



**UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA**

**PUBLIC ADMINISTRATION, HUMAN RESOURCES
AND SOCIAL DEVELOPMENT DIVISION**

**Ad hoc Experts Group Meeting on Assessment of
Confidence Building Factors in School Curricula
(18-21 October 1993, Addis Ababa, Ethiopia)**

**CURRICULUM DEVELOPMENT AND EVALUATION
FOR SOCIO-ECONOMIC DEVELOPMENT IN AFRICA:
THE EXPERIENCE OF THE AFRICAN CURRICULUM ORGANIZATION**

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INTRODUCTION

This paper seeks to discuss the following:

- * The need for education for various peoples of the continent of Africa.
- * The establishment and objectives of the African Curriculum Organization.
- * Cooperation between the African Curriculum Organization and the German foundation for International Development.
- * Need to understand the process of Curriculum Development.
- * Six week Courses by the African Curriculum Organization.
- * Objectives of the course by the African Curriculum Organization.
- * Need for a comprehensive understanding of the various models of Curriculum Development.
- * Suggested practical process of Curriculum Development
- * Impact of objectives in Curriculum Development.
- * Definition of National objectives of Education.
- * Some Examples of National objectives of Education.
- * Objectives in Curriculum Evaluation.
- * Objectives in the selection of content and learning experiences.
- * Implications of Policy statements and Directives for Curriculum Development
- * Problem of articulation of objectives of education.
- * Problem of inadequate understanding of the process of Curriculum Development.
- * Lack of planning for the dynamic nature of Curriculum Development
- * Lack of finance for a periodic review of the curriculum.
- * The role of the African Curriculum Organization
- * Action for the future.

NEED FOR EDUCATION

Africa invests in education in order to achieve a myriad of economic, political and cultural objectives. Our people have come to expect and to demand that an expanding adult literacy programme and free primary education should enhance the social mobility of the poor.

Secondary education is needed in an expanding economy in order to perform technical and administrative functions and to replace expatriates. On the other hand, university graduates are needed in order to supply professional and managerial skills required in both the public and private sectors of our economies.

As people we expect schooling to contribute to political, socialization and cultural homogenization. We consider formal education to be an engine of economic growth and the more schooling for each individual in society, the better for humanity.

Since the independence of our respective nations, we have all come to accept that for the poor, more education is the only hope for our children to join the middle class of society.

The transformation of a system of elite education which trains only a small proportion of the school age population to a system of mass education is the fulfilment of a pre-independence promise to the peoples of Africa. Now the promise is to provide universal access to education for as many years as possible. Universal literacy is a main objective for the adult community.

The social demand and the political pressure for more and more education for our people has come from all levels of the social stratum, and our people have come to believe that the more schooling and certificates our children can get, the better will be their chances of finding secure and well paying employment.

Education has come to be considered to be a vehicle for the economic growth of the individual, his family, the community in which he lives and national development. The objectives of education as perceived by both parents and children are translated into a rapidly increasing demand for primary, secondary and higher education.

The demand for more education has resulted in a phenomenal increase in school enrolments. In many of our African countries, the enrolments have increased five fold since political independence, and because of our limited financial resources, our countries have not been able to maintain a satisfactory level in the provision of all the facilities needed to sustain the educational system at an acceptable level of efficiency.

The direct implications of the expanded and continuously expanding educational system of our countries and the growing inadequacy of the facilities for teaching

and learning, are that the quality of education may continue to degenerate unless governments and educators come to accept the challenge of development with dedication and commitment.

It has always been the objective of our nations to seek to promote effective teaching and efficiency in learning. The problem is to find the means to achieve this purpose.

The task before us all is vast and it requires expertise and cooperation not only among professional colleagues as individuals but also among and between nations.

Given the limited human and financial resources that are available to its member countries, the need for relevant research in teaching and learning, the preparation of appropriate curriculum materials which take account of all of the influences at work in our particular and differentiated environments, it was resolved to establish the African Curriculum Organization whose ultimate objective was to contribute to the total effort to promote the quality of education for the benefit of the children of the continent of Africa, and more particularly, Anglophone Africa.

