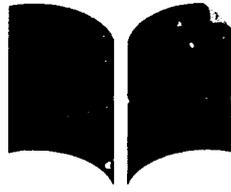


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ABEL 2



Advancing Basic
Education and Literacy
Phase 2

**An International Curricular
Perspective on Decentralization**
An Introduction to its Problems, Prospects and Evaluation

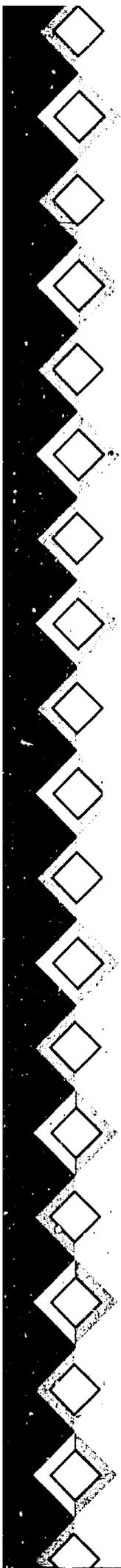
Presented at Ethiopian Curriculum Policy Workshop
Addis Ababa
October 23-25, 1995

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**An International Curricular
Perspective on Decentralization:**
An Introduction to its Problems, Prospects and Evaluation

by

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Presented
at
Ethiopian Curriculum Policy Workshop
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An International Curricular Perspective on Decentralization: An Introduction to its Problems, Prospects and Evaluation

Introduction

This brief introduction to the topic is not meant as a formal paper for presentation to an academic conference, but rather as a brief introduction to a workshop of curriculum practitioners, who are in the midst of one of the most profound and interesting educational and curricular decentralization processes in the world today. Ethiopia is undertaking the daunting task of maintaining a national identity, while decentralizing almost all aspects of its school system. This is not just local control or site-based management, which have swept the United States and other countries in recent years, but the development of newly Latinized written languages, regional and zonal curricular materials, instructional adaptations at all levels, national and regional standards, new forms of assessment and a host of other plans which make the Ethiopian experience well worth watching by the rest of the world. With tribalism and nationalism sweeping the globe, it is likely that many other nations in the coming years will be watching the Ethiopian experiment with growing interest. I am deeply honored to be here early in this exciting process to share with you some experiences from other nations.

Following a brief introduction to the broad topic of curriculum, we will turn to a general discussion of the various definitions and types of decentralization, followed by the experiences of various nations around the world with the process. Specifics on the decentralization of curriculum and instruction from various nations is dealt with, followed by some recommendations based on two hundred years of local control experience in the United States. The national standards movement in the United States and other countries might be of some help in defining the role of the ICRD in Ethiopia, and we close this brief introduction to the topic with an overview of curriculum evaluation. The select bibliography contains the sources for materials in this paper and the various handouts, for those seeking more detailed information on the various topics. The appendices are filled with a wide variety of handouts and copies of overheads which will be part of the workshop activities and presentations, but are not necessarily directly related to this brief introductory paper.

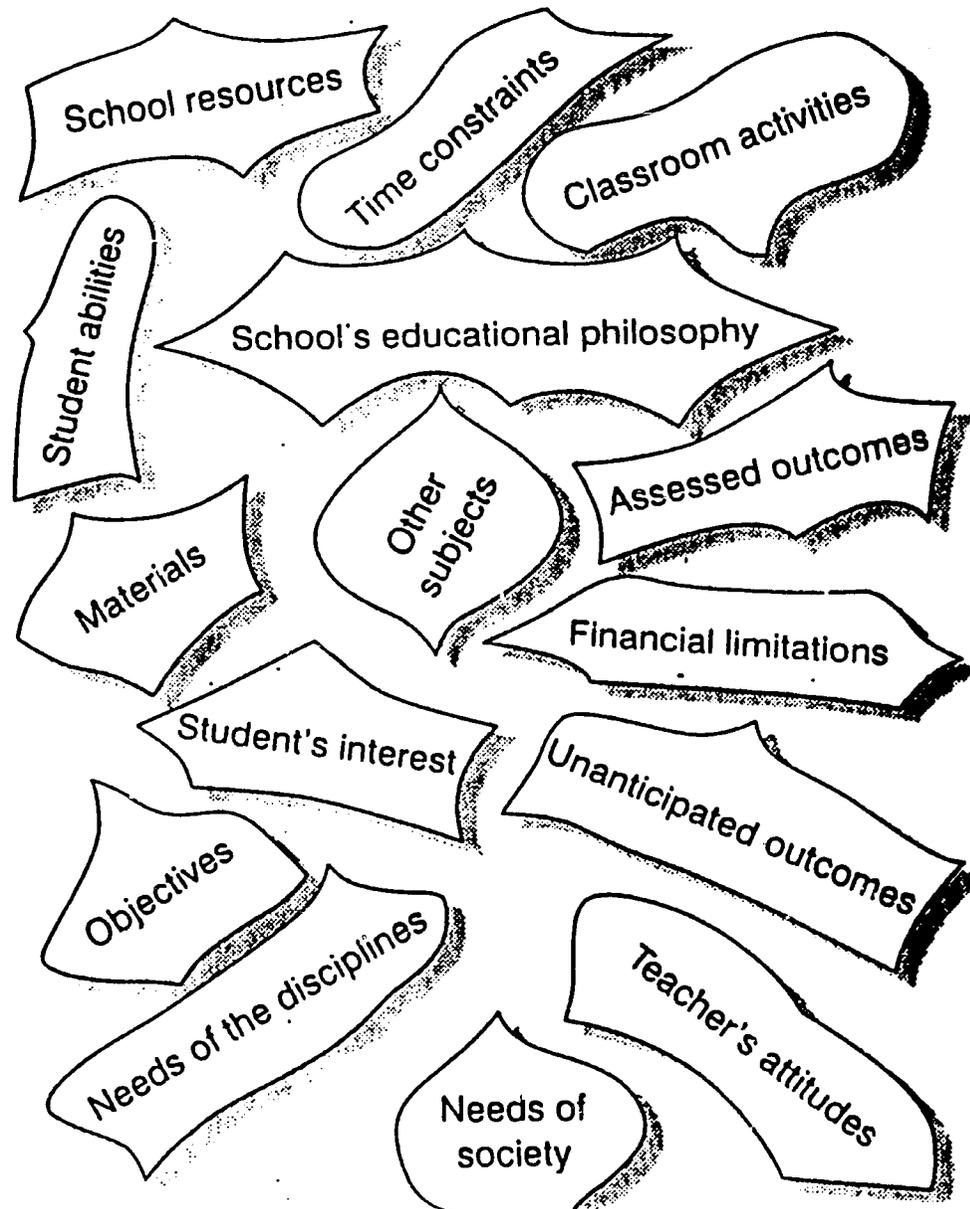
Curriculum

For almost a century, the word curriculum has been defined and redefined. Some typical definitions of the term have been (Lewy, 1991):

- 1) Curriculum is all of the experiences children have under the guidance of teachers.
- 2) Curriculum encompasses all learning opportunities provided by the school.
- 3) Curriculum is a plan or program for all experiences which the learning encounters under the direction of the school.
- 4) A regular course of study or training, as at a school or university.

In much of the world, the word curriculum has been used almost synonymously with the list of courses or timetable of classes. For our purposes in this workshop, we will use a broader definition, which includes all the experiences and learning opportunities which children have under the direction or guidance of their teachers or the school in general. The Figure which follows gives some indication of the wide range of influences, components of the curriculum.

Pieces of the Curriculum Game



Curricular Dilemmas

The importance of basic educational philosophy can be found in the answers to the 9 dilemmas listed below which explore the relationship between educational practices and philosophical, psychological and social assumptions. It is the observation of this writer that many of these dilemmas still exist in Ethiopia. While curriculum writers and developers might hold to one viewpoint, teachers in actual practice exemplify significantly different behaviors. Each society must answer these dilemmas for itself, but it behooves a nation to attempt coherence between stated curricular theory and actual classroom practice.

1. Whole child versus child as student.
2. Teacher versus child control.
3. Personal knowledge versus public knowledge.
4. Knowledge as content versus knowledge as process.
5. Extrinsic versus intrinsic motivation.
6. Learning is holistic versus learning is molecular.
7. Each child unique versus children have shared characteristics.
8. Learning is social versus learning is individual.
9. Child as person versus child as client.

(Based on Berlak Dilemmas)

Curriculum Elements

The following elements and definition are generally accepted to be major components or factors of the formal curriculum in any country.

Goals, Objectives and Purposes: Goals, objective and purposes for teaching and learning are defined as anticipated or actual outcomes of learning-the results which are expected and worked for or which come about as a result of engaging in purposeful learning activities. *Goals* are broad general outcomes. *Objectives* are carefully defined behavioral outcomes for students. *Purposes* suggest that the results of learning may not be known until after a meaningful activity has been engaged in by the students.

Content: Content is defined as those facts, ideas, concepts, processes, generalizations, attitudes, beliefs and skills with which students interact as they experience a curriculum. Content is that which teachers and students consider as they engage in the processes of teaching and learning. Content may be derived from humankind's carefully organized and preserved wisdom as represented by the disciplines, or it may be from less traditionally organized fields of human endeavor.

Materials and Resources: These are the objects, places, and people used to facilitate the learning process-the tools used with students to assist learning. They include resource people, textbooks, magazines, computers and software, videotapes, records, games, and such things as chalk, chalkboards, crayons, scissors and special laboratories. They also include libraries, museums, workplaces and parent and community volunteers.

Activities are what students do as they engage in the process of learning. They include such activities as recitation, listening, reading, writing, role-playing, reflecting upon an ideal, taking field trips, doing homework, watching television, working at a computer, playing games, and acting out sociodramas and simulations.

Teaching Strategies are defined as roles taken by a teacher or a teaching device such as a computer, programmed text, or television set in order to facilitate learning.

Evaluation is the procedure for determining what students are learning or have learned. It may include testing, observing, grading papers, analyzing student products, conducting interviews, or administering surveys, and it can occur at any point in time-prior to teaching, ongoing during te

Grouping is the process and result of determining the sizes and compositions of clusters of students formed to facilitate the learning process.

Time is also a fundamental curriculum element about which decisions must be made. It may be allocated on a formal or informal basis, and decisions regarding it often occur at several levels: legislative mandates or decrees; regional or district mandates; institutional or local school decisions; and individual teachers' decisions.

Space is the design and use of school and classroom physical dimensions. The allocation and use of space can have significant influence on the curriculum. (Flexible and inflexible space; laboratories; etc.)

Curriculum Decentralization

There are a wide range of perspectives on the whole process of decentralization, and the quote by Winkler (1989) which follows summarizes some of the current thinking on the topic.

Some decision making (about finance and teacher recruitment) should be handled at the local and some (about school organization and curriculum) at the regional level. Problems of equity can be addressed through a system of central government grants (Winkler, 1989).

