skills [is] interpreted loosely by different people" observed Indonesia's EPO. Assumptions about what constitutes Life Skills do indeed vary greatly from country to country. Several country reports pointed to topics in hygiene, nutrition, and disease prevention in the descriptions of Life Skills. Others listed lessons in etiquette and good manners, and preserving the environment. Income generating skills such as animal breeding, organising small businesses, and basket weaving were also mentioned. UNICEF defines this last set of important incoming generating skills as 'Livelihood' Skills, and distinct from 'Life Skills'. In contrast, Life Skills are psycho-social and interpersonal skills used in every day interactions and are not specific to getting a job or earning income.

A wide range of examples exist under the UNICEF working definition of Life Skills, such as assertion and refusal skills, goal setting, decision making, and coping skills. The Life Skills approach is designed to support and build on existing knowledge, positive attitudes and values, skills and behaviours, as well as prevent or reduce risk behaviours. This attention to behaviour change distinguishes Life Skills from information-only approaches which assume that if only people had more information they would change their behaviour for the good. While information is a necessary element, it is generally not sufficient to make enduring impact on behaviour.

Historically education systems have favoured knowledge acquisition over attitude or skills development; typically they have not focused on behaviour change. The Life Skills approach does not aim to present all the information known about a topic, rather it seeks to present only the information considered necessary to influence pupils' attitudes and achieve the higher goal of reducing risk behaviours or promoting knowledge, positive attitudes and behaviours.

Teaching Life Skills is not limited to schools, but there are important benefits to using this approach in schools and in developing school curriculum.[3]   The actual life skills that are included in curriculum and different programs vary with the setting, context, purpose, and user expertise, as the country reports demonstrate. Each of the life skills needs a context within which to make sense. The context allows us to answer questions like, About *what* do we need to be assertive? About *what* do we need to make decisions?

In its description of peace education, the questionnaire noted that Peace Education is one context for Life Skills. For example, Rwanda referred to this connection, where Life Skills overlap in conflict resolution, self awareness, cooperation and communication. In Zimbabwe, HIV/AIDs provides the context for teaching Life Skills in a separate course. Students and teachers in grades 4-7 (8/9 to 11 year-olds) have a weekly, compulsory 30-minute lesson. Life Skills is also a separate subject in Ghana and Guinea. Pupils in Primary 4-6 in Malaysia take "Living Skills."

Most countries reported integrating particular topics of what that country defines as Life Skills into particular subject areas. Morocco integrates Life Skills topics into different disciplines or subjects. Topics include hygiene, big city problems, Islamic and civic values, elections, sports, electricity, and water.   Social Studies (Tanzania), Civics and religion (Sudan) are other subjects into which life skills are integrated. China integrates life skills into courses on Society, Labour, Moral Education, and Nature.

In Myanmar, recent education reform has made Life Skills mandatory for inclusion in the primary school curriculum. The relatively small UNICEF SHAPE project has made an impact on the whole Myanmar primary school curriculum and teaching and learning process. The topics covered in the curriculum include: personal health and hygiene; physical growth and development; mental health; diseases such as diarrhea, iodine deficiency, dengue, tuberculosis, hepatitis and malaria; drugs; HIV/AIDS; decision making skills; communication skills; fostering self-esteem and self-expression; developing interpersonal relationship and cooperation skills; coping with emotions and counselling.

In Bosnia, Life Skills is integrated into the teaching process, not the written curriculum. Integrating Life Skills is "up to teachers' creation." Teachers might include life skills in health education and first aid, in language class, or in sciences.

As with Morocco, other countries also presented a limited if not misleading view of Life Skills, in that the actual content does not seem to reflect the intention of a genuine Life Skills approach. For example, some countries discussed Life Skills as the acquisition of knowledge or content rather than behaviour-changing skills. Quite often "communication skills" were mentioned as taught through a language class such as Khmer in Cambodia, and English in Oman. This is relevant in its own right, but may not be connected with the Life Skills approach under discussion here.

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[3] For suggestions on developing a key learning area outside of school, see Peace Education in UNICEF: UNICEF Working Paper Series. July 1999, pp. 20-24.

Some countries have not yet begun to include Life Skills in the curriculum (Guinea Bissau, Macedonia) and some are just getting started (Uganda). Lao PDR reports that some changes have been made with their new curriculum so that, for example, children are encouraged to speak more than in the past and parents comment that children are more confident at their age than were children in the past. Liberia and Mauritius describe strategies for preparing the way for introducing Life Skills into the curriculum. Swaziland held one national and two regional workshops to introduce Life Skills. Zambia's curriculum review team is working out ways in which to infuse Life Skills into a few subjects aimed at adolescents. In Mexico, the Ministry of Public Education in the capital city is launching a project to monitor and evaluate the learning outcomes of Life Skills and other areas among 3rd, 4th, and 5th graders.

Table 1 identifies five broad life skill categories as examples that could be utilized in prevention programs and applied to particular topics, areas, or contexts, such as HIV/STD or drug use prevention, or peace education. These categories include those initially suggested by WHO in the early nineties.[4]

Table 1. Examples of Categories of Life Skills

Inter-personal Skills	Skills for Building Self- Awareness	Critical & Creative Thinking Skills	Decision-Making Skills	Coping & Stress Management Skills
Empathy building Active listening Giving & receiving feedback Non/Verbal Communication Assertion & refusal skills Negotiation & conflict management Cooperation & Teamwork Relationship & community Building skills	Self-assessment skills Identifying personal strengths & weaknesses Positive thinking skills Values clarification skills; (social norms, beliefs, myths, ethics, culture, gender, stereotypes, discrimination...) Identifying & acting on rights, responsibilities & social justice	Analytical skills Creative thinking skills Skills for generating alternatives Info gathering skills Skills for evaluating information Including sources of information such as the media	Critical thinking skills Problem Solving skills Skills for assessing (personal & other) risks Skills for assessing con-sequences Goal setting skills	Self control skills Coping with (peer) pressure Time management skills Skills for Dealing with anxiety Dealing with difficult situations Help seeking skills

A Gender-inclusive Curriculum

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[4] World Health Organisation. (1993). Life Skills Programmes for Children and Adolescents: Situation Analysis. Geneva, Switzerland.

EPOs addressed this definition when they prepared their questionnaire responses:

> A gender inclusive curriculum is one which addresses all teaching and learning arrangements (including the learning environment) that affect student outcomes. It examines understandings of masculinity and femininity and takes into account social constructions of gender. A gender inclusive curriculum is achieved by consciously selecting, reflecting upon, and addressing choices about classroom planning, implementation, and evaluation.

In all, 54 of the overall 59 countries reported either gender inclusive curriculum strategies or the lack of such strategies in their national curriculum. Of the 54 countries, 38 (70%) have gender-inclusive strategies already in place or under development. Of the remaining 15 countries, 28% reported lack of current initiatives to develop gender-inclusive strategies, and one country reported a lack of gender bias and, therefore, no concern for a gender-inclusive curriculum.