THE ESTABLISHMENT OF THE AFRICAN CURRICULUM ORGANIZATION

The founding of the ACO was preceded by two major events - one at the international level and the other at the African level. Granna (in Sweden) was the venue of an international curriculum seminar in 1971, at the end of which an International Organization was formed. Not much has been heard of that Organization since then, but its founders are still active in the areas of curriculum development and evaluation.

One of the recommendations of the Granna Seminar was the organization of regional follow-up seminars. The African Regional Seminar held in Ghana in 1975 was the first and only one of the follow-up seminars. It was sponsored by HEP, and was attended by leaders of Curriculum Development Centres from the English-speaking countries of Africa as well as the Republic of Cameroon. Resource persons were drawn from Universities in Africa, the UNESCO Regional office for Education in Africa (BREDA), the United States, West Germany, and other parts of the world. Participants, at the end of the Seminar decided to set up a Committee to work out the modalities for the formation of an African Curriculum Organization.

The Committee met at the University of Ibadan early in 1976 and drew up a Constitution for the Organization. In addition to circulating the constitution for adoption by African countries, the Committee also presented it before the Fourth Conference of Ministers of Education of African Member States of UNESCO

(MINDEF IV) held in Lagos in 1976. The Conference, in its **Recommendation 15** endorsed the formation of ACO and urged all African countries and UNESCO to give it all the support it deserves.

In September, 1976, the formal launching of the African Curriculum organization took place at the University of Ibadan. This event coincided with the first formal training programme of the Organization which dealt with data collection and analysis in curriculum development and evaluation. The Representative Council of the African Curriculum Organization (the major governing body) also held its first formal meeting during that period. It was at that meeting that it was decided that the Secretariat of the Organization should be based at the Institute of Education, University of Ibadan, Nigeria.

THE MANDATE OF THE AFRICAN CURRICULUM ORGANIZATION

The major mission of the African Curriculum Organization was envisaged to be active collaboration among Curriculum Development Centres for the training of indigenous manpower for curriculum development in the various African countries. At the wake of independence, most African countries set a variety of machinery for educational reform. To give effect to such educational reform, Curriculum Development Centres had to be set up. The professional staff of these centres needed training in the art and science of their new tasks. This had to be a combination of on-the-job and institute-based training.

In addition, innovations in the area of education, and more specifically in the field of curriculum, were going on in the various parts of the continent of Africa. There had to be a way of getting these innovations known to other countries within the continent. The African Curriculum Organization was to provide one forum for the exchange that the existence of innovative projects called for.

The mission of the African Curriculum Organization is best spelt out in its Constitution, as being made up of the following tasks:

- (i) assisting member countries to create national centres for curriculum development where they do not exist and strengthening existing ones;
- (ii) establishing a network of communications among curriculum development centres with ACO serving as a clearing house for the exchange of information on selected aspects of curriculum development in Africa through conferences, workshops, publications etc.;
- (iii) organizing and/or sponsoring joint training programmes, workshops, seminars and regular meetings of curriculum materials among Curriculum Development Centres;

- (iv) promoting production and exchange of curriculum materials among Curriculum Development Centres;
- (v) encouraging and promoting joint curriculum research programmes as well as the exchange of research information;
- (vi) setting up task forces to carry out specific projects in curriculum development and research;
- (vii) providing opportunities for the exchange of curriculum specialists and personnel between centres;
- (viii) developing a directory of personnel for consultancy work;
- (ix) establishing a working relationship with similar organizations in various parts of the world;
- (x) carrying out such functions as the Representative Council may determine from time to time.

These broad objectives have guided the activities of the African Curriculum Organization since its inception in 1976. The Organization has succeeded in achieving some of the objectives which were prescribed by its founding fathers while it has not quite succeeded in others.