He suggests that while central government grants should be used to deal with problems of equity and inefficiency in a decentralized system, we know very little about the economic and educational consequences of decentralization. He suggests that decentralization policies are most successfully implemented if:

1. There is a tradition of self-reliance in local communities.
2. Local government or communities have their own sources of tax revenues and voluntary contributions.
3. The pressure for decentralization originates in the community rather than with ministry planners.
4. All important affected political groups, especially teachers, are involved in and informed about the development of decentralization plan.
5. Administrative capacity at the local level either exists or is provided through training.

The table which follows gives some of the major arguments for and against decentralized curriculum development.

Arguments for and against Decentralized Curriculum Development

Arguments in Favor of Decentralized Curriculum Development	Arguments against Decentralized Curriculum Development
<p>1. Socio-political ideals: The right to self-determination.</p>	<p>1. The teachers' ability to produce curriculum: a) The ability of the teaching profession to attract and retain teachers of high intellectual capacity is limited due to prestige and pay factors. b) Society is unlikely to pay teachers for curriculum development. c) Through technology, centrally produced materials are likely to increase.</p>
<p>2. Role definition of teachers: Teachers have a major responsibility for curriculum development.</p>	<p>2. The quality of the product: Most locally developed materials do not match the quality of professionally developed curricular materials.</p>
<p>3. The status of the teaching profession: Primary teachers in particular can use curriculum development as a basis for professional status for promotion and public recognition as professionals who contribute to the improvement of the profession.</p>	<p>3. The professional role definition of the teacher: Teachers have many other roles, and few have the time or training to do curriculum development.</p>
<p>4. Local needs orientation: It is better suited to respond to local needs than a nationally developed curriculum. It takes into consideration the local ecosystem, cultural and religious values, occupational opportunities and the ability level of the schoolgoers along with their previous learning experiences and the resources available in and to the school.</p>	<p>4. The characteristics of teacher-initiated changes: Teacher initiated changes are seldom sweeping in nature and generally maintain the status quo. Without central intervention, radical change is unlikely.</p>
<p>5. Effective monitoring and control: Locally developed materials allow effectiveness in monitoring the programme and controlling the resources. Schools can adapt programmes and texts to changing conditions and update them if and when necessary, even if the central development agency no longer exists.</p>	<p>5. Weak evaluation basis: Local schools and regions seldom have trained evaluators and teachers seldom see evaluation as of high importance.</p>
	<p>6. A common core of knowledge: Societies share a basic set of concepts, ideas, literary allusions, and characters from history, and the socialization of the individual implies becoming familiar with them.</p>

Models of Decision making

In the literature, four types of decentralization are identified (Rondinelli, 1984): deconcentration, delegation, devolution, and privatization. In a traditionally *centralized* system, education is financed and managed by the central Ministry of Education, and while teachers and administrators are given some decision-making power over routine decisions but have little or not control over resource allocation in the schools. Cameroon is an African example of a centralized system where the central government provides most of the revenues, determines curricula, sets and evaluates examinations, recruits, assigns and promotes teachers and administrators.

In Latin America, several countries have experimented with a *delegated* form of decision making, whereby some traditionally government tasks are transferred to autonomous organization or regional agencies, who are accountable to the government, but have greater autonomy. Vocational training and higher education are more likely to be given independent sources of revenue and reporting to their own boards of directors, than either primary or secondary schools. In a few cases, such as Lesotho, Papua New Guinea and Paraguay much of the elementary system has been delegated to churches, but the government still pays the teacher salaries.

Latin American countries have also attempted to *deconcentrate* decision making by transferring authority to lower levels within central government agencies. This is usually done through the formation of regional directorates. Peru, Columbia, and Chile in South America, along with the Philippines in Asia have de concentrated power, generally in the areas of supervision and planning by region.

In an even more decentralized system, autonomous and independent subnational units of government, with have authority to raise revenues and spend in a *devolved* decision making model. This model is similar to the Federal systems to be found in Asia in India, Malaysia, Pakistan and Papua New Guinea, in Latin America in Brazil and in Africa in Nigeria. In a Federal system, both centralized and decentralized systems exist, with provision of public services such as education based on the demands for those services by residents of a particular region. Decision making authority is typically divided between central and regional governments, and while local authorities have some power, it is usually controlled by a regional government. Some countries devolve primary education down to the local level, while maintaining control of secondary education at the regional level. In Nigeria, the local government is responsible for managing primary schools and providing revenues for school construction and materials and supplies, but most operating revenue comes from state government transfers, most of which is derived from the central government.

Finally, some countries around the world have a system that is centralized and decentralized. Kenya and Indonesia have a nationalized primary education system and a decentralized secondary system, with some school controlled at the national, some by the community and some privatized. Countries have also experimented with variations in salaries by location and variations in the amount of local decision making authority. The following table indicates how five countries in the Western hemisphere deal with a decentralized curriculum.

Distribution of Main Educational Responsibilities in Four Latin American Nations and the U.S.

(Adapted from Prawda, 1992: World Bank)

Topic	Argentina	Chile	Colombia	Mexico	United States
1. Core Curriculum Design	C	C	C		CRD
2. Regional Curriculum Design	D	D	D	D	CD
3. Textbooks Procurement		C			D
4. Textbook Production					CD
5. Textbook Distribution		D		C	C
6. In-service Teacher Training Accreditation Standard Setting	C	C	C	C	D
7. In-service Teacher Training Service Delivery	D	D	D	D	D
8. Pedagogical Supervision	D	D	D	D	RD
9. Establishment of Number of Working School Days	C	C	C	C	RD
10. Labor Policy Definition	D	D	C	C	RD
11. Budgetary Allocation	D	C	C	C	D
12. Microplanning and Resource Programming				D	D
13. Resource Management	D	D	C	D	D
14. Delivery of Educational Services	D	D	D	D	D
15. Production of Local Teaching Materials	D	D	D	D	D
16. School Accreditation and Certification	D	D	D	D	CR
17. Gathering and Processing of Statistical Information	D	D	C	D	CRD
18. School Construction and Maintenance	D	D	D	D	D

C=CENTRALIZED

D=DECENTRALIZED

A blank space implies the information was not available. In the U.S. Context, decision-making power is distributed primarily between the Regional/State and the D/Local Districts, with many now being made at the building level. The Central/National system is attempting to set voluntary national curriculum standards.

Curriculum and Instruction

As indicated above in the area of finance and broad decision making, there is a wide range of variation throughout the world. In the arena of curriculum standards and teacher education, centralization has more often than not been the norm. Part of the reason for this is that these are seen as the domain of experts, who reside in central Ministries or in large nations in regional offices. Pre-service education has tended to remain nationalized, while in-service education has often been decentralized down to the local or municipal levels.

While decision making in curriculum has remained centralized and in countries such as Cameroon, this has meant specific and identical curricula in all parts of the country, there are other examples in which there is greater freedom. This can be seen in countries which permit regions to produce their own textbooks within broad curricular guidelines, or for schools and parents to purchase textbooks from a broad approved list. The following table provides a visual example of a centralization-decentralization typology.

Centralization-Decentralization Typology for Public Education

Topic of Concern	Centralized Model	Mixed Model	Decentralized Model
School Organization	Minimum schooling requirements and school organization (preschool, primary, secondary, vocational, higher education) set by the central government.	The central government determines organization of the schooling system, but the local community helps determine how many years of education are provided, often through at least temporary self-finance of years beyond those funded or authorized by the central government.	Organization of schooling is almost always set by the central ministry of education; the local community decides how many years and levels of education will be provided.
Curriculum and Teaching Methods	Curriculum teaching materials, pre-service and in-service instruction provided by the central ministry of education.	Curriculum, teaching materials and in-service instruction established and provided by the central government or through its regional delegations.	The basic contents of the curriculum are set centrally, but textbooks may be selected and purchased locally, and in-service instruction may be provided locally or regionally depending on the size of the locale.
Examinations and Supervision	Examinations set and evaluated, as teaching performance evaluated by central ministry of education; responsibility for direct supervision often lies with regional administrative offices.	Examinations are set centrally but usually administered and evaluated regionally; the instruction, often through regional or district offices.	No national examination system exists; all examinations are set and evaluated locally; the central or regional governments usually provide limited supervision of teachers and schools.
Teacher Recruitment and Compensation	Central government sets accreditation standards, provides teacher education, sets teacher pay scales, and directly pays the teachers; in some cases the civil service, not the Min. of Ed. controls teacher recruitment, pay and promotion.	Teacher may be selected by the local school authority, but the central or regional government typically prescribes pay scales; accreditation standards are also set centrally.	Teachers are selected and pay scales are set by local government; accreditation standards are typically set by the central government but they may not be enforced.

Centralization-Decentralization Typology for Public Education (Continued)

<p>Finance of Recurrent Expenditures</p>	<p>All recurrent expenditures fully funded by central government excepting minor user fees; non teacher resources distributed to schools.</p>	<p>The central or regional government provide most funding of local schools in the form of block grants or project grants, but some portion of educational expenditures are funded by local revenue sources, and the local community has some influence on total expenditure levels.</p>	<p>Local government funds elementary and sometimes secondary education from local revenue sources; user fees or "voluntary" contributions to the parents-teachers associations may be required; block grants or project grants may be provided by the central government.</p>
<p>School Construction and Finance</p>	<p>Central government set construction standards, which may be uniform for the entire country, and covers all construction costs, although the local community may be required to provide labor and/or some construction materials.</p>	<p>Construction standards are set by the central or regional government and matching funds are often provided for school construction; in some cases the matching funds take the form of a promise by the central government to cover some portions of recurrent expenditures, often teacher salaries.</p>	<p>Land and materials for school construction are provided by the local community; labor may be voluntary; local construction standards used.</p>

(Adapted from Winkler (1989) World Bank)

Centralized curricula, whether at the regional or national levels are generally justified on the basis that some schools, districts, or regions are performing below expectations and therefore centralized standards will help to improve performance. The most direct method of setting clear and high standards is to develop mandated syllabi for each curriculum area, and the most powerful way of ensuring adherence to the objective of these syllabi is through an extensive testing program. The emphasis is almost always on *results*, not improvements of instructional practices, and results on tests are the measure generally used by the public and policy makers to gauge a school, district or regions efficacy. The experience of the United States with such moves towards centralization might prove instructive to the country of Ethiopia is it attempts some moves towards decentralization.

Centralized systems give a range of intentional and perhaps unintentional messages to the local schools (Brooks, 1991).