Developing a comprehensive, gender-inclusive curriculum is complex. Most commonly curriculum review committees have evaluated textbooks and curriculum materials to identify negative or stereotypical views of girls and boys. A study in Pakistan showed that 80% of the textbook content was gender-biased. Although much is not currently taking place in this area, the EPO from Congo (Brazzaville) participated in a search for discriminatory stereotypes in the first grade reading manual in 1990.

Other countries have identified and have begun to address those stereotypes and gender equity concerns. In Yemen, gender awareness was raised through discussions with curriculum teams that had equal numbers of women and men. In Nepal, gender training preceded curriculum development for curriculum writers, artists, and editors. Curriculum writers, resource teachers and teacher educators in The Gambia received training in developing "gender balance across the curriculum." Using the resource books that accompanied this training, the already trained educators prepared to train teachers across the country in the same skills and knowledge (see Republic of the Gambia Department of State for Education, 1999). Togo organised a conscious-raising seminar on gender in the curriculum and in managing teaching personnel for decision makers and managers in education, along with a module on gender disparities education for about 700 teachers.

Materials revised in Oman to eliminate stereotypes and discrimination now "reflect positive role models for girls and boys within culturally acceptable boundaries. . .with [girls] participating in sporting activities, being interested in science and technology." The materials show women as "full citizens who have equal rights and social duties as men. . .and who can be trusted in enacting social, economic and political roles" (Jordan). Boys are also shown as being interested in more creative activities such as drawing, painting and cooking. The Philippines states that "evidence of gender bias depicted in the Elementary Learning Competencies and in all existing learning materials" have been minimized.

Some countries report that gender issues are integrated across or systematically incorporated into the curriculum (Guinea, Egypt, Mali). The concept of gender is integrated into Life Skills (Malawi, Ghana); into Civic and Moral Education and language classes (Angola, Congo).

At the classroom level, teachers in Mali now "go to greater efforts not to discriminate" and call on girls "just as much as boys in class, assigning them the same exercises." Although Guyana does not implement a gender inclusive curriculum, the EPO notes that some teachers make an effort to address curriculum planning that examines the social constructions of gender in the arrangement of the classroom, student roles in the classroom, choice of texts, etc).

Education for Development

Education for Development was not reviewed in this curriculum study (along with mathematics, environmental education, social studies and science education); however, it is an area of curriculum study that also has been funded through UNICEF.

Education for Development promotes the values of social justice (including peace and tolerance), global solidarity, and environmental awareness. As in the Life Skills approach, Education for Development aims to equip children and youth with the knowledge and skills that enable them to make choices and bring about change in their own lives. The salient processes in this approach, as in all UNICEF work in education, include the interaction of child and youth friendly environments with participatory learning processes and relevant curriculum. Participatory learning processes include cooperative learning, interactive learning methods, and the use of new technologies. These approaches are incorporated into teacher training to help new teachers develop these skills, attitudes, and approaches they want children to adopt.

Since the ways in which children and adults interact with each other contribute to children's growing sense of justice, equality, tolerance and democracy, an Education for Development approach emphasises children's rights in facilitator/teacher-student relationships, decision-making, and discipline. Education for Development programmes in country offices have developed practical strategies to challenge and reduce bias and discrimination, encourage democratic participation, and ensure that every individual is valued and that responsible expression of opinions is the norm.

In Colombia, the "explore-respond-take action" process is used in the development of learning guides for the Escuela Nueva programme. The five concepts of interdependence, images and perceptions, social justice, conflict resolution, and change and the future are incorporated into the learning materials. In Croatia, teaching materials were developed that demonstrate how cooperative and participatory learning methods can be used in teaching traditional subject areas. Themes of conflict resolution and discrimination are explored through children's literature. Pre-service teacher training helps new teachers develop the skills they want children to adopt: respect for differences, participatory decision-making, and creative problem-solving. Participatory learning methods have

been introduced with a particular aim toward reducing prejudice in Guyana. Open questioning techniques used to stimulate critical thinking point to the importance of considering different viewpoints and realizing that there can be more that one way to answer a question. These are essential attitudes to encourage if students are to learn to challenge prejudice.

Reading and Writing, Talking and Listening

EPOs reported that nearly all reading and writing instruction is carried out through the language course approach; that is, the instruction tends to focus on teaching the language as an end in itself, rather than learning language in the context of other learning areas, such as Social Studies or Science. Integration and activities in reading and writing varied according to the curriculum design and the flexibility allowed for teacher initiative.

Respondents' assessments of the reading and writing programs described proficiency levels of students, program characteristics such as rote memorization, didactic teaching methods, and exam-oriented teaching and learning. They listed the range of activities in reading and writing classes that included picture reading, composition, spelling, silent reading, comprehension, oral communication, and writing. Writing as a skill was often confused with handwriting, and few countries seem to have a sequenced curriculum for writing development. Critical Literacy, being able to criticise or react to text, was a skill never mentioned. Media Literacy, the ability to understand and critically evaluate media messages is also never mentioned, even though these two areas are central to the lives of young children in the 21st century. Inadequate teacher preparation in reading and writing, inadequate resources, and inconsistent or a lack of, evaluation methods were also noted.

Some countries seemed to employ rigorous planning and integration of themes from the local environment for skill acquisition (e.g., Viet Nam). One EPO indicated that the program "employs the teaching unit as an organizing centre – that is, teachers evaluate a competency or desired learning outcome and plan the lesson around it" (Jordan). There are other attempts to integrate reading and writing instruction into learning areas by incorporating into instruction themes relevant to the student's daily life. One respondent described his education system's efforts in integrating literacy throughout the curriculum as the transition from "isolated knowledge to practical and organized knowledge, made concrete in real life situations" (Burkina Faso).

Many national curriculum boards review and revise the teaching guides and textbooks. Respondents noted the need to improve teacher training in order to move from the rote-didactic teaching methods to practical understanding and applications.

> Reading and writing are not simply activities of phonics, vocabulary, dictation, comprehension, silent reading, composition and so on. Reading and Writing skills are a transactions between the teacher, student, words, and environment, during which meaning is constructed (Zemelman, Daniels, and Hyde, 1993).

Some programs described a linear model of literacy, where aural skills are taught first, followed by speech, then reading and finally writing. In contrast, in the integration approach, reading skills are practiced simultaneously with writing or developed through writing. Other countries described programs distinctive in their attention to integrating literacy throughout the curriculum used language as a tool for social development. They incorporated situations from daily life situations into activities that fostered the acquisition of reading and writing skills. For example, in Peru

> [t]he curriculum document and teacher training have adopted a constructivist perspective. Taking this focus, children get involved in producing their own [written] text from their own experiences and do not copy. . .from examples. Teachers are taught to take advantage of children's "errors" in writing as part of [teaching] the [writing] process….