DSE/ACO PROGRAMME OF COOPERATION SINCE 1976

For the centres to carry out their mandate and to achieve their objectives, they needed trained professional manpower. Towards this end, DSE/ACO have collaborated in setting up and sponsoring both long and short term training programmes. The long term training programmes include the M.Ed. Programme in Educational Evaluation in Ibadan, Nigeria, Postgraduate Diploma in Systematic Curriculum Development in Nairobi and the Science Education Training Course at Njala in Sierra Leone. The short term intensive courses have been many and varied and have covered a wide range of topics in the field of curriculum development, evaluation and research.

The intensive (short term) courses were an annual event from 1976 to 1984. In chronological order, the following were the courses run by ACO and financially supported by DSE:

- (i) Techniques of Data Collection in Educational Research and Curriculum Development (Ibadan, Nigeria: September, 1976).
- (ii) Techniques of Curriculum Development (Dar es Salam, Tanzania: November/December, 1977).

- (iii) Curriculum Material Production (Banjul, the Gambia: July/August, 1978).
- (iv) Curriculum for Early Childhood Education (Nairobi, Kenya: July/August, 1979).
- (v) Environmental Education in the School Curriculum (Lusaka, Zambia: November/December, 1979).
- (vi) Curriculum for Teacher Education (Lusaka, Zambia: November/December, 1980).
- (vii) Curriculum for Primary Science (Maseru, Lesotho: September, 1981).
- (viii) Book Production Techniques (Ibadan, Nigeria: March, 1983).
- (ix) Book production Techniques (Eastern and Southern Africa: Domasi, Malawi: April, 1984).

It was in 1976 that the cooperation between the German foundation for International Development (DSE) and the African Curriculum Organization (ACO) was agreed upon. This was soon after the ACO was founded and it was on the occasion of the Achimota Seminar in Ghana in 1976. In September, 1976, in Ibadan, Nigeria, it was agreed that the cooperation envisaged would be for an initial period of five years (1976 - 1980). At a review conference in Swaziland in 1982, the programme of cooperation was evaluated and it was agreed that it should be extended for a further period of five years (1981 - 1985).

The African Curriculum Organization had presented to DSE a programme proposal which was intended for ten years and the budget estimate for that purpose was set at 16 Million German Marks out of which the Federal Republic of Germany was expected to provide 4 Million German Marks. The same programme proposal had been based on an initial training need analysis which estimated that there were approximately 500 professional staff of eighteen to twenty National Curriculum Development Centres who would need professional training. It was then that it was decided that DSE would support two training programmes, one on curriculum evaluation at the International Centre for Educational Evaluation in Ibadan, Nigeria and the other on Science Education at Njala University College in Sierra Leone. In addition, there was a course on Curriculum Development which was established in Nairobi, Kenya. This particular training programme was supported by German Foundation for Technical Cooperation (GTZ). But since 1984, the scholarships for the students in that programme were provided by DSE. Altogether there have been 157 professional staff of the various Curriculum Development Centres who have benefited from the DSE scholarship programme. So far this has been at an estimated cost of about 3 Million Marks, an average of 20,000 German Marks per student.

In addition to the long term training programme, there have been annual seminars under the DSE/ACO sponsorship and three study tours which have altogether assembled about 400 professionals from the Curriculum Development Centres.

The amount of money on these short term courses is estimated at 2.5 Million Marks. Together with the DSE scholarships made available for the Curriculum Development Diploma Course at Kenyatta University College (now Kenyatta University) since 1984, there has been a total DSE investment into the DSE/ACO programmes of well over 6 Million German Marks an amount which is far greater than the originally agreed sum of 4 Million German Marks over the period.

The main target groups for the DSE/ACO training programmes included the Directors of Curriculum Development Centres, professional staff of the Centres and others within the educational systems with related work responsibilities. It was estimated that up to 500 professionals would need some training over the period of the agreed DSE/ACO cooperation.

In the main, the course participants were to be graduates working within the Curriculum Development Centres or who are expected to participate in the programme activities of the National Curriculum Development Centres. They were to be selected by the Curriculum Development Centres in collaboration with the Ministry of Education of the country concerned.