- 1) **"Curriculum development is not your responsibility."** Centralized systems define the skills children should learn and develop the syllabi and curriculum. Teachers who wish to deviate from the syllabi, do so at great risk, and if they wish to develop creative instruction, the risk their students not doing well on the state tests. When teachers no longer have a role in curriculum development, only curriculum delivery, teachers lose a great deal of their professional status and responsibility.
2. **"Testing drives instruction."** With the development of criterion-reference, high stakes tests, there is even greater pressure on teachers to stay closely to the syllabus and "teach to the test." What gets tested, gets taught, is another way of putting it. The downside of this is that the message is loud and clear, "if it is not tested, it is not important," a message patently false on the surface. Secondly, testing tends to reward an environment in which there is one correct answer, one truth, rather than a complexity of multiple options. Finally, few tests deal with higher order thinking skills, and most emphasize memorization and basic skills, not analytical thinking. This is counter to almost every state and national goal calling for more inquiry, discovery and creativity.
3. **"It is more important to cover material than to learn it."** Meeting the needs of individual students generally takes second place to covering material in the syllabus when there is a centralized curriculum and high stakes testing program. "Teacher talk," the best means for covering lots of material tends to dominate in this type of environment, rather than student exploration, discovery, hypothesis testing and problem solving.
4. **"Minimum competence is the desired outcome."** Many states list behavioral objectives and minimum standards to meet them, often times emphasizing the percentage of students following below a state reference point. Teachers therefore spend an inordinate amount of time getting students "above" state minimum cutoff scores, rather than pushing all their students to higher achievement. Minimum competence all too easily becomes the expectation for all students.
5. **"We don't trust you!"** Centralized systems are generally hierarchical in nature, and all participants are held accountable. Teachers, the ones ultimately responsible for the implementation of the curriculum get the very real impression that they are trusted to neither develop nor teach the curriculum appropriately. Freedom and autonomy are for teachers two of the few job satisfactions, and when those are taken away, all they are left with is low status, low pay, poor working conditions, critical parents, and unruly students; not much reason to remain in the profession.
6. **"Past effectiveness does not matter."** Even schools that have always met high standards of student achievement, attendance, parental support or other indicators of success are held to the same controls as the poorest schools or districts. *Too often we confuse standardization with standards.*
7. **"More and sooner and quicker and tougher is better."** Too often, pressures are brought to bear to have children be pressured to learn things earlier and faster, even when they are not developmentally ready. Toughening standards may improve education, but it may also lead to greater student frustration and greater dropout rates.

The following definitions sheet and curriculum matrix give the reader some idea of the complexity of the curriculum decision-making process.

Levels of Decision Making

Academic Level: The level most remote from the students is the academic level, which is defined as the scholars at colleges and universities.

Societal Level: This level includes all those in the lay communities and organized groups who are not directly involved in the day-to-day education of students but who would like to influence the curriculum, such as government agencies, businesses, and industries.

Formal Level: This level is beyond the individual school and involves all those individuals and groups who have some type of direct responsibility for the curriculum. It includes national, regional, or district agencies; textbook publications, and professional associations of teachers, researchers and curriculum developers.

Institutional Level: Those participants in curriculum development at the individual school level. Teachers and administrators at the local level.

Instructional Level: These are the classroom teachers who decide what or what not to teach and how to teach it.

Operational Level: How the curriculum actually unfolds in the classroom. The interaction between teachers and students and the abilities and interests of students affect how the curriculum is actually implemented.

Experiential Level: The experiential level is composed of the student-their individual expectations, perceptions and achievements. Any student decides what his or her curriculum will be by the degree of interest expressed and willingness to participate in it.

Curriculum Framework for Decision Making

Curriculum Elements

Perspectives or levels of Decision-making

	Goals, Objectives Purposes	Content	Materials Resources	Activities	Teaching Strategies	Evaluation	Grouping	Time	Space
Academic									
Societal									
Formal									
Institutional									
Instructional									
Operational									
Experiential									

In our experience in the United States, many of the standardized national and state centralization functions have led to the perpetuation and even strengthening of those negative aspects of education which led to the reform movement in the first place. Secondly, qualitative measures of efficacy have often become subordinate to quantitative measures, often severe negative effects on the quality of instruction. Finally, too many centralized curricula are designed to teach the parts, not the whole, the reverse of what we know to be the best forms of teaching and learning.

Recommendations based on U. S. Experience.

1. Top-down accountability generally does not work.
2. Changes or improvements should be targeted to those schools or districts that need them, not indiscriminately to all.
3. Qualitative measures, not just quantitative measures should be used. Visitation teams of evaluators and teachers could visit schools and regions on a regular basis to ascertain what is really happening.
4. Regional and district improvement teams should replace impersonal bureaucratic centralized individuals or offices. Qualitative measures on student thinking, peer reports, student projects, portfolios, teacher instructional methodologies, information on parental support and teacher observations must be considered, not just test scores, attendance ratios, and graduation rates.
5. Schools or regions which have "always" done well on both quantitative and qualitative measures should be given five-year exemptions from many or most centralized mandates. Schools not doing as well should be given two year mandates on how to improve. Regional officers should spend several weeks each year intervening in the "worst" schools.
6. We need to consider the importance of "value added." Schools serving very poor students, with little or no equipment, books, etc. should not be judged in the same manner as those with many more inherent advantages.
7. Teachers make more of a difference than mandated curricula, and thus pre and in-service training are as or more important than the curriculum materials themselves.

National Standards

Several countries around the world have attempted to develop national standards, while maintaining some level of decentralization. It is important to define what is meant by national standards. In the context of the United States, the following definitions have become somewhat accepted in the last 2-3 years (Elmore and Fuhrman, 1994).

Overarching Statement: This statement should describe briefly and in general terms vision of the nature of the education standards for the content area. It should emphasize a theoretically and pedagogical coherent and engaging presentation of up-to-date subject matter and high expectations for all students.

Content Standards: Content standards should set out the knowledge, skills and other necessary understandings that schools should teach to ensure that all students attain high levels of competency in the subject matter. Generally, for our purposes, what schools are expected to teach is equivalent to the knowledge, skills, and other understandings that students are expected to learn in schools.

Student Performance Standards: These standards should establish the degree or quality of student performance in the challenging subject matter set out in the content standards. In general, the development of such standards will require examples of a range of professionally judged student performances to serve as benchmarks for assessing the quality of a new student's performance.

School Delivery Standards: These standards, referred to as “opportunity to learn” standards should set out criteria to enable local and state educators, policy makers, parents and the public to assess the quality of a school’s capacity and performance in educating their student in the challenging subject matter set out in the content standards. School delivery standards should provide a metric for determining whether a school “delivers” to students the opportunity to learn the material in the content standards.

- 1) Are the teachers in the school trained to teach the content of the standards?
- 2) Does the school have appropriate and high-quality instructional materials that reflect the content standards?
- 3) Does the actual curriculum of the school reflect the content standards in sufficient depth for the students to master it to a high standard of performance?
- 4) Does the performance of the students in the school indicate that the school is successfully providing all students the opportunity to learn?

System Delivery Standards. These standards should set out criteria for establishing the quality of a school system’s (local, state, or national) capacity and performance in educating all students in the subject matter set out in the content standards. Each state and local district might establish their own achievement targets that, when summed, would enable the nation to reach the national goals.

Curriculum Evaluation Theory

Evaluation is an integral part of the curriculum improvement process. It should provide both measurement and appraisal whenever and wherever needed. Both curriculum theory and good practice indicate that the times for evaluation are before, during and after an aspect of curriculum study. Evaluation is a continuous process in curriculum planning and in the instruction which puts the plans into action. In the context of this validation/evaluation process in Ethiopia, the evaluators were brought into the process at almost the same time that the new curriculum was being put into place, and this preliminary report is being written before the end of the first year of implementation. The evaluation team cautions the readers of this preliminary validation process to keep in mind that the measurement and evaluation reported on here was conducted during the first five months of the implementation stage, with little information available about prior curriculum practices, and with no information, to date, on the effects of a full school year of implementation.

In the framework of curriculum improvement, evaluation may be viewed in a threefold role: 1) within the curriculum, that is, the evaluation that teachers make in the classroom situation; 2) about the curriculum, that is, appraising the effectiveness of the educational program in meeting its goals; 3) about the process of curriculum improvement, that is, were the ways used to effect curriculum change in harmony with proposed curriculum theory and practice? In this evaluation/validation, we have attempted to provide a great deal of data on numbers 1. Teachers through questionnaires, interviews, and observation provided the evaluators with a great deal of information about what is occurring within the Ethiopian classrooms. Limited data is available on number 2. Teacher behavior change was questioned and observed, the availability of texts and other instructional materials was observed, and by the end of the study in November, we should have limited results on student achievement. Finally, we will comment on the process of curriculum improvement, making recommendations for future curriculum reform in Ethiopia.

Curriculum evaluation is concerned with making judgments about educational materials and practices. Since the range and number of combinations possible for educational materials and practices are far-reaching, complex and diverse, it is necessary to restrict one’s thinking to major categories of concern that characterize curriculum development, design, materials and implementation strategies. The major categories are the following.

- 1) **Program Focus:** This is the subject matter or established knowledge in a given field of study.
- 2) **Medium of Instruction:** The primary concern here is with how the program is packaged for delivery. That is: print form, pictures, equipment, materials needed etc.
- 3) **Organization of Material:** Some materials are tightly structured and organized with carefully designed behavioral objectives, while others permit the teacher a great deal more latitude and discretion in the use of them.
- 4) **Teaching Strategy:** This refers to how the teachers conduct the instruction, how they deal with selected content and to determine expected outcomes. They are specific techniques used to foster learning and understanding of content and skills.
- 5) **Classroom Management:** In this area, we look for how the teacher controls the interaction of learners, materials, method, and scheduling of events. How children are grouped and how they are matched with content, skills, and attitude requirements are major concerns of classroom management. The effective use of time and resources is another component in this area.
- 6) **The Role of the Teacher in Using Curriculum Materials.** This role can vary from interpreting the developers' instructions, revising materials, providing prerequisite skills and learning, motivating students to practice, and assisting student to work independently.

Evaluation Research Questions

Curriculum evaluation attempts to provide answers to a rather broad array of questions. Due to time, personnel and financial constraints, the evaluation process can seldom claim to have final or even preliminary data on all of them, but we list them here to give the reader a sense of the complexity of validating or evaluating a curriculum.

Basic Curriculum Questions

1. Is it worthwhile to devote time to learning the materials included in the program?
2. Do the educational materials reflect recent developments and contemporary ideas dominant in a given field of intellectual or scientific behavior?
3. Are the study materials free from obsolete concepts and ideas?
4. Under the prevailing system of teaching-learning conditions can the new program be successfully implemented?
5. Will the students master certain skills as a result of the programs?
6. Will the student acquire certain desired attitudes and values?
7. Will the teachers accept the major tenets and objectives of the program?
8. Is the new program an economic means of obtaining the desired goals?
9. What unintended or unforeseen outcomes may emerge as a result of utilizing a given program?
10. Was there a plan or design for implementing the curriculum program?
11. Were teachers given the time and training necessary to understand and master the content and major component of the curriculum program?
12. Were teachers afforded an opportunity to observe and practice the delivery approaches called for in the curriculum program?
13. To what extent was the curriculum program implemented according to the design suggested by the developers?
14. Do user groups require any prerequisite learning or experiences to use the materials effectively?
15. How complete and independent is the new curriculum program as a total learning experience.
16. Are there provisions for making changes in the program's design and implementation or strategies?

Questions for Teachers and Learners

1. How will the teacher's personal day be changed by the innovation?
2. How much additional preparation time will the innovation require?
3. How much paperwork will be involved in implementing and monitoring the innovation?