Languages of Instruction

Principle 13. Pupil achievement is enhanced if pupils first become literate in their mother tongue, but investments in first language texts of increasing complexity may be prohibitively expensive. However, whatever the languages policy may be, teaching must be effective for pupils to achieve.

Another critical aspect of literacy development was the language or languages of instruction. Several countries that reported on innovative literacy efforts were bilingual or multilingual (Burkina Faso, Oman, Cambodia, Jordan, Lebanon and Tunisia). Countries vary in terms of how they deal with their bilingual or multilingual environments. Following a primary curriculum review in 1994, an innovation that Djibouti added was to develop language learning in a bilingual orientation (Arabic and French).

Resources are important, in first and second language instruction; however, they are frequently unavailable in the many languages spoken in schools. While pupils can help to create beginning level textbooks, investments in first language texts of increasing complexity may be prohibitively expensive.

The Benavot and Karmens 1989 study reported an increased use of an official language in instruction. They also observed certain trends unique to Sub-Saharan Africa. Primary education systems in this region were more likely to use an official (rather than a national) language for instruction and they were more likely to teach an official language that is not the mother tongue of a majority of the population. However, more instruction was offered in local languages in this region than anywhere else in the world.

Skilled teachers play a vital role in the acquisition of reading and writing skills. If a child can first become literate in her or his first language s/he can more quickly become literate in a second language, and s/he can grasp concepts more quickly. It is not the choice of language alone, however, that leads to a pupil's success in learning. Most important is effective teaching; that is, a teacher's ability to help students' learn, understand, and progress to higher levels of ability with reading and writing.

As reported above, Elley's analysis of the 1988 IEA data indicated that school resources for literacy and the availability of appropriate books for students to read were very important to student achievement in literacy both in developing and developed countries. In another study, Elley and his colleagues traced the achievement of students following an innovative "book drop" program. They documented students performance in literacy increased when a number of books besides textbooks were made available to pupils in Sri Lanka, South Africa, and Singapore, and when teachers were taught how to teach use these books in their teaching (Elley, 1996).

THE TAUGHT CURRICULUM

5. Teachers and the Curriculum

Principle 14. Curriculum also consists of how the teacher teaches and makes links with what children already know. Direct improvement of teaching and learning at the classroom level can contribute to better learning outcomes, even in the face of a less than optimal curriculum.

What is the teacher's relationship to the curriculum process?

One model proposes three levels of curriculum development in relation to teachers: (1) what curriculum writers do when they develop curriculum plans and materials; (2) what teachers do as they select, adapt or change textbook materials, preparing their lesson programmes to meet their students needs; and (3) what teachers do in the classroom when they interact with students in the course of a lesson (Ben Peretz, 1990; Remillard, 1999). Since teachers are among the curriculum writers (see Principle 5), all three of these levels involve the teacher and underscore the importance of teaching in implementing curriculum.

Teachers' use of textbooks in teaching and the relationship of textbook use to the curriculum is complex. At the classroom level, teachers prepare lessons and instructional materials for the daily lessons they teach, in response to current student needs. *Students use* Even teachers who follow textbook suggestions very closely still make curriculum-development decisions (Remillard, 1999).[5]

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[5] For new teachers and teachers implementing new curriculum, following a well-written teacher guidebook carefully can be important to one's teaching practice and to student learning.

In Moulton's (1997) examination of how teachers use textbooks, teachers in some of the classrooms teachers used textbooks as resources for themselves only and did not distribute them to pupils. Other teachers, especially those who were untrained, used textbooks as a means of teacher education. In other classrooms, teachers used textbooks less than 15% of the time, or used them primarily when teaching a particular subject. In a 1983 study of 400 Chilean teachers, over three-fourths were ambivalent about using textbooks, and over half of the teachers viewed the textbooks as unnecessary or inadequate didactic material (Sepulveda-Stuardo and Farrell, 1983). In a more recent study, Ghanaian teachers explained that they did not use textbooks because they knew that the pupils could not communicate or read well in the language of the textbook (English). Even more significantly, teachers were afraid of being held responsible for textbook damage (Harris, Okyere, Mensah and Kugbey, 1997). On the other hand, teachers in the United States tended to "over use" textbooks

> …in the sense that many use them almost exclusively as the curriculum and source of all instructional materials. Teachers in Botswana, Ghana, and Chile, in contrast, appear to "under use" them; they do not use textbooks during large portions of the lessons. (p. 22)

Teachers accustomed to mainly using the chalkboard need explicit training to use textbooks in their teaching and for group instruction. A one-time in-service session is not sufficient (Harris, et al, 1997); teachers need opportunities to try using the textbooks and to discuss their successes and failures with their colleagues.

As was noted above, a teacher's participation in curriculum development, implementation, and evaluation is critical in the educational process of reaching desired learning outcomes. The ways in which Ministry of Education officials, curriculum and textbook writers, head teachers, and teachers themselves think about teaching and their professional roles as teachers helps to shape the ways in which teachers participate in the curriculum process.

While research on how teachers actually implement curriculum is limited, Remillard (1999) proposes this model of a teacher's role in curriculum development at the classroom level. It includes three areas or arenas:

♦ **Design** arena – selecting and designing tasks for students in advance of teaching, based on the teachers' understanding of the learning outcomes to be reached and on her/his knowledge of the pupils. In this arena teachers read the teacher guide, pupil textbook, and other resources, and decide how they will prepare to teach a lesson

♦ **Construction** arena – teaching in the classroom; shaping the actual lesson around classroom interactions with and among pupils. Here the teacher is continually asking herself: Do they understand? What do they seem not to

understand? Shall I explain the material in a different way? Shall I repeat this activity? Shall I improvise and try another approach?

♦   The **Mapping** arena is made up of a teacher's cumulative decisions about lesson design and construction over the course of the year. If a teacher teaches only three major concepts in science from a fifteen-unit science curriculum, he has mapped a very different curriculum from the intended curriculum. Or, if a teacher expands on a grammar-only language curriculum so that pupils learn to communicate well orally, over the course of the year she also maps out a curriculum that is different from the intended curriculum.

There is a tension between the arenas of design and construction that teachers can often feel, between following the design or lesson programmes they have developed and improvising with another activity "on the spot." Teachers' must constantly rely on their professional judgment in making these decisions. Teacher guides and resource materials assist teachers in making decisions, but the tension does not go away and teachers must learn to manage this dilemma that they regularly face.

Teachers as Transmitters and Transformers of Culture

In another way of thinking about how teachers enact curriculum, through design, construction, and mapping teachers both transmit culture and transform it. For example, in Malaysian moral education, teachers teach and transmit to pupils the "16 universal values taken from the various religions, traditions and cultures of the multi-racial society."

On the other hand, as teachers enact curriculum, they can also be "agents" of cultural transformation. For example, in Guyana, although a gender inclusive curriculum is not intentionally implemented, some teachers still make an effort to address the curriculum planning which examines the social constructions of gender (arrangement of classroom, roles in the classroom, choice of texts etc). And following gender training in Mali, the EPO reports that teachers now "go to greater efforts not to discriminate" and call on girls "just as much as boys in class, assigning them the same exercises."