CURRICULUM DEVELOPMENT CENTRES

Curriculum Development Centres which are members of the African Curriculum Organization are Anglophone countries scattered throughout the continent of Africa.

Since the attainment of political independence, various African governments have established Curriculum Development Centres. In terms of structure, location and control, there are two main groups of centres.

There are centres which function as an integral part of a Ministry of Education. They operate just like any other department or unit which comes under the Ministry of Education. They are a part of the formal administrative structures of the Ministry of Education. Examples include the Kenya Institute of Education, the Curriculum Development Unit in Zimbabwe as well as the one in Botswana.

The second category of centres are those that are semi-autonomous and hence tend to operate outside the immediate bureaucratic control or administrative structure of the Ministry of Education. They are normally established by a special legal instrument and are administered by a Board of Governors. The Director of the centre is responsible for its day to day operations and he reports directly to the Board of Governors which is the policy making body for such Centres. Examples include the Institute of Education in Dar es Salaam and the Malawi Institute of Education.

Irrespective of the administrative structure and control of a centre, they all work closely and collaborate with the Ministry of Education which has a direct interest and influence on the policies of the centres and are responsible for the formulation

of education policy and priorities. In the main, the Ministries of Education provide finance for the day to day operations of the centres.

Analysis of the functions of these Curriculum Development Centres shows that there are variations from country to country. However, the following functions appear to be common to virtually all the Centres.

They all:

- (a) participate in varying degrees in the formulation of policies and national objectives for education;
- (b) assist in the design of the school curriculum and its implementation;
- (c) design and prepare syllabuses as well as an appropriate scope and sequence in order to facilitate teaching and learning;
- (d) prepare instructional materials to support the various subject syllabuses including the preparation of pupil textbooks and accompanying teachers' guides;
- (e) conduct educational research studies and evaluate instructional materials and educational programmes;
- (f) conduct in-service courses, seminars and workshops for appropriately selected target groups within the education system;
- (g) undertake studies leading to the development of new curricula, new forms of organization and new education practices;
- (h) undertake projects and provide teacher education programmes aimed at improving course content and learning teaching practices
- (i) establish resource centres for developing teaching and learning materials in certain key areas of the country for use by the teachers in their retraining programmes;
- (j) develop low cost teaching aids and organize and monitor the training of teachers in the production and use of such teaching aids.

TRAINING IN CURRICULUM DEVELOPMENT

As a result of the evaluation study which was conducted in 1987, it became clear that a more effective programme of training was essential. All the Curriculum Development Centres stated that their professionals were either inadequately trained for their responsibilities or not trained at all. The view expressed was that the training should include both theory and a significant element of practice. Even

those who had degrees or diplomas in Curriculum Development had been found to be unable to translate Theory into Practice.

The demand for a longer practically oriented training programme was such that the German Foundation for International Development and the African Curriculum Organization agreed to conduct a six weeks course over a period of years, whose venue would move from country to country within the Region. These took place as follows:

Malawi	April/May	1987
Kenya	August/Sept	1988
Mauritius	July/August	1989
Gambia	Sept/Oct	1990

Course Participants

Course participants consisted of persons who were directly or indirectly involved in curriculum development as follows:

1. Non-graduate curriculum development workers,
2. Graduates in Curriculum Development Centres,
3. Teachers' College Tutors, and Secondary School teachers,
4. Persons employed in Teacher Advisory and Education Resource Centres,
5. Instructional supervisors including Inspectors of Schools.

Objectives of the course

The general objectives of the course were to:-

1. Acquaint participants with the concepts and techniques of curriculum development
2. Give participants practical orientation in the processes and techniques of curriculum development.