3. How much paperwork will be involved in implementing and monitoring the innovation?
4. How will the innovation "fit in" to the content to which learners have already been exposed?
5. What kinds of teacher resource materials will be provided?
6. Will resource materials be in each teacher's room, in a separate room in the school, or at some other location?
7. What kinds of new learning materials will be provided for learners?
8. Are reading levels and other characteristics of the materials clearly appropriate for learners to be served?
9. What patters of teacher-learner interaction will be demanded?
10. Will any required instructional procedures demand teaching techniques teachers have not already mastered?
11. What kinds of inservice training will be provided?
12. What is the relationship of the innovation to standardized tests learners must take?
13. What allowances are there going to be for possible declines in standardized test scores resulting from an instructional program new to teachers and learners alike?
14. What are the implication of the new program for classroom management?
15. How strong is the commitment of administrators at the building, municipal, district and national levels to the new program?
16. To what extent are the school directors familiar with elements of the new program and able to assist teacher in implementing it?
17. Who, specifically, can be called upon for help if there are problems regarding implementation of the new curriculum?
18. Will the supervisors be willing and able to visit individual classrooms?
19. What school library and other resources are there to support the new program?
20. To what extent do parents know about the support the new curriculum?
21. What are the implication of the new program in terms of classroom management?

Information Collection and Time Lines for Curriculum Evaluation

The following list of information collection techniques is provided to give the reader a better sense of what might be done, if time, personnel and funding are available.

- 1) **Record Review:** Most schools throughout the world maintain a comprehensive record of information about such topics as: student grades, attendance, behavior, test scores, programs of study, course offerings, scheduled time, and available textbooks, learning materials and supplies.
- 2) **Observation:** Observation is defined here as the viewing of the school or classroom environment for the purpose of identifying (collecting) cues and impression of behaviors and interactions, and artifacts by which we can make meaning. The focus of this evaluation component is on the instructional and experiential curriculum levels. Observation instruments can be developed to sample the various events that occur as part of the ongoing implementation of the curriculum in the classroom.
- 3) **Content Analysis:** Content analysis is a form of observation of materials and communication. It focuses specifically on documents, instructional materials, artifacts, media and textbooks. Checklists, readability assessments, content analysis, and a range of other classification systems are used to provide information on the content of the old and new curricula.
- 4) **Opinionnaire/Questionnaire Surveys:** Opinionnaires are generally constructed to survey the opinions, attitudes and values of teachers regarding instructional and curricular needs and of parents regarding school issues and school support. Several questionnaires have already developed for use in the Ethiopian curriculum validation process.

- 5) Interviews:** The interview is one of the "soft" data techniques which is used in combination with other information gathering to fill out the meaning of the information. Interviewing can get at interpretations and values and attitudes in ways that other survey techniques can not. While structured protocols can be used for the interviews with directors, parents and teachers, some unstructured questions can also be asked.
- 6) Paper-Pencil Tests and Scales:** Paper-pencil tests and scales refer to those techniques for gathering information about achievement, aptitude, diagnostic instruments concerning motivation, interest, personality, learning style, and knowledge. Little in the way of such tests or scales appear to have been developed in Ethiopia, but if the effects of the new curriculum are to be properly measured some type of norm and/or criterion referenced tests will need to be developed and administered at various grade levels.
- 7) Performance Tests:** A performance test is an information gathering technique for assessing complex and holistic actions and behaviors in a real or near real situation.

We would conclude this brief introduction to curriculum evaluation by stating that as wide an array of information collecting techniques as are possible and feasible should be used, given the severe time restrictions, the limited number of trained evaluation personnel, and the limitations of expenditures for paper, travel, and per diems.

Discussion Questions on the New Ethiopian Curriculum

The discussion questions which conclude this brief introductory presentation are based on observations and research by Ethiopian and foreign researchers, and from discussions by the author with teachers, curriculum developers, TTI instructors, and MOE officials, brief observations in classrooms, and from 32 years curriculum and teacher education experience in countries in Latin America, Asia, Africa, the Middle East, Europe and the United States.

1. What evidence exists of the quality of the new curriculum? Meets local, regional and national needs? Indicators? Attitudes of teachers and administrators? Meets international standards? Comparative study? Student achievement has risen? Criterion or Norm referenced tests? Student promotion? Student attendance? Student graduation rates?
2. Do teachers have access to the new curriculum syllabi and teachers' guides and if so do they actually use them? Evidence?
3. Do teachers and children have textbooks? How many? If so, do they actually use the books? Are the textbooks and other curricular materials interesting and age appropriate? Do children want to read them?
4. Has teaching behavior changed in any significant way through the use of the new curriculum? What teaching methods still predominate in Ethiopian classrooms? What do we know about helping teachers master new teaching techniques?
5. How effective have been the training sessions on helping teachers implement the new curriculum? How might they be improved? Could cluster groups be formed? Newsletters? Has an effective training model been developed? Is the multiplier model working?
6. Is "coverage" of the curriculum considered an evidence of actually learning the material? What incentives or disincentives are in place to encourage coverage as opposed to mastery of material?
7. What assessment techniques do teachers use to see whether their students actually understand the concepts being taught? Have teachers been trained in various forms of continuous student assessment?

8. Under the new automatic promotion schemes, what mechanisms are being put in place to assure quality does not suffer, and what remediation activities and materials are in place to help teachers deal with students who are not ready for the material in the syllabus of the next grade?
9. If the new curriculum is emphasizing an "integrated" approach to teaching in the primary grades, do the subject matter panels make sense, or should "grade level" panels be formed? Do panel members at the national and regional levels have experience teaching at the grade levels for which they are preparing materials, and should primary teachers be added to the panel?
10. How is time actually spent in the school? Is time wasted? Do classes start on time? Are children and/or teachers absent a lot?
11. How well do the teachers in the various regions actually read and write in the newly Latinized script of their mother tongue? What additional training is necessary for them to become truly "expert" in their own languages?
12. Other than a few basic texts, how many books, pamphlets and other materials exist for children to read in their mother tongue? In the absence of literacy materials, how can the schools begin to produce their own reading materials? How much actual writing, other than copying off the board to children do?
13. With large numbers of illiterate parents, what is the responsibility of the school in helping parents to learn the basics of literacy so as to help their children? Should parents be involved in curricular decisions? How?
14. How have each of the regions attempted to "localize" or "regionalize" the curriculum? Language? Examples? New books and texts?
15. How well does the supervision system work in promoting the goals of the new curriculum? What could be improved?
16. Do school directors/principals understand the new curriculum and its goals, and are they supportive of their teachers using new teaching techniques?
17. Does the new curriculum actually differ from the "old" curriculum in any meaningful way? If so, how and in what ways?
18. Given the class sizes in many town and city schools (50-100 children), what can be done to help teachers implement goals of active learning, inquiry, creativity and other goals of the new curriculum?
19. Are appropriate, inexpensive curricular materials available to help teachers teach in the "new" way? If not, what can be done to help provide them?
20. Are there gender differences in achievement, attendance, dropout, and graduation rates? Are there differences related to the gender of the teacher? To the nature of the curricular materials or teaching methods?
21. How well do elementary teachers read, write and speak English? Are students ready to attend grades 9-12 totally in English?
22. What role does educational radio currently play and how could be better utilized in English and the other subject areas?
23. Does the current timetable provide sufficient time for children to learn the curriculum? Should greater emphasis be given to literacy and numeracy in the earlier grades, with more emphasis on the other subjects in later grades?

24. What efforts are being made to meet the needs of the outstanding students, or do they get lost in masses of pupils?
25. What efforts are made to meet the needs of "special" children, who suffer from physical, mental, learning or other disabilities? Does the curriculum or teacher training speak to their needs?
26. Are the MED officials or regional education officers open to genuine "experimental" schools, where teachers are freed to try a range of new approaches, and to have some flexibility with the curriculum?
27. Are the newly Latinized languages capable of handling scientific and mathematical concepts up through the 8th or 12th grade level? Will there be sufficient literature, textbooks, and other materials available for later primary and perhaps eventually secondary and university level students? Are mechanisms in place to develop new materials?
28. What screening devices are in place to select teachers for entrance to TTIs and for quality controls on entrance to the teaching profession? General Knowledge tests? Pedagogical Tests? Subject Specific Tests? Student Teaching Ratings? Portfolios?
29. In the "upgrading" of the curriculum, are some of the concepts and ideas too advanced for the students for whom they are intended?

The various charts, tables and lists which follow in the appendices, are included because they are part of the overall Ethiopian Curriculum Workshop, although not part of this formal presentation of curricular theory, practice and evaluation.

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Effects of School Inputs, Teacher Attributes, and Pedagogical Practices
(Low Income Countries)
(Adapted from Fuller and Clark, 1994)

School/Teacher Factor	Number of Significant Effects: Number of Analyses	
	Primary	Secondary
School Spending		
1. Expenditure per pupil	3:6	3:5
2. Total school expenditures	2:5	---
Specific School Inputs		
3. Average class size	9:26	2:22
4. School size (enrollment)	7:8	1:5
5. Teaching tools		
Textbooks	19:26	7:13
Supplementary readers	1:1	2:2
Exercise books	3:3	---
Teaching guides	0:1	---
Desks	4:7	0:1
6. Instructional media	3:3	---
7. Quality of facilities	6:8	1:1
8. School library	16:18	3:4
9. Science laboratories	5:12	1:1
10. Child nutrition and feeding	7:8	1:1
Teacher Attributes		
11. Teacher's length of education		
Total years of schooling	9:18	5:8
Earlier measured achievement	1:1	1:1
Tertiary or teacher college	21:37	8:14
12. In-service teacher training	8:13	3:4
13. Teacher gender (female)	1:2	2:4
14. Teacher subject knowledge or language proficiency	4:4	---
15. Teacher experience	13:23	1:12
16. Teacher salary level	4:11	2:11
17. Teacher social class	7:10	---
Classroom pedagogy and organization		
18. Instructional time	15:17	12:16
19. Active, complex pedagogy	3:8	2:5
In-class written exercises	0:2	---
20. Frequent monitoring of pupil performance	3:4	0:1
21. Class preparation time	5:8	1:2
22. Frequency of homework	9:11	2:2
23. Teacher efficacy	1:1	0:1
24. Cooperative-learning task structure	---	3:3
School management		
25. School cluster membership	2:2	---
26. Independence from central government	---	0:1
27. Principal's staff assessment	3:4	0:1
28. Principal's training level	3:4	1:2
29. School inspection visits	2:3	0:1
30. Tracking or pupil segregation	1:1	---

Rating scheme for the Mathematics, Language Arts and Other Textbooks						
1	2	3	4	5	6	7
Not at all			To a moderate extent			To a great deal

Rating Question

1. To what extent are the textbooks aligned or easily connected to the syllabi?
2. To what extent are the textbooks aligned with the teacher's handbooks?
3. What is the quality of writing?
4. Are students capable of understanding the words?
5. Is the vocabulary age appropriate in the Ghanaian context?
6. Do the textbooks meet the stated objectives for the overall curriculum and help students achieve those objectives?
7. Do the concepts taught match what is the current best thinking by current international standards?
8. To what extent do they meet the varying needs of slow, average and gifted students?
9. Are concepts and ideas factual and presently accurately?
10. Do the materials promote self-directed learning?
11. Do they promote cooperative or group learning?
12. Are textbooks available and easily used by teachers?
13. Are they readily available and usable by students?
14. Are the textbooks interesting to students of that age?
15. Does the approach promote creativity, discovery learning and problem solving?
16. Are they developmentally appropriate?
17. Do they promote conceptual understanding as opposed to memorization of facts?
18. Are the exercises and end of chapter activities helpful to the learning process?
19. Is there an appropriate variety of drawings, photos, graphs, tables and other illustrations?
20. Are they graphically appealing to students?
21. Is the print of appropriate size and readable for students of a given age group?
22. Do they encourage a range of teaching styles?
23. Are they aligned with the books for earlier and later grades?
24. Do the books provide a wide range of concrete as opposed to abstract examples?
25. Are they sensitive to the cultural setting of Ghana?
26. Are they sensitive to the range of ethnic and tribal groups?