Further, teachers can supplement and point out errors in textbooks. If pupil textbooks have not been revised to integrate peace education activities or gender awareness, teachers can design and include peace education or gender awareness activities in social studies or whichever learning area(s) is appropriate. Or teachers may choose to use inappropriate texts as models for what *not* to do, thus teaching pupils to critically analyse the text. For example, in an English language textbook that portrays the majority of girls and women as weak and helpless, pupils can discuss examples from their daily lives-- such as fetching water or carrying wood--where sisters and mothers are strong and resourceful or learn to read *against* the text, using the non-gender sensitive text as the tool for discussing what is wrong and what can be done to correct the situation. This is Critical Literacy.

How do teachers change their teaching practice?

While workshops can be important, we know that teachers learn about their teaching and improve on their practice through sustained professional input—keeping journals, reflecting on their teaching with a group of teachers, or having regular discussions with the head teacher/instructional leader of the school. Conversations with primary education inspectors or advisors and/or with school university or college teacher educators are other ways in which sustained professional input takes place. Teachers and systems can monitor teaching effectiveness and promote professional dialogue among teachers by developing teacher performance standards against which teachers can be measured, or by which teachers can gauge their own standards of success. The following is an example of national teaching standards for the U.S:

Teacher Standards (US National Board for Teaching Standards, January 1996)

1.   **Knowledge of Students:** Teachers draw on their knowledge of child development and their relationships with students to understand their students' abilities, interests, aspirations and values.

2.   **Knowledge of Content and Curriculum**: Teachers draw on their knowledge of subject matter and curriculum to make sound decisions about what is important for students to learn.

3.   **Learning Environment:** Teachers establish a caring, inclusive, stimulating and safe school community where students can take intellectual risks, practice democracy, and work collaboratively and independently.

4.   **Respect for Diversity**: Teachers help students to learn to respect individual and group differences.

5.   **Instructional Resources**: Teachers create, assess, select and adapt a rich and varied collection of materials and draw on other resources such as staff, community members and students to support learning.

6.   **Meaningful Applications of Knowledge**: Teachers engage students in learning within and across disciplines and help students understand how the subjects they study can be used to explore important issues in their lives and the world around them.

7.   **Multiple Paths to Knowledge:** Teachers provide students with multiple paths needed to learn the central concepts in each school subject, explore important themes and topics that cut across subject areas, ands build knowledge and understanding.

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8. **Assessment:** Teachers understand the strengths and weaknesses of different assessment methods, base their instruction on ongoing assessment, and encourage students to monitor their own learning.

9. **Family Involvement:** Teachers work to create positive relationships with families as they participate in the education of their children.

10. **Reflection**: Teachers regularly analyse, evaluate and strengthen the effectiveness and quality of their practice.

11. **Contribution to the Profession:** Teachers work with colleagues to improve schools and to advance knowledge and practice in their schools.

Principle 15. Teacher education and professional development need to include a curriculum development focus that helps teachers understand both curriculum content and the processes involved in supporting learning (e.g., how to teach reading and writing and how to assess student learning).

We advocate that teachers should be part of the curriculum development process. What do teachers know about curriculum development? Where and how do they learn about the curriculum development process? In introducing a new curriculum, teacher professional development holds a key role as teachers become familiar with new ways of facilitating student learning, and of aligning new concepts with familiar ones. Head teachers provide important leadership in this process. Pre-service training in curriculum studies and curriculum offer an important introduction to the curriculum components of intended.

Assessing pupil learning is an important part of making informed, professional decisions. Teachers must conduct on-going assessment of individual pupils' learning in the course of a lesson, a week, or a topic, to be able to make wise decisions in design, construction, and curriculum mapping. This will be discussed in greater detail in the section on Learning Outcomes, Performance Standards, and Assessment.

THE LEARNED CURRICULUM

6. The Learner

One factor facing education internationally, is

the need to recognise the voices of the child, the learner, the majority group within education, the actual consumer of educational resources, and the group with no formal power to influence the curriculum (Moyles, Hargreaves, & Moyle, 1998, p. 219).

Understanding How Children Learn

When we say pupils have learned something in school, what kinds of things does this include? The skills to be able to read, write, and understand numerical concepts in maths, the ability to create analogies, construct outlines, develop visual representations, and build concept maps. The capacity to compare and classify from the most concrete levels (mangoes, oranges, and chickens); have educative experiences that push them to think abstractly and to abstract meaning or ideas. The opportunities to make decisions, solve problems, teach others, create products, critique an idea or a product, defend one's own ideas, predict what could or should happen in the light of particular evidence.

Learners need to be provided time and assistance to demonstrate achievement. They need to be shown that the emphasis is on achieving outcomes and application of learning rather than covering the material and repeating back what the teacher has said. Rather than fearing assessments and testing, it is important for children to understand that assessment is appropriate to learning, its life context and the learner. Prompted by the teacher, pupils need to know that their advancement in school is on the achievement of learning outcomes rather than on the completion of time in a particular class.

Teachers need to assist with carefully facilitating learning towards the achievement of outcomes. Learning should be characterised by its appropriateness to each learner's needs, interests and developmental level. It should also be active and experienced-based for maximum application of knowledge skills and orientation necessary to learner success in the present and future.

Teachers need to demonstrate to children that tests and assessments are not processes through which teachers hold power over them and their futures, but instead how their progress is recorded on criterion-referenced assessment—that assessment tools are to help them figure out what they have not yet learned so that they can move ahead in their learning.

7. Learning Outcomes, Performance Standards, and Assessments

Learning Outcomes

Principle 16. The curriculum development process is most effective when learning outcomes and performance standards are established first and then linked to what teachers must do to ensure that learning takes place.

Learning Outcomes put the focus on what students know and can do, not merely what they have been taught (Conely, 1992). Learning outcomes are different from objectives. They include not only content knowledge, and focus not only on students being able to do what has been taught; they also consider students' ability to use cognitive skills such as reasoning, critical thinking, and creativity in performance situations--situations where they can demonstrate what they have learned to do. From this point of view, learning outcomes drive curriculum and instructional methods, and even establish the purposes and philosophy of schooling.

In response to the survey, descriptions of the link between learning outcomes and curricula ranged from those that represented a clear, technical view of performance standards to those that held very broad or vague notions of learning outcomes. Many indicated that outcomes are still viewed primarily in terms of content knowledge, that is, material that can easily be tested using a traditional paper-and-pencil format. Several pointed to the need for more teacher education in the area of learning outcomes, pointing to the critical role teachers play in student assessment.

Outcomes-based Education

Outcomes–based education implies that the curriculum is based on learning outcomes. What learners are to learn is clearly defined and each learner's progress is based on demonstrated achievement of particular skills in realistic contexts. Each learner's needs are accommodated through multiple teaching and learning strategies; that is, teachers and students try out alternatives until the right combination can be found to help students learn. All learning outcomes focus on how things can be learned, not just on what is to be taught.