27. Do they use a variety of organizational signaling techniques to facilitate student learning. e.g. paragraphing, headings, levels of subordination and type sizes, headings and subheading in a logical, hierarchical relationship?
28. Is there a high interest level and a range of "seductive" topics or personally involving information for children?
29. Are there typographical and spelling errors in the book?
30. Are there errors of fact?
31. Is there a nice conversational tone and style?
32. Is there vocabulary assistance for the teachers and pupils?
33. Do the texts contain advance organizers to facilitate learning?
34. Is there gender sensitivity?
35. Is there careful consideration of word choice and word order, particularly in mathematics story problems?
36. Do they promote retention of both facts and concepts?
37. Are both process and product goals evident in the books?
38. Do the books relate to life outside the classroom?
39. Do they include both expository and narrative text?
40. Do they build on prior knowledge?
41. Do the textbooks actively involve the students?
42. Do they teach the students "how" to think, rather than what to think?
43. Do the books promote "in-depth" learning as opposed to superficial coverage?
44. Do they promote the student's affective involvement as opposed to strictly cognitive development?
45. Is there evidence of the books being successfully utilized in of Ghana?
46. To what extent are the ideas of the students encouraged or permitted by the texts?
47. Do the books promote class discussion?
48. Are the illustrations appropriately labeled to promote learning?
49. Is the content presented clearly?
50. Can the books be printed at a reasonable cost?
51. Are Supplemental Readers ever used and have children ever written their own texts?

Curriculum Myths

- Myth #1: The curriculum consists only or primarily of syllabi and teacher's guides.**
- Myth #2: The formal written curriculum is the most important component of the school curriculum in bringing about educational improvement.**
- Myth #3: Curriculum developers can create new curricula or change existing ones without the full involvement and cooperation of all interested parties.**
- Myth #4: Formal written curricula are neutral philosophically, psychologically and socially.**
- Myth #5: The formal school curriculum can contain most if not all of the important knowledge and concepts which and educated person needs.**
- Myth #6: Syllabi, guides and textbooks are sufficient components to educate children for the 21st century.**
- Myth #7: "Activities" or active learning are not necessary for children to genuinely understand the concepts and gain the necessary skills.**

- Myth #8: Multiple choice tests and other forms of "objective" testing are genuine tests of what children know and can demonstrate.**
- Myth #9: Children should be age-graded and grouped in classes of 30-60, to best teach them.**
- Myth #10: The spending of "time" in school, whether 5 or 7 hours a day, 30-40 hours per week and 1000 hours per year is sufficient for children to learn.**
- Myth #11: Classrooms with desks, chairs, blackboard and teacher are the best ways for children to learn.**
- Myth #12: Successful decentralization can be a top-down phenomenon, without any preparation or input at the local, Wareda, Zonal or Regional levels.**
- Myth #13: The teachers in the classroom can be ignored in the curriculum decentralization process.**
- Myth #14: It is sufficient to decentralize the curriculum without an extensive monitoring and evaluation system in place.**

Myth #15: There is one best way to go about the decentralization process.

Myth #16: The whole system has to be either centralized or decentralized.

Myth #17: A testing system with criterion-referenced, high stakes tests will not drive teaching in the classroom.

Myth #18: Coverage of material ensures that students will learn what is in the formal curriculum.

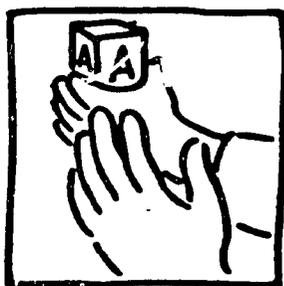
Myth #19: University professors and secondary teachers are the best designers of curriculum.

Myth #20: The members of the local community have nothing to contribute to the curriculum development process.

Myth #21: As long as the teachers cover the curriculum, children will learn.

Myth #22: Children's interest and motivation is not important in the learning process.

The National Education Goals



GOAL 1: Ready to Learn

By the year 2000, all children in America will start school ready to learn.

Objectives:

- All children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.
- Every parent in the United States will be a child's first teacher and devote time each day to helping such parent's preschool child learn, and parents will have access to the training and support parents need.
- Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain the mental alertness necessary to be prepared to learn, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.



Goal 2: School Completion

By the year 2000, the high school graduation rate will increase to at least 90 percent.

Objectives:

- The Nation must dramatically reduce its school dropout rate, and 75 percent of the students who do drop out will successfully complete a high school degree or its equivalent.
- The gap in high school graduation rates between American students from minority backgrounds and their non-minority counterparts will be eliminated.

Goal 3: Student Achievement and Citizenship

By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.



Objectives:

- The academic performance of all students at the elementary and secondary level will increase significantly in every quartile, and the distribution of minority students in each quartile will more closely reflect the student population as a whole.
- The percentage of all students who demonstrate the ability to reason, solve problems, apply knowledge, and write and communicate effectively will increase substantially.
- All students will be involved in activities that promote and demonstrate good citizenship, good health, community service, and personal responsibility.
- All students will have access to physical education and health education to ensure they are healthy and fit.
- The percentage of all students who are competent in more than one language will substantially increase.
- All students will be knowledgeable about the diverse cultural heritage of this Nation and about the world community.

Goal 4: Teacher Education and Professional Development

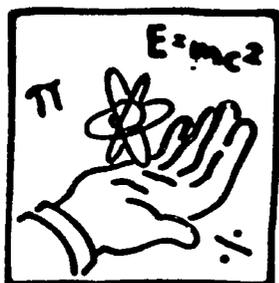
By the year 2000, the Nation's teaching force will have access to programs for the continual improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.



Objectives:

- All teachers will have access to preservice teacher education and continuing professional development activities that will provide such teachers with the knowledge and skills needed to teach to an increasingly diverse student population with a variety of educational, social, and health needs.
- All teachers will have continuing opportunities to acquire additional knowledge and skills needed to teach challenging subject matter and to use emerging new methods, forms of assessment, and technologies.
- States and school districts will create integrated strategies to attract, recruit, prepare, retrain, and support the continued professional development of teachers, administrators, and other educators, so that there is a highly talented work force of professional educators to teach challenging subject matter.

- Partnerships will be established, whenever possible, among local educational agencies, institutions of higher education, parents, and local labor, business, and professional associations to provide and support programs for the professional development of educators.

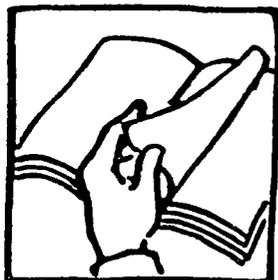


Goal 5: Mathematics and Science

By the year 2000, United States students will be first in the world in mathematics and science achievement.

Objectives:

- Mathematics and science education, including the metric system of measurement, will be strengthened throughout the system, especially in the early grades.
- The number of teachers with a substantive background in mathematics and science, including the metric system of measurement, will increase by 50 percent.
- The number of United States undergraduate and graduate students, especially women and minorities, who complete degrees in mathematics, science, and engineering will increase significantly.



Goal 6: Adult Literacy and Lifelong Learning

By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Objectives:

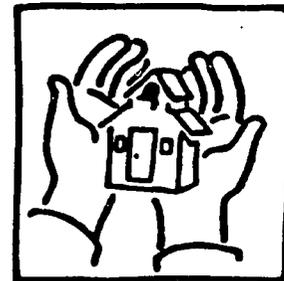
- Every major American business will be involved in strengthening the connection between education and work.
- All workers will have the opportunity to acquire the knowledge and skills, from basic to highly technical, needed to adapt to emerging new technologies, work methods, and markets through public and private educational, vocational, technical, workplace, or other programs.
- The number of quality programs, including those at libraries, that are designed to serve more effectively the needs of the growing number of part-time and midcareer students will increase substantially.
- The proportion of the qualified students, especially minorities, who enter college, who complete at least two years, and who complete their degree programs will increase substantially.
- The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially.
- Schools, in implementing comprehensive parent involvement programs, will offer more adult literacy, parent training and lifelong learning opportunities to improve the ties between home and school, and enhance parents' work and home lives.

Goal 7: Safe, Disciplined, and Alcohol- and Drug-free Schools

By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.

Objectives:

- Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol.
- Parents, businesses, governmental and community organizations will work together to ensure the rights of students to study in a safe and secure environment that is free of drugs and crime, and that schools provide a healthy environment and are a safe haven for all children.
- Every local educational agency will develop and implement a policy to ensure that all schools are free of violence and the unauthorized presence of weapons.
- Every local educational agency will develop a sequential, comprehensive kindergarten through twelfth grade drug and alcohol prevention education program.
- Drug and alcohol curriculum should be taught as an integral part of sequential, comprehensive health education.
- Community-based teams should be organized to provide students and teachers with needed support.
- Every school should work to eliminate sexual harassment.



Goal 8: Parental Participation

By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

Objectives:

- Every State will develop policies to assist local schools and local educational agencies to establish programs for increasing partnerships that respond to the varying needs of parents and the home, including parents of children who are disadvantaged or bilingual, or parents of children with disabilities.
- Every school will actively engage parents and families in a partnership which supports the academic work of children at home and shared educational decisionmaking at school.
- Parents and families will help to ensure that schools are adequately supported and will hold schools and teachers to high standards of accountability.



Content Standards

(from Douglas County, Colorado)
March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

Language Arts

- #1: The student demonstrates an *understanding of how reading provides insights* into his/her own life and into other times, places, people and ideas.
- #2: The student demonstrates the ability to *conduct research* through developing an idea and accessing and evaluating information from a variety of print, media and technological sources.
- #3: The student demonstrates the ability to *write meaningfully*. This includes the knowledge of writing processes; purposes for writing; potential audiences; and conventions of writing (e.g., grammar, capitalization, punctuation, spelling).
- #4: The student demonstrates the ability to *read meaningfully*. This includes a knowledge of comprehending strategies; a wide variety of reading materials; literary elements; text structures; purposes for reading.
- #5: The student demonstrates the ability to *communicate orally* for a variety of purposes and audiences.
- #6: The student demonstrates the ability to *understand and evaluate visual images* (e.g. film, computer-generated texts, illustrations, exhibits).

Language Arts Content Standard

(from Douglas County, Colorado, USA)

March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

Language Arts Standard #4: The student demonstrates the ability to *read meaningfully*. This includes a knowledge of comprehending strategies; a wide variety of reading materials; literary elements; text structures; purposes for reading.