The advantages to developing learning outcome statements include the following:

- Schools can make reliable judgements over time.
- Learners can know what is expected of them and measure their own achievements.
- Learners need not repeat what they already know.
- Teachers can know on what basis to assess existing learning, and facilitate new learning.
- School and parents can monitor a learner's progress in the light of specific learning attainments, and not just symbolic grades.

Principle 17. Learning outcomes should describe what children should know and can do, and they should be observable in the course of classroom life through a variety of mechanisms. Learning outcomes, not written tests, should drive the curriculum.

When educators formulate learning outcome statements, they need to specify who is learning what and under what conditions.

Here are two examples:

- the learner (*who*) will be able to use simple addition to solve a problem (*what*) in a realistic context (*under what conditions*)
- the learner (*who*) will be able to work as a member of a group (*under what conditions*) to complete research activities and present findings in writing (*what)*

Outcomes are future oriented, publicly defined, learner-centred, focused on life skills and content, and characterised by high expectations of all learners.

Performance Standards

Principle 18. Establishing clear learning outcomes provides the context for practical assessment.

Performance standards or benchmarks define to what level learners should progress and by which grade. They also provide targets at which students should aim.

Educators develop standards for reporting on students' progression in learning in each of the Key Areas of learning. These standards provide a framework for teachers to report on student achievement, and thereby help teaching and learning. Standards consist of achievement statements--learning outcomes--which describe, in order of difficulty, significant skills and knowledge that students need to learn in order to be successful users of particular subject knowledge. The standard enables the teacher to chart a student's progress and achievement.

Once countries establish a link between curriculum and learning outcomes, they must develop systems of assessing the degree to which intended outcomes are achieved.

Key Learning areas are defined by performance standards or benchmarks, for example, as defined below by the Australian Curriculum Corporation:

> Benchmarks are an important part of a national plan to support achievement of the (Australian) national education goal that `*every child leaving primary school should be numerate, and be able to read, write and spell at an appropriate level*' and the sub-goal that `*every child commencing school from 1998 will achieve a minimum acceptable literacy and numeracy standard within four years*' recognising that a very small percentage of students suffers from severe disabilities. Literacy and numeracy benchmarks articulate nationally agreed minimum acceptable

standards for literacy and numeracy at Years 3, 5, 7 and 9/10. `Minimum acceptable' means a critical level of literacy and numeracy without which a student will have difficulty making sufficient progress at school…[T]he benchmarks ask `at this point in a child's schooling, is this position on the continuum sufficient?'
http://www.curriculum.edu.au/curriculum/benmark.htm#bench

Year Three Benchmarks from the Australian National Curriculum
YEAR 3 READING
Students read and understand a range of texts that are suitable for this year level. These texts appear in, for example, picture books, illustrated chapter books, junior reference material and the electronic media.
Typically, texts that these students are able to read have predictable text and sentence structures. Words that may be unfamiliar are explained in the writing or through the illustrations.
Typically, these texts use straightforward, everyday language.
When students read and understand texts like these, they can:
- identify the main purpose of the text (e.g., say that the purpose of a set of short simple instructions is to help you do something)
- identify a sequence of events in stories
- find directly stated information in the written text and/or illustrations
- make links between ideas stated directly and close together in different parts of a text (e.g., predict the end of a story; work out a character's feelings from an illustration; make links between a diagram and its label)
- work out the meaning of some unfamiliar phrases and words.

YEAR 3 WRITING
Students compose simple pieces of writing that make sense to the reader and show a basic understanding of the writing task.
The pieces of writing contain a few ideas related to the task and topic. The ideas are usually briefly expressed.
The pieces of writing show evidence of some organisation of the subject matter (e.g., a simple beginning, middle and end in a story). However, they may also include irrelevant details, or ideas not well tied into the writing.
In these pieces of writing, students use:
- simple sentences, and some longer sentences using joining words like *and, but, then, because*
- phrases and words to give information about the place and time of events (e.g., *in the park, on the lid, On Monday, Today*), and the means by which something is done (e.g. *by bus, with a spoon*)
- words appropriate to the topic, including some subject-specific words
- capital letters and full stops used correctly most of the time.

http://www.detya.gov.au/schools/Literacy/Literacy_Benchmarks_Years3and5/benmark.htm

Assessing Student Learning

Performance assessments

Where teachers use student assessment as a strategy both to help students with learning and to adjust their pedagogy, and as a means of professional development, assessment can be a powerful tool for improving pupil achievement and school improvement (Fullan, 1999).

During performance assessment, students should be engaged in activities that require the demonstration of specific skills or the development of specific products (i.e. as defined by learning outcomes). The demonstrations can take place in a controlled environment (such as lab or classroom) or in a real life environment where the complexities faced by the learners are much higher. In the latter case, the performance assessment is also called an "authentic assessment." In both cases the learner can demonstrate complex learning that integrates knowledge, skills, and attitudes for a single performance.

The concepts of performance standards and learning outcomes are relatively new in education. The school systems that have begun to address the question of linking learner outcomes to curricula are facing challenges related to assessment at the classroom level (Brualdi, 1998), as well as regional and national levels standards (Roeber, 1995). While teachers need to determine whether previously taught concepts have been learned, they are often unfamiliar with assessment procedures that can go beyond the level of recall (e.g., multiple choice or fill-in-the-blank exams). It is not surprising that few respondents in this study have developed a comprehensive system of performance assessment; however, it is a goal toward which many are working. Most school systems reported using a variety of types of assessments, but rely mainly on traditional paper-and-pencil tests of content knowledge. Some implement continuous assessment.

> Principle 19. Assessing student ability to perform specific learning outcomes needs to be viewed as a tool which helps teachers to know whether learning is occurring or not.

Portfolio assessments

As assessment tools, tests provide a snapshot of a student's knowledge. Tests offer a picture of what the student knows at a particular moment in time and what he or she is able to express under the conditions given. Portfolio assessments, on the other hand, afford a view of the learning process. The portfolio is a purposeful collection of examples of student work that show the questions, interests, creative and analytic processes that he or she develops. It shows both attempts and accomplishments, and can focus on one learning area or integrate several. Unlike tests, teachers can use portfolios to assess students' growth as well as their general work quality. Individualized and comprehensive, portfolio assessment can provide a clearer picture of a the development of a student's cognitive processes.

Portfolios may include work samples (writing, artwork, work logs, etc.) and records of systematic observations. Grace (1992) suggests that systematic observations should

include anecdotal records about spontaneous events that shed light on student development; checklists or inventories based on instructional objectives; rating scales that help the teacher identify and look for complex behaviours; questions and requests that provide insights into the student's communicative development and motivations; and screening tests not for grading but for assessing student needs.