Primary: (K-3)

1. Uses reading strategies to comprehend words in text (e.g. context clues, picture clues, phonic cues, word substitutions, rereading for meaning).
2. uses reading strategies (e.g. activating prior knowledge, determining what is important in text, visualizing, asking questions, previewing and predicting, drawing inferences, synthesizing information, self-monitoring) to comprehend texts (e.g. narratives, fiction, non-fiction).
3. Knows strategies for choosing appropriate texts to read for a variety of purposes.
4. Knows how literary elements (e.g. beginning/ middle/end, characters, setting, problem/solution) and expository text structure (e.g. key vocabulary, table of contents) can be used to make sense of text.

Intermediate (4-6)

1. Uses strategies to increase reading vocabulary (e.g. through reading and writing, investigating new and unfamiliar words).
2. Uses reading strategies (e.g. activating prior knowledge, determining what is important in text, visualizing, asking questions, previewing and predicting, drawing inference, synthesizing information, self-monitoring) to comprehend sophisticated text (e.g. poetry, directions, content-area reading).
3. Uses knowledge of an author's point of view to make sense of text.
4. Knows ho literacy elements (e.g. conflict/ resolution, figurative language) and expository text structure (e.g., glossaries, chapter headings, indexes, captions) can be used to make sense of text.

Middle School: (7-8)

1. Uses complex and diverse materials to read for a variety of purposes (e.g. technical writing, newspapers, magazines, manuals, poetry, short stories, plays, novels).
2. Knows how literary elements (e.g. theme, foreshadowing) can be used to make sense of text.

High School: (9-12)

1. Understands the variety of purposes for which complex and diverse fiction and nonfiction works are written (e.g. essays, speeches, autobiographies, first person historical documents, professional and technical journals, literary criticism and analysis).
2. Use knowledge of a writer's craft (e.g. author's use of vocabulary, character and plot development, description of setting, realistic dialogue, induction, deduction) to understand text.
3. Knows how to summarize and synthesize idea presented in various texts.
4. Knows how literary elements (e.g., mood, diction, idiom, shifts in perspective or time, style, point of view) can be used to make sense of text.

Content Standards

(from Douglas County, Colorado)
March, 1995

Mathematics

- #1: The student effectively uses a variety of strategies within the *problem-solving* process.
- #2: The student demonstrates an understanding of *number sense* and uses numbers and number relationships to solve meaningful problems, and communicates the reasoning used in solving these problems.
- #3: The student demonstrates an understanding of *computational skills* and techniques including *estimation, mental mathematics, paper and pencil, calculators, computers* and uses these to solve problems.
- #4: The student demonstrates an *understanding of measurement* and uses a variety of tools and techniques to solve problems.
- #5: The student demonstrates an understanding of *properties of geometry*, and uses these to solve problems.
- #6: The student demonstrates an understanding of the properties of *data collection and analysis, statistics and probability*, uses these to solve problems and communicates the reasoning and processes used.
- #7: The student demonstrates an understanding of *algebraic methods* used to explore, model and describe patterns and functions.

Mathematics Content Standard

(from Douglas County, Colorado, USA)
March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

Math Standard #1: Effectively uses a variety of strategies within the problem-solving process.

Primary (K-3)

1. Brainstorms possible things to do (guess and check, make a picture, make a chart.
2. Draws pictures to represent problems.
3. Uses pictographs to model problems in one-to-one correspondence.
4. Represents problem situations using physical objects.
5. Clarifies problems using discussions with teacher or knowledgeable others.
6. Uses guess and check to solve problems.
7. Clearly states problems in his or her own words.

Intermediate (4-6)

1. Checks the reasonableness of results through estimation.
2. makes attempts to verify solutions or results in situations where it is warranted.
3. Constructs physical models to understand problems.
4. Uses graphs to model problems.
5. Clarifies problems using discussions with peers.
6. Identifies a similar problem type to solve a problem.
7. Breaks larger problems into smaller problems.
8. Works backwards from the solution to solve a problem.

Middle School (7-8)

1. Uses substitution within given formula and expressions.
2. Constructs and uses models to solve problems.
3. Solves the same problem two or more different ways.
4. Effectively verifies solutions or results in situations where it is warranted.

High School (9-12)

1. Classifies problem-solving strategies or problem types by underlying general characteristics.
2. Represents problems using algebraic function and graphs of those functions.

Content Standards

(from Douglas County, Colorado)

March, 1995

Science

- #1: The student demonstrates the ability to *design, conduct, evaluate and present a scientific investigation.*
- #2A: The student demonstrates an understanding that *matter* has characteristic properties that are related to its structure.
- #2B: The student demonstrates an understanding that *energy* appears in different forms and can be transferred.
- #2C: The student demonstrates an understanding that *interactions between matter and energy* can produce changes in a system, although the total quantities of matter and energy remain unchanged.
- #3A: The student demonstrates an understanding of *characteristics of living things* and how they function.
- #3B: The student demonstrates an understanding of how *living things and their environment interact.*
- #3C: The student demonstrates an understanding of how *matter cycles and energy transfers* through living systems.
- #3D: The student demonstrates an understanding of how *species evolve* in response to changes in their environment.
- #4A: The student demonstrates an understanding of the *composition of the Earth*, its history and the natural processes that shape it.
- #4B: The student demonstrates an understanding of the general characteristics of the *atmosphere* and the fundamental processes of *weather.*
- #4C: The student demonstrates an understanding of major sources of *water*, its uses and importance, and its cyclic patterns of movement through the environment.
- #4D: The student demonstrates an understanding of the structure of the *solar system, dynamics of the universe, and how space* is explored.
- #5: The student demonstrates an understanding of ways that *science, technology and human activity have impact* on the world and its resources.

Science Content Standard
(from Douglas County, Colorado, USA)
March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

Science Standard #1: The student demonstrates the ability to design, conduct, evaluate and present a scientific investigation.

Primary (K-3)

1. Knows that evidence can be gathered from direct observations and simple experiments.
2. Understands the use of careful description in science and how it allows for comparison.

Intermediate (4-6)

1. uses scientific processes (observing, describing, comparing, classifying, questioning, recording) as methods of scientific investigation.
2. Knows basic features of evidence (e.g. based on observations and experiments, has reproducible results, new evidence can change current explanations).
3. Knows how to define and use variables and controls.
4. Knows how to select from and use a variety of scientific equipment and measuring devices (e.g., thermometers, magnifiers, rulers, balances) including metric-based instruments.
5. Knows how hypotheses are constructed and tested.
6. Understands that individuals can interpret the same information in different ways.

Middle School: (7-8)

1. Knows the difference among hypotheses, theory and scientific law.
2. Understands that scientific investigations may have alternative explanations and procedures.
3. Understands that all measuring devices and procedures have some degree of uncertainty (error).
4. Understands relationships between evidence and explanations.
5. Knows how to use metric units.
6. Understands the use of control in an experiment.

High School: (9-12)

1. Knows how to create and defend a written plan of action for scientific investigation.
2. Understands that scientific investigations, explanations and models are constructed and revised using evidence, logic, and by identifying and controlling variables.
3. Knows how to select and use appropriate technologies to gather, process and analyze data, and to report information related to an investigation.
4. Understands that scientists should take steps to safeguard objectivity.
5. Understands that scientific model may include inherent ambiguities and uncertainties, and experiments must be precisely replicated to verify scientific results.
6. Understands that new results may require the modification or abandonment of scientific theories or models.

Content Standards

HISTORY

- #1A: The student demonstrates an understanding of the *chronological organization* of historical events and major areas.
- #1B: The student demonstrates an understanding of the chronology of historical developments and events, and *historical causes and their effects*.
- #2A: The student demonstrates an understanding of how to interpret and evaluate *primary, secondary, and tertiary (research) sources of historical evidence*.
- #2B: The student demonstrates an understanding of how to *formulate historical questions, gather and analyze the historical data, and draw conclusions*.
- #2C: The student demonstrates an understanding of history by *connecting present-day issues with the events of the past*.
- #3A: The student demonstrates an understanding of how societies have been created and changed by the *movement and interaction of peoples and cultures*.
- #3B: The student demonstrates an understanding of the *development of the culture and history of societies*.
- #4A: The student demonstrates an understanding of the *impact of scientific and technological developments* on individuals and societies.
- #4B: The student demonstrates an understanding of how *economic factors* have influenced history.
- #5A: The student demonstrates an understanding of how *democracy* evolved and the ideas events and people that play significant roles in that evolution.
- #5B: The student demonstrates an understanding of the historical development of *various forms of government*.
- #5C: The student knows how governments and different factions have attempted to *resolve conflict* throughout history.
- #6A: The student demonstrates an understanding of the historical significance of *religions and philosophical beliefs*.
- #6B: The student demonstrates an understanding of how *cultural activities (art, literature, architecture, sports, music)* can reflect and shape the beliefs and values of an era.

History Content Standard
(from Douglas County, Colorado, USA)
March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

History Standard #2B: The student demonstrates an understanding of how to formulate historical questions, gather and analyze the historical data, and draw conclusions.

Primary: (K-3)

1. Knows how to use historical pictures, photographs and artifacts.
2. Knows how to obtain historical information about families and the local community (e.g. interviews, newspapers, museums).

Intermediate: (4-6)

1. Knows how to gather information through oral history and interviews.
2. Knows how to use information from historical maps, charts, graphs and diagrams.
3. Understands that many factors (e.g., political, social, economic) contribute to historical events.

Middle School: (7-8)

1. Knows how to formulate historical questions based on a variety of sources (e.g., documents, diaries, artifacts).

High School: (9-12)

1. Knows how to apply the historical method of inquiry to interpret history (the historical method of inquiry is: 1. consistent gathering of data; 2. interpreting that data; and 3. formulating a conclusion.

History Standard #2C: The student demonstrates an understanding of history by connecting present-day issues with the events of the past.

Primary: (K-3)

1. Understands that people of the past and present have both similarities and differences.

Intermediate: 4-6)

1. Understands how characteristics of place and time influence the development of events or actions.

Middle School: (7-8)

1. Knows that interpretations of history are tentative and subject to change based on new information, new interpretations and changing social values.
2. Knows how to support a decision or position regarding an issue, using historical information and interpretation.

High School: (9-12)

1. Knows how to recognize parallels between historical events and present situations and evaluate similarities, differences and consequences.

Content Standards

(from Douglas County, Colorado)
March, 1995

Geography

- #1: The student demonstrates an understanding of how to *locate groups of people, places and environments on the Earth.*
- #2: The student demonstrates an understanding of the *physical and human characteristics of places.*
- #3: The student demonstrates an understanding of the *concept of regions.*
- #4: The student demonstrates an understanding of the relationship of geography to the *concept of culture.*
- #5: The student demonstrates an understanding of the *physical processes that shape patterns on the Earth.*
- #6: The student demonstrates an understanding of how *human migration and settlement* affect the lives of people and the environment.
- #7: The student demonstrates an understanding of how *physical and human systems are connected and interact*, and the consequences of this interaction.
- #8: The student demonstrates an understanding of how geography is used to *interpret the past and the present and consider the future.*

Geography Content Standard

(from Douglas County, Colorado, USA)

March, 1995

Definition: A content standard is a statement that describes what a student should know and be able to do in a specific subject.