Teachers evaluate portfolios based on assessment of a student's individual progress toward predetermined curricular standards, not in relationship to other students. Grace (1992) suggests that "wide use of portfolios can stimulate a shift in classroom practices and education policies toward schooling that more fully meet the range of children's developmental needs" (p. 1).

Additional techniques include questioning techniques, story retelling, and drilling.

The educational systems surveyed for this study understand and interpret the ways in which learning outcomes are linked to curriculum in different ways. Some discussed learning outcomes by describing pre-set curricular objectives. Bangladesh reports continuous assessment with regard to the expected competencies while teaching and learning is going on in the classroom.

Brualdi (1998, p.1) points to the following steps teachers need to take in order to implement performance-based assessment.

1. Define the purpose of the performance-based assessment
2. Choose the activity
3. Define the criteria
4. Create the performance rubrics (or standards)
5. Assess the performance.

In the context of school reform, Roeber (1995) notes that using performance-based assessment data beyond the classroom level--to school, district, or national levels--may be possible, but adds that the major challenge for assessment is to coordinate the implementation of these additional assessments so that the amount of assessment is not a burden to teachers or students and truly supports the changes needed. He notes

> Typically, student achievement is measured with available student test data, often using information from district or state testing programs.... In a top-down model, policymakers develop an assessment design that meets their needs, hoping the data may be useful by persons at lower levels (p. 2).

For example, local districts can adopt a portfolio system for improving instruction, while the state carries out matrix-sampling across important standards. The information collected by the state can become part of the student's portfolio, thereby strengthening the portfolio's quality. The state could also provide opportunities for teachers to learn to

score the open-ended written and performance assessments, thereby enhancing teachers' capabilities of observing and rating student performances in their classrooms.

Principle 20. Assessment is more than testing children's understanding. It also involves assessing the entire educational system's ability to provide learning opportunities for children.

In this case, the elements of the system at the different levels build on and support the elements at other levels. It is also anticipated that information collected at the different levels can be reported in a more understandable manner, since the same standards apply in different ways. This assessment model enhances the reforms of schools so many desire."

It is important to note here, that the systems and methods described in this section may be difficult to implement in countries where there is a lack of trained educators at both the central ministry of education and teaching levels. Assessments such as those described above assume a high level of technical competence, equipment, material, logistics, and congruence between teaching and curriculum (Dykstra, 2000). Most experience in authentic assessment (e.g., portfolios), has come from countries or settings that have, in addition to well-prepared teachers, the requisite supplies, paper, and educated parents to support new, alternative assessment methods. In countries where there is a lack of trained educators in schools and also in central ministries of education, improving on traditional assessment methods such as paper and pencil tests is an important interim intervention to help build quality education. Training teachers to write test questions that enable pupils to demonstrate what they have learned and that require children to think beyond what they may have memorized, is an important contribution to quality education in such settings. Overall, the most common form of measuring learning outcomes described by EPOs , however, remains traditional testing.

Traditional tests of factual knowledge

The most common form of measuring learning outcomes within the group of responding countries remains traditional testing, although there are some signs of change. In 1999 Armenian seven-year olds were accepted to school for the first time without taking a simple but formal exam.

Critics see many problems with tests (see Perrone, 1991). First, they see tests as incapable of truly reflecting a student's intelligence and abilities. Also, teachers may feel pressure to "teach to the test," limiting the range of subjects taught and spending school time on practice exams rather than in more complex learning situations. Third, they believe tests can be used to label and sort students inappropriately, and can lead to lowered expectations and loss of self-esteem. Finally, tests have been shown to be culturally, linguistically, and class-biased, limiting the possibility of high achievement by second language speakers and other minority groups. Thus, national tests often limit the

access of those from cultural and linguistic minority backgrounds to advancement within the education sector and/or in the society at large.

What can be learned from tests to improve curriculum and teaching? When standardised testing occurs across a system -- whether local, regional, or national -- it can provide insights not just about individual students, but also about the system as a whole. Taken together, test results may point to areas of strength or weakness in curriculum design, curriculum delivery, instructional practices, or other components of education. For example, low overall pass rates may indicate areas of systemic concern. In Nepal, only 28 percent of children enrolled in Class One complete the five year cycle in five years, and only 66 percent of children taking the Class Five exam were successful. Based on this aggregate data, the EPO noted, "it is apparent that the textbooks and instruction are not having the planned impact." High failure rates in Burundi suggest that classroom overcrowding is having a negative impact, and also implies a need for improvement of teacher qualifications. Aggregated test results can generally only serve as indicators of problems, however. Focused investigation may be needed to identify specific problems and their causes. Data can also be disaggregated by relevant categories such as gender, region, or socioeconomic background, which can expose patterns in subgroups that point to areas of possible improvement (Johnson, 1997).

CURRICULUM CHANGE

Principle 21. System-wide support is necessary for true curriculum change, especially for change at the most important level, the classroom.

A central purpose of this working paper is to support UNICEF Education Programme Officers and UNICEF partners as they engage in advocacy and programme development to improve primary education. Earlier sections of the paper have mapped out the curriculum terrain, detailing the linkages between learning outcomes, curriculum, and teaching; discussing UNICEF priorities in curricular programming and describing how these priorities are being enacted in nearly 60 countries. This final section will address ways to support and intervene in curriculum development in order to advance education for all children.

Principle 21 makes two important points about curriculum change: 1) Critical curriculum change that leads to improved quality education is centred in the classroom; and 2) for quality education to reach all pupils, the entire education system must support curriculum change. Those involved in curriculum change need to keep the two points in mind simultaneously, focusing on learned and taught curriculum in the classroom and in the school in the context of educational support and enabling conditions for curriculum change and development at various levels of the education system.

The 21 Principles of Curriculum offer one way of thinking about points of entry into the curriculum change process. Completing the checklist (Appendix Two) for both a specific

education system and for two schools, say, one rural and one urban, can assist one in thinking about how macro-level changes support micro-level (i.e., school and classroom) change. Pushing this analysis further, Heneveld (1999) provides a way of thinking about which actors (e.g., Ministry of Education, communities, donors) contribute to enabling conditions for improving learning outcomes in a particular country.

Placing this discussion in a context of macro- and micro-level support, Heneveld (1999) describes four broad categories of variables that contribute to pupils' academic achievement (i.e., accomplishing established learning outcomes), and completion of a basic education. Completing Heneveld's charts (see Appendix One) is another way of assessing how a country is doing in supporting pupil learning and success in school.

Heneveld's four categories include supporting inputs, enabling conditions, school climate, and teaching and learning processes. Supporting inputs refers to the support from people, structures, and materials that make schools good, healthy places to be. Supporting inputs include parent and community support, a healthy learning environment, effective support from the education system, and adequate supplies of books and materials. Enabling conditions are those factors that make academic achievement possible. These include effective leadership, a capable teaching force, flexibility and autonomy, and a significant number of days and hours spent in school (high time). The "school climate" refers to the collective habits and attitudes of pupils and teachers toward their work. A healthy school climate includes high expectations of all pupils--from teachers, parents, pupils themselves, the community, and education officials. A healthy school climate also consists of teachers' positive attitudes toward pupils, colleagues, and leaders, and to the work of teaching. The existence of order and discipline in the school, an organized curriculum, provision of rewards and incentives that help to maintain the high achievement and a healthy climate, and high learning time, that is, "time on task" or the actual minutes and hours that students are engaged in constructive, meaningful learning are the other components of a good school climate. Heneveld's fourth category is teaching/learning processes. This includes topics discussed throughout this paper: a variety of teaching strategies; frequent homework; frequent student assessment and feedback; and participation (attendance, continuation, and completion), especially for girls.

Curriculum-related topics specifically include an organized curriculum an adequate supply of books and materials, high learning time, a capable teaching force, a variety of teaching strategies, and frequent student assessment and feedback. The categories are not static nor do they operate independently. Increasing the supply of books without providing sufficient learning time contributes only a minimal amount to pupil achievement. Which factors need to be addressed to improve curriculum and student learning in a specific education system? Which actors at various levels in the system are, can be, or should be responsible for specific changes in these areas? Answers to these questions will point to opportunities and areas in which to improve curriculum.

Many concepts have been presented in this paper that may be new to its readers. In order for change to occur, understanding concepts such as learning outcomes and performance standards and believing that they are important to improved pupil learning is critical to

initiating change. Hill and Crevola (1999) argue that factors that are closest to instructional processes most heavily influence educational effectiveness and school reform, and that changed beliefs and understandings are central to this reform.
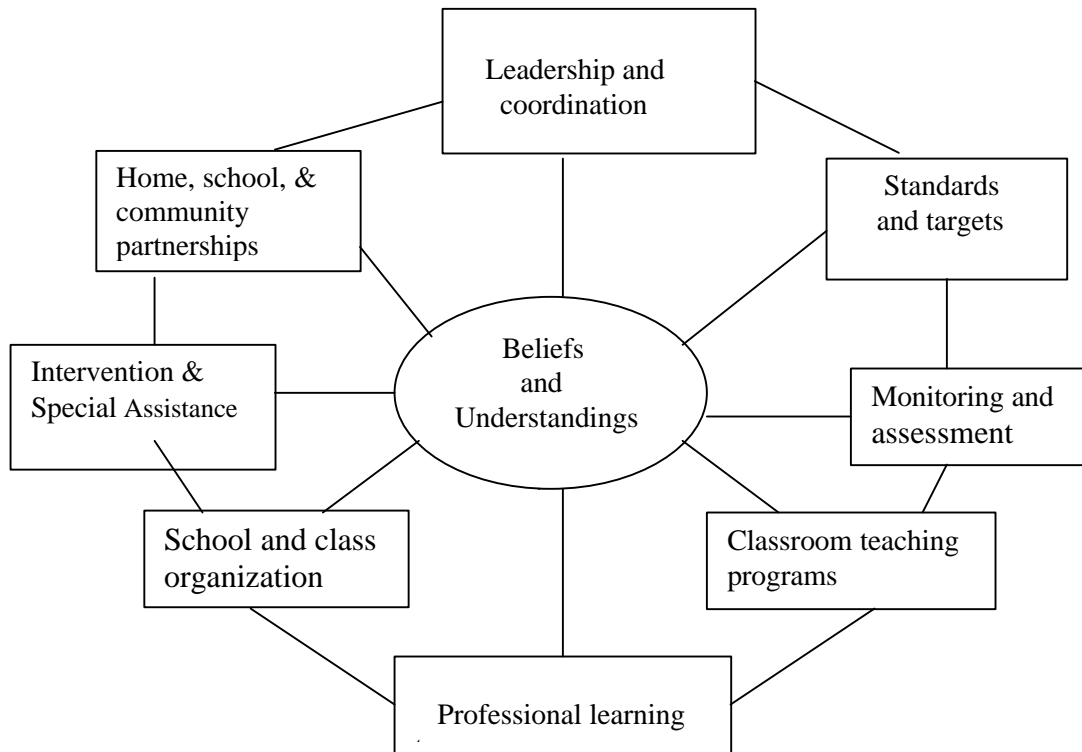
General Design for Improving Learning Outcomes

Hill & Crevola, 1999, p. 123

As an example, for improved pupil learning outcomes in Life Skills, specifically girls' assertiveness in relationships as an HIV/AIDS prevention strategy, changed beliefs and understandings are pivotal. The classroom teacher must understand the importance of assertiveness so that s/he teaches this skill to pupils and includes it in her/his classroom teaching program or lesson plan. The teacher may come to this understanding through professional learning--in discussions with her colleagues or a special training program organized by the school leadership. Assertiveness behaviours also need to be understood and supported by parents, school, and community partnerships, and assessed by teachers according to established performance standards. Interventions and special assistance needs to be provided to those who do not meet standards or targets. Finally, girls (and boys) will change their behaviours and become more assertive, resulting in improved learning outcomes. Other examples in teaching and learning pupils to read or to develop skills in conflict resolution would similarly illustrate how these factors that are close to instructional processes influence educational effectiveness and school reform.

Benavot and Karmens 1989 study of curriculum in developing countries revealed that curriculum change does not occur quickly.

Curriculum

- *content* in many SSA countries often still reflects the curriculum of former colonial powers

- *of mass education systems* show (increasingly) world-wide homogeneity or stability

- *policies* can be – and many times are – poorly related to actual educational practice in local schools

- *conflicts* often centre on matters considered marginal by some (sex biases, conflicts over what to include)

- *in the primary school* increasingly is a taken-for-granted matter Few reports detail the actual content of curriculum; most raise questions about what knowledge or values students ought to possess.

Curriculum changes may not take place quickly, disagreements and conflicts will emerge. These are not insurmountable obstacles, however, but challenges to confront in the drive to provide a quality education for all children.

Conclusion

As Jacques Delors (1996) reminds us,

> Education is at the heart of both personal and community development; its mission is to enable each of us, without exception, to develop all our talents to the full and to realize our creative potential, including responsibility for our own lives and achievement of our personal aims. This aim transcends all others. Its achievement. . .will be an essential contribution to the search for a more just world, a better world to live in.

As we strive to improve curriculum by taking into account all aspects and dynamics of the curriculum process, we will have contributed to the development of a better world for children and a better future for us all.

We would recommend that you use this Working Paper as part of a more comprehensive training approach with your staff and your government counterparts. We hope that its contents will provide you with the tools for networking with other professionals to work on areas of curriculum reform which are needed.

We have covered critical curriculum issues, identifying 'principles' for working with curriculum, to serve as a framework for all practitioners. Curriculum goes beyond official statements of intention. Curriculum is what happens to students (either as a result of

direct or indirect school action) within the context of schooling and for which schools can be held accountable. Curriculum development means changing behaviour. To that extent training, especially of teachers, for purposes of changing attitudes, skills and knowledge is key in curriculum change.