Geography Standard #1: The student demonstrates and understanding of how to locate groups of people, places and environments on the Earth.

Primary: (K-3)

1. Knows the location the location of home, school, neighborhood, community, state, country.
2. Knows various land forms and environmental features (e.g, hills, forests, streams, flood plains, delta).
3. Knows how to use symbols and term related to location, distance, direction (e.g., compass rose, cardinal directions, map grid, key).
4. Understands the difference between maps and globes.

Intermediate: (4-6)

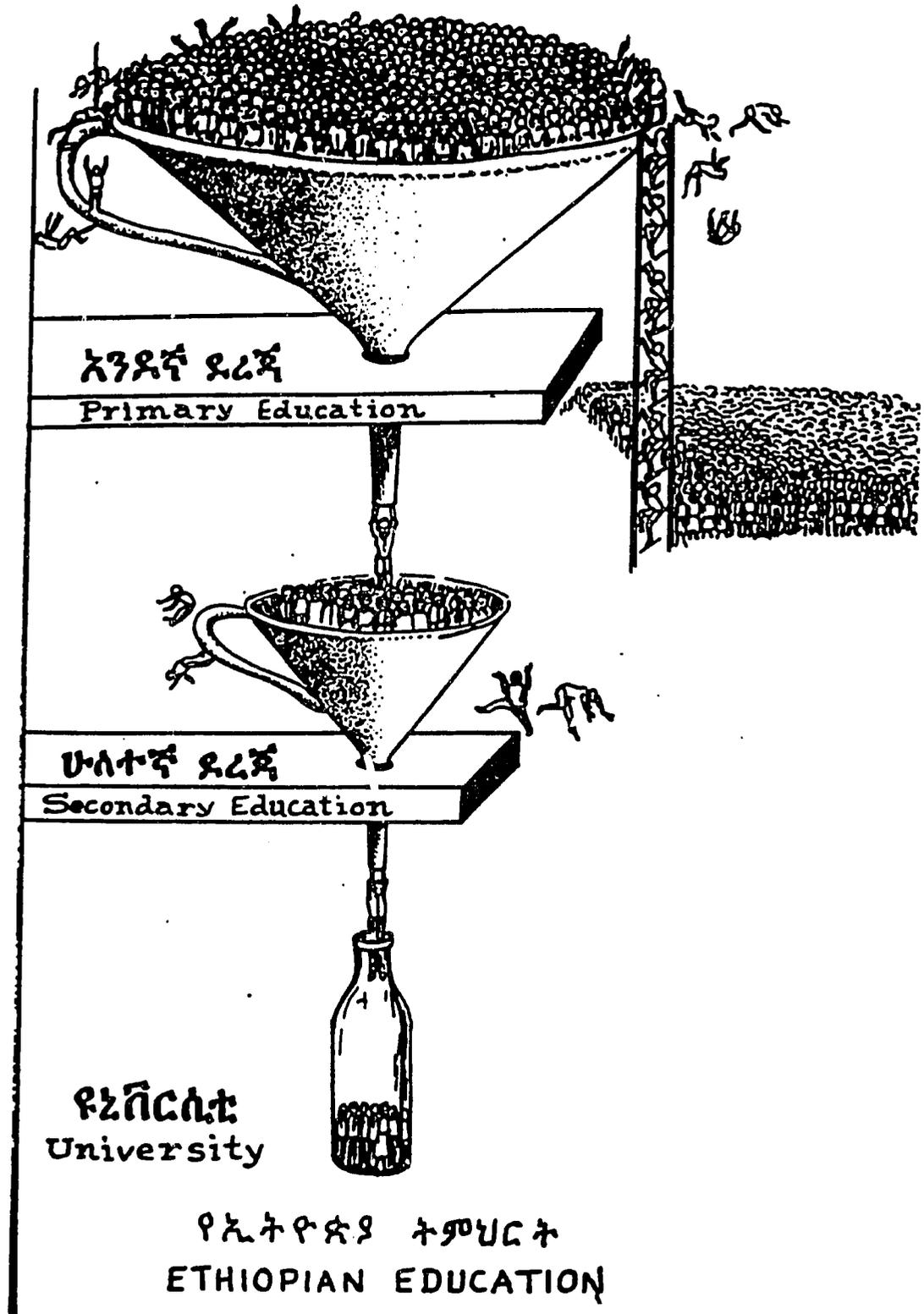
1. Knows how to interpret and display information on maps, globes, graphs, pictures, charts and tables.
2. Knows the location of the major physical and cultural features in the United States (e.g., Rocky Mountains, Great Plains, Midwest, major cities, bodies of water).
3. Knows how to use symbols and terms related to location, distance, direction (e.g. scales, intermediate directions, latitude, longitude, projections).
4. Knows the names and location of continents and oceans of the world.

Middle School: (7-8)

1. Knows the location of the major physical features, countries and cities of the various regions.
2. Knows how to use latitude and longitude to locate places and calculate time differences between places.
3. Understands concepts such as axis, rotation, revolution and great circle routes.
4. Knows how to read, use and construct thematic maps, graphs, charts, globes and geographic databases.

High School: (9-12)

1. Knows how to use maps and other graphic representations to depict geographic problems.
2. Knows the absolute and relative location of areas studies.
3. Knows how to use technologies to represent and interpret the Earth's physical and human systems (e.g. , aerial photos, topographic maps).



HOWARD GARDNER'S SEVEN INTELLIGENCES

LINGUISTIC

LOGICAL--
MATHEMATICAL

SPATIAL

MUSICAL

BODILY --
KINESTHETIC

INTERPERSONAL

INTRAPERSONAL

Learning Style Inventory (Kolb)

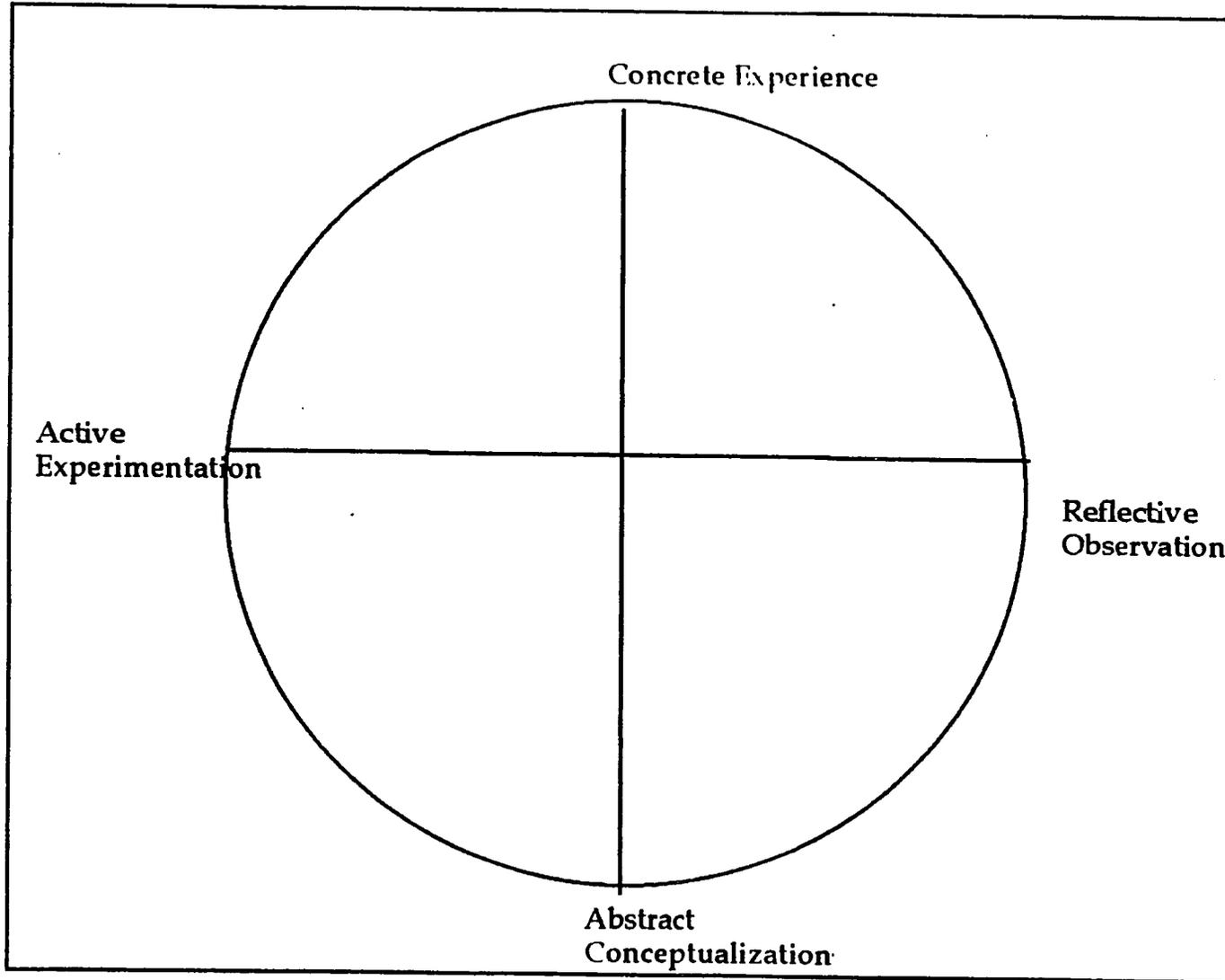
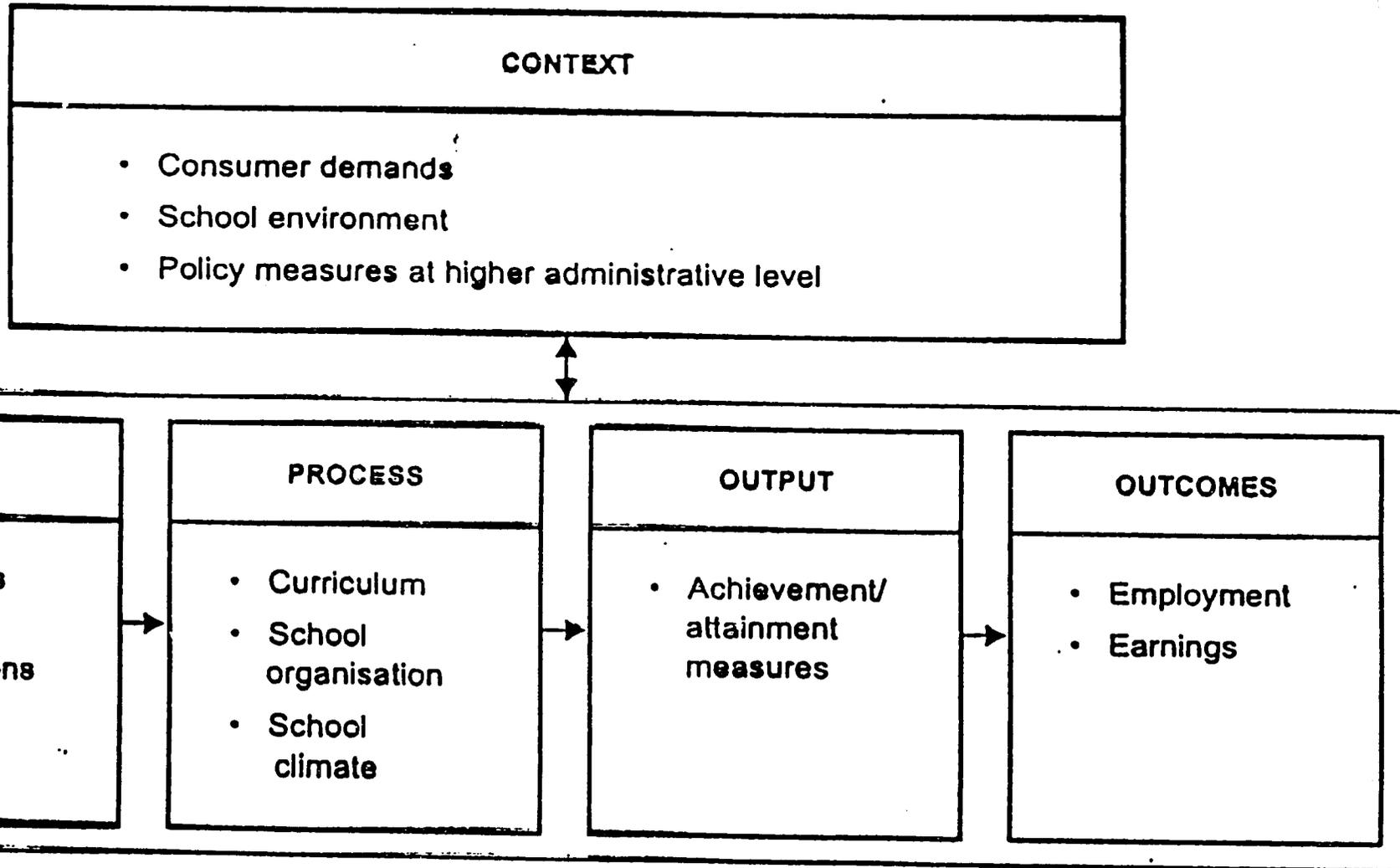