As you move to a focus on what is learned, think about how you may be able to apply the principles which are outlined in this paper in teacher education, in education reform processes, in sector reviews and other contexts where curriculum is a central issue.

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Appendix One **FRAMEWORK OF EFFECTIVE SCHOOLS AND SCHOOLS ASSISTANCE IN** _____

Four broad categories of variables contribute to schooling outcomes of academic achievement and persistence in school. They are:

Supporting Inputs	Enabling Conditions	School Climate	Teaching Learning Processes
• parent and community support • a healthy learning environment • effective support form the education system • adequate supplies of books and materials	• effective leadership • a capable teaching force • flexibility and autonomy • high time (days and hours) in school	• high expectations of students • positive teacher attitudes • order and discipline • organized curriculum • rewards and incentives • high learning time (time on task)	• variety of teaching strategies • frequent homework • frequent student assessment and feedback • participation (attendance, continuation, and completion), especially for girls

Most inputs in themselves are unlikely to constitute a set of actions that is sufficiently comprehensive to truly improve performance of schools. Donors contribute, but often much of their assistance focuses on efforts to build effective support from the education system, and to providing inputs such as books and schools. There is often comparatively less attention to issues of improving the school climate or to improving teaching and learning. Who contributes to which enabling conditions for improving learning outcomes in your country?

SUPPORTING INPUTS				
	Parent and Community Support	Healthy Learning Environment	Effective Support from Education System	Adequate Books and Materials
International Research				
Ministry of Education				
Civil Society −Families −Religious Organizations				
Private Sector				
National NGOs				
International NGOs				
Voluntary Organizations				
Multilaterals				
Bilaterals				

ENABLING CONDITIONS				
	Effective Leadership	Capable Teaching Force	Flexibility and Autonomy	Adequate Learning Time (days and hours in school)
International Research				
Ministry of Education				

Civil Society
    −Families
    −Religious
    Organizations				

Private Sector				
National NGOs				
International NGOs				
Voluntary Organizations				
Multilaterals				
Bilaterals				

SCHOOL CLIMATE					
	High Expectations of Students	Positive Teacher Attitudes	Order and Discipline	Organized Curriculum	Rewards and Incentives
International Research					
Ministry of Education					

Civil Society
    −Families
    −Religious
    Organizations					

Private Sector					
National NGOs					
International NGOs					
Voluntary Organizations					
Multilaterals					
Bilaterals					

TEACHING LEARNING PROCESSES				
	Variety in Teaching Strategies	Frequent Homework	Frequent Student Assessment and Feedback	Participation (Attendance, Continuation, Completion), especially for girls.
International Research				
Ministry of Education				

Civil Society
    −Families
    −Religious
  Organizations				

Private Sector				
National NGOs				
International NGOs				
Voluntary Organizations				
Multilaterals				
Bilaterals				

Appendix Two: Curriculum Assessment Checklist

Principles for Curriculum Design

_____1. What statements about curriculum as a *process* do curriculum developers, curriculum documents (curriculum, syllabi, textbooks, etc.), and those engaged in teacher education and professional development make about curriculum? Do the statements explicitly mention intended (official and written), taught and learned curriculum? Give examples.

_____ 2. Are national goals for education linked with national assessment, pupils' learning outcomes, school curricula, and teacher training curricula?

_____ 3. Do curriculum guidelines include skills, attitudes, and values in addition to fact-based knowledge? Give examples.

_____ 4. Do curriculum documents specify adequate instructional time for basic subjects in primary classes, especially in language development/reading and writing and mathematics? How much time?

_____ 5. Are professionals (women and men) with current teaching experience involved at all levels of writing, developing, and evaluating curricula? For each key learning area, make a list of professionals involved, note their gender and give the number of years of current teaching experience.

_____ 6. What are the plans for curriculum to be widely validated by parents, community members, teachers, ministries across sectors, and the business community? Describe the validation process and list the key actors. Tell how this will build understanding, support and confidence in schools and teachers.

Textbooks and Materials

_____ 7. Do textbooks follow a clear, well-organized scope and sequence for key curricular learning areas?
_____   When will pupil textbooks and teacher guides be available to accompany a new curriculum? If there is a time lag, what provisions have been made to help teachers teach according to the new curriculum using old textbooks?

_____ 8. What plans have been made to pilot test materials before they are distributed widely?

_____ 9. Do national budget items and education investments make it possible for updates and changes to textbooks and learning materials? Explain.

Curriculum Review and Evaluation

_____10. Does the curriculum review and development cycle proceed expeditiously to ensure that the curriculum is relevant and current? What is the length of a cycle? (Ten years is too long.)

_____11. What process is in place to evaluate intended, taught, and learned curriculum according to pre-set standards? Does this evaluation process precede new curriculum development?

Curriculum Integration

_____12. Is curriculum responsive to new issues and needs, such as HIV/AIDS prevention and Environment Education? Give examples.
        What does integration mean in (your) curriculum? What has been/will be integrated? Into which key areas?

Teaching and Teacher Education

_____ 13. (Language of Instruction) In which language are pupils expected to first become literate--a first, second or third language?
_____   Does this practice take into account that pupil achievement is enhanced if pupils first become literate in their mother tongue?
_____   Are materials available in these languages?
_____   Are teachers taught how to teach a second language and how to teach using a second language?
_____   Do teachers receive instruction in effectively teaching pupils who speak a second language, regardless of the language policy?

_____ 14. Regardless of the state of the curriculum (taking into account that it may be in disarray or less than optimal) do professional development activities enable teachers to directly improve their teaching and pupil learning? Are teachers helped to make clear connections with what pupils already know?

_____ 15. Does teacher education and professional development include a curriculum development focus? Does this focus help teachers understand content of curricula content, the processes involved in supporting learning (e.g., how to teach reading and writing and how to do assessment and testing), and curriculum evaluation?

 Learning Outcomes

_____16. Are learning outcomes and performance standards established first and then linked to what teachers must do to ensure pupil learning?   Give examples.

_____17. Do learning outcomes describe what children should know and can do? Are they observable in the course of classroom life through a variety of mechanisms? Describe the mechanisms. When are learning outcomes assessed?

_____ What drives the curriculum--learning outcomes or written tests? Explain. Note how much of the school year is devoted at each level to preparing for exams compared to assessing learning.

_____18. Have clear learning outcomes been established? Is the linkage between learning outcomes and practical assessment written out clearly for teachers?

Assessment

_____19. What does assessment mean in (your) setting? Is a pupil's ability to perform specific learning outcomes in the key learning areas viewed as a tool that helps teachers know whether learning is occurring? Give examples.

_____20. How does the system make use of assessment to understand the educational system's ability to provide learning opportunities for children? Give examples.

Curriculum Change

_____21. What system-wide support is present for curriculum change at the classroom level? (For an analysis of this, fill out Heneveld's (1999) charts for your setting.)