Figure 1. "Context-input-process-output-outcome"
model of schooling



Influences on Curriculum Decision Making

Influences	Predominant Level of Involvement	Example of a Goal/Demand	Influence on Policies	Influence on Specific Curricula	Influence on Teaching Methods
Local community	School	Local history for bicentennial celebration	Low	Low	Low
Students	School	New class in music	Low	Low	Medium
Parents	School	Audiovisual equipment for school library	Low	Low	Low
School boards	School	Local work-experience programs	Medium	Medium	Low
Teachers unions	State	Reduced class sizes	Medium	Medium	Low
Professional associations	State/national	Professional development opportunities	Medium	High	High
Colleges/universities	State/national	Stimulate interest in new reading approaches	Medium	Low	Low
News media	State/national	Literacy and numeracy	Medium	Low	Low
State/national education agencies	State/national	Core curriculum	Low	Low	Low
Textbook publishers	State/national	Standard delineations of topics	Low	High	Medium
Testing agencies	State/national	Literacy levels	Medium	High	Low
Employers	State/national	Basic skills	Medium	Medium	Low
State government	State/national	Driver education	Medium	Low	Low
Federal government	National	Transition to work program	Low	Low	Low

Initial Conditions for Decentralization

Initial conditions arrayed on scale of largest to smallest difficulty in implementing decentralization.

Government Finance	Political Context	Administrative Structure	Historical Context
Direct central government provision of educational inputs to local schools.	Decentralization policy introduced by the central government, consultation with affected groups and associated with a particular political or political party.	Constitution assigns responsibility for education to central government; lack of administrative capacity at local level.	Tradition of dependence by local communities on the central government.
Conditional cash grants for specific project or functions	Decentralization advocated by the central government with consultation with affected groups and with broad political support.	Central government administrative tasks already deconcentrated to the regional or local level.	Tradition of self-reliance by local communities and spirit of competition between communities.
Unconditional educational block grant or earmarked shares of central government tax revenues	Pressure for decentralization originates at the local level and with affected groups, including parents, teachers, and local government officials.	Some educational decisionmaking given to local authorities, and local authorities permitted to raise some educational revenues.	
Large, local-government own-source revenues from taxes and voluntary cash and in-kind contributions.		Local authorities given significant decisionmaking responsibilities, resulting in development of local administrative capacity.	

(Adapted from Winkler (1989) World Bank)

International Standards on Reading and Literacy

The following standards are adapted from documents from the International Reading Association, U.S., New Zealand, Australia and British literacy experts, ESL experts and a range of other organizations and individuals dealing with literacy.

1. Parents play roles of inestimable importance in laying the foundation for learning to read.
2. Parents have an obligation to support their children's continued growth as readers.
3. Early primary programs should emphasize oral language and writing as well as the beginning steps in reading.
4. Phonics instruction improves children's ability to identify words.
5. Reading primers should be interesting, comprehensible and instructive.
6. Both oral and silent reading are important for the beginner.
7. Reading lessons should stress understanding and appreciating the content of the selection.
8. Readability formulas are useful only as a rough check on the difficulty and appropriateness of books.
9. School textbooks should be rich with important concepts and information.
10. Teacher need to teach comprehension strategies directly.
11. Workbook and skill sheet tasks take too much of the time allotted for reading.
12. Students should do more extended writing.
13. Priority should be given to independent reading.
14. Effective teachers create a literate environment for their children.
15. Grouping by ability may slow the progress of low-ability students.
16. More comprehensive assessments of reading and writing are needed.
17. Tests need to reflect the ultimate goals of reading instruction.
18. The proper attitude toward standardized testing is one of balance.
19. Improving reading instruction is not possible without good teachers.
20. Teacher education programs need improvement.
21. Schools should make special provisions to ease the induction of newcomers into the teaching profession.
22. The ethos of the school should promote literacy.

Percent of Curriculum devoted to 10 major content areas and GNP per capita in the 1980s

(Benavot and Kamens (1989))

Primary Education First Cycle : Grade 4 (Ethiopia)

Curriculum Content	Ethiopia	GNP per Capita Level			
		Low	Lower Middle	Upper Middle	High
Language	42.8	37%	34%	36%	34%
Mother Tongue	(11.4%)	(37%)	(34%)	(36%)	(34%)
English	(14.3%)				
National Language	(17.1%)				
Math	14.3	18	17	18	19
Science	14.3	7	9	8	6
Social Studies	11.4	8	10	9	9
Moral	0	5	6	4	5
Music and Art (cult.st.)	11.4	9	8	11	13
Physical Education	5.7	7	6	7	9
Hygiene	?	1	2	2	1
Vocational Subjects	0	6	7	3	1
Agriculture					
Life Skills					
Other		3	3	2	3
Total	100%	100%	100%	100%	100%

Percent of Curriculum devoted to 10 major content areas and GNP per capita in the 1980s

(Benavot and Kamens (1989))

Primary Education Second Cycle : Grade 6 (Ethiopia)

Curriculum Content	Ethiopia	GNP per Capita Level			
		Low	Lower Middle	Upper Middle	High
Language	34.7%	37%	34%	36%	34%
Mother Tongue	(8.6%)	(37%)	(34%)	(36%)	(34%)
English	(14.3%)				
National Language	(11.4%)				
Math	14.3	18	17	18	19
Science	14.3	7	9	8	6
Social Studies	11.4	8	10	9	9
Moral	0	5	6	4	5
Music and Art (cult.st.)	17.1	9	8	11	13
Physical Education	8.6	7	6	7	9
Hygiene	0	1	2	2	1
Vocational Subjects	0	6	7	3	1
Agriculture					
Life Skills					
Other	0	3	3	2	3
Total	100%	100%	100%	100%	100%

**Comparative Approaches to Literacy/Language Arts Curriculum and Syllabi
(Kraft, 1994)**

Topic	Third World	First World
1. Length and Detail:	2-4 Pages	10-15 pages
2. Philosophy:	Implicit	Explicit
3. Teacher/Student:	Skill Development Teacher Centered	Whole Language Learner Centered
4. Assessment/ Evaluation:	Teacher Evaluation Activity	Student Level of Proficiency
5. School/Community:	School Centered	School and Community
6. Mastery:	Presentation of material	Mastery level of material
7. Teaching Hints/ Methods:	Teaching Hints	Teaching hints reserved for handbooks, modules, texts.
8. Objectives	No broad, many specific objectives	Several broad, many specific "outcomes."
9. Input/Output	Input model	Output model
10. Process/Product	Product	Process
11. Instruction	Large group	Cooperative learning, group, and individual learning.
12. Student role	Passive recipient	Active creator of knowledge
13. Cognitive/Affective	Cognitive	Cognitive and Affective
14. Emphasis	Grammatical Knowledge	Demonstration of ability to listen, read, write and speak
15. Methodology	Memorization/ role	Reading, writing, researching often individually
16. Learners	2nd language	1st language
17. Materials	Textbooks	Books, supplementary readers, library, etc.
18. Technology	None	Computers, video and other technology to assist
19. Grouping	None	Reading groups by ability
20. Preparation	By National Curriculum Experts	By local teachers
21. Subject matter	Separate Subject	Interdisciplinary
22. Time	10-35% of curriculum	30-50% of Grade 1-3 Curriculum

How well does the current Ethiopian mathematics curriculum meet current standards? Based on standards now in use around the world.

Number

Increased Attention

- Number sense
- Place-value concepts
- Meaning of fractions and decimals
- Estimation of quantities

Decreased Attention

Early attention to reading, writing and ordering numbers symbolically

Operations and Computation

- Meaning of operations
- Operation sense
- Mental computation
- Estimation and the reasonableness of answers
- Selection of an appropriate computational method
- Use of calculators for complex computation
- Thinking strategies for basic facts

Complex paper-and-pencil computations
Isolated treatment of paper-and pencil computations
Addition and subtraction without renaming
Isolated treatment of division facts
Long division
Long division without remainders
Paper and pencil fraction computation
Use of rounding to estimate

Geometry and Measurement

- Properties of geometric figures
- Geometric relationships
- Spatial sense
- Process of measuring
- Concepts related to units of measurement
- Actual measuring
- Estimation of measurements
- Use of measurement and geometry ideas throughout the curriculum

Primary focus on naming geometric figures
Memorization of equivalencies between units of measurement

Probability and Statistics

- Collection and organization of data
- Exploration of chance

Patterns and Relationships

- Pattern recognition and description
- Use of variables to express relationships
- Word problems with a variety of structures
- Use of everyday problems
- Applications
- Study of patterns and relationships
- Problem-solving strategies

Use of clue words to determine which operations to use

Instructional Practices

- Use of manipulative materials
- Cooperative work
- Discussion of mathematics
- Questioning
- Justification of thinking
- Writing about mathematics
- Problem-solving approach to instruction
- Content integration
- Use of calculators and computers

Rote practice
Rote memorization of rules
One answer and one method
Use of worksheets
Written practice
Teaching by telling