3. Stimulate interest in and inculcate the habit of self-development in curriculum development and evaluation.

Specific Objectives

More specifically, at the end of the course, participants were expected to be able to:-

1. Explain the difference between curriculum planning and curriculum development.
2. Discuss the process of curriculum planning, development and implementation.
3. Describe a number of curriculum development models.
4. Explain the role of objectives in curriculum planning and development.
5. Name and describe selected curriculum designs.
6. Explain how to select content for an approved curriculum.
7. Explain how to select learning experiences for a subject at a chosen level of education.
8. Explain the concept of evaluation.
9. Discuss some models of evaluation in terms of their usefulness in the African context including their advantages and disadvantages.
10. Formulate objectives for the curriculum and curriculum development from a set of policy guidelines, conditions and circumstances in a given country.
11. Design a model of curriculum development for a selected country.
12. Develop a programme from objectives and situation analysis of a selected country.
13. Select content for an approved curriculum.
14. Develop a scope and sequence chart for a primary or secondary school subject.
15. Select learning experiences for a subject at a selected level of education.

16. Develop a unit of instruction in a chosen subject for a specific level of education.
17. Evaluate instructional materials in the classroom.
18. Evaluate the following
 - A syllabus
 - Pupils' textbook
 - Teachers guide
19. Write a proposal for the evaluation of an educational programme.

Content of The Course

The course covered the following areas of study:-

Topic 1: Concepts of Curriculum Development

The curriculum development process.

The methods of a situation analysis and its importance for Curriculum Development.

The selection of objectives in curriculum planning.

Programme implementation.

Resources (for planning or implementation).

Topic 2: Objectives in Curriculum Development

The importance of objectives in curriculum development. Models of curriculum development. Developing a curriculum development model.

Topic 3 : Content Selection

Determining criteria for selection of content.

Selecting content.

Developing a scope and sequence chart.

Developing a teaching syllabus

Topic 4 : **Selection of Learning Experiences**

Criteria for selection of learning experiences.

Selecting and organizing experiences.

Relating experiences to educational environments.

Topic 5 : **Curriculum Design**

Main theories influencing curriculum design - their strengths and limitations in the perspective of their implementation in African Curriculum Development Centres.

Skills in the process of designing a curriculum plan especially as it relates to primary or basic education.

Steps in curriculum design.

Instructional Design Process.

Designs based on specific competencies.

Designs based on subject disciplines.

Designs based on individual needs and interests.

Guidelines for selecting appropriate curriculum designs.

Curriculum design for a selected African Country.

Topic 6 : **Curriculum Design: Scope and Sequence**

Organization of content and learning experiences.

Criteria for developing a scope and sequence.

Analysis of Pupil's Books, Teachers' Guides and Syllabuses.

Topic 7 : **Curriculum Evaluation**

The nature and meaning of evaluation.

Evaluation of curriculum change at the planning stage, the tryout stage and the implementation stage.

Models of Evaluation.

An exercise on programme evaluation.

Topic 8 : **Developing Instructional Materials**

Teachers' Guide and Pupils' Books as aids to teaching and learning.

Planning the Pupils' Book and Teachers' Guide.

Developing the manuscript.

Evaluation of instructional materials.

Training Strategy

For each topic there was a series of presentations and discussions. These were followed immediately by practical sessions which were designed to translate theory into practice.

Course participants were divided into two or three groups of eleven participants each. Groups were to deal with the following:-

- (a) Further explanation of principles which had not been understood.
- (b) Translation of theory into practice and an application of principles of curriculum development as they relate to each topic under discussion.

Approximately 50 per cent of the time was devoted to practical assignments.

Course Tutors

In order to ensure the success of the course, course tutors had to be carefully selected and the following were the main tutors for the whole period of four years:

Professor N.O.H. Setidisho (Course Director)

Professor S.A. Bajah (university of Ibadan)

Dr P.H. Chiwona (E C A)

The others who assisted from year to year, were;

Professor J. Bolvin	(university of Pittsburgh)
Dr B. Sarr	(Gambia)
Dr M. Luswata	(Zambia)

Framework of The Training Programme

In order to establish a theoretical, philosophical and practical basis for a sound training programme for Curriculum Development, the strategy was to introduce the course through a discussion and analysis of a variety of Curriculum Development Models, the main ones being the following:

The Tyler Model Of Curriculum Development

Ralph Tyler in his book **The Basic Principles of Curriculum and Instruction** identified four fundamental questions which must be faced in any curriculum development process. He stated these as follows:

1. (a) What educational purposes should the school seek to attain?
- (b) What are the objectives we hope to achieve from our teaching?
- (c) what qualities of mind, what knowledge, skills, values, do we wish our pupils to acquire?
2. what educational experiences, what subject matter, what activities, what programme of work, will best achieve these purposes?
3. How can these learning experiences be efficiently organized so as to constitute a practical guide to action?
4. How can we determine whether these desirable purposes are being attained?

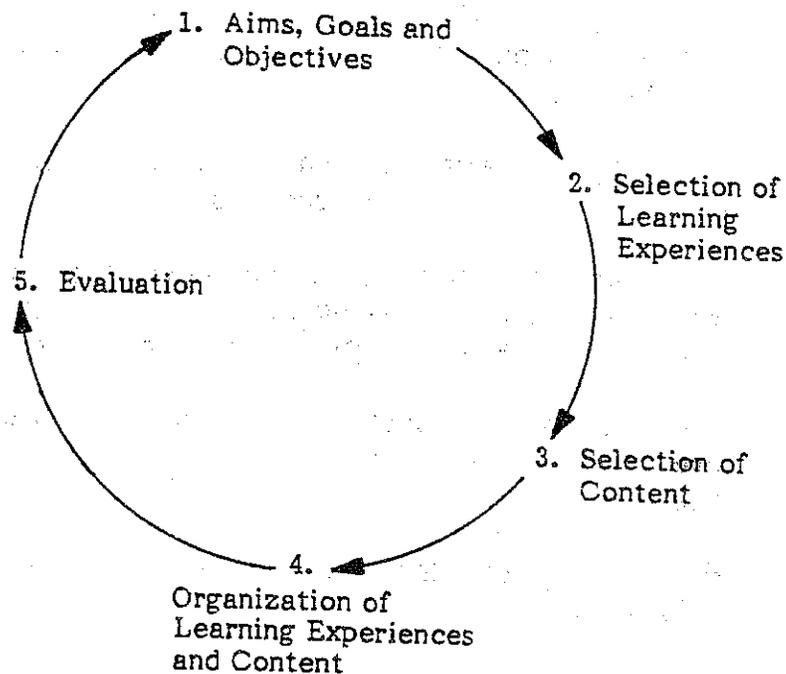
These four basic questions may be reformulated into a simple four step process as follows:

1. Statement of Objectives.
2. Selection of learning experiences.
3. Organization of learning experiences.
4. Evaluation.

Thus the Tyler Model of Curriculum Development may be represented diagrammatically as follows:

It has been argued that the Tyler Model is rather too simple. It has been suggested that evaluation need not be a terminal process, but that it should take place at every stage.

The Wheeler Model has converted Tyler's Model into cyclic form.



Wheeler's Cyclic Model consists of the following five phases:

1. Formulation of aims, Goals and Objectives.
2. The selection of learning experiences and activities, determining the centres or focal points to be used for organizing these experiences so as to assist in the attainment of the objectives. This must take into account the nature of the learners and the principles of learning
3. The selection of content; this includes determining what subject matter should be covered and what mental powers and capacities, such as thinking, skills attitudes, and values should emerge from the learning activities.

4. Organization and integration of learning experiences and content and methods.
5. Evaluation of the effectiveness of the second, third and fourth phases of the curriculum development process. This constitutes an assessment of the attainment of the intended learning outcomes.

Note the following:

Wheeler breaks down the aims, goals and objectives into the following:

- (a) The general aims in a school have to be analysed into a set of ultimate goals.

These are the behaviours which illustrate the general aims and thus refer to the end product of schooling.
- (b) Each ultimate goal is then broken down into mediate goals. These are applicable at different stages of learning. The principle is that the mediate goals add up to the ultimate goals when taken together.
- (c) From each mediate goal, we can derive goals which can be achieved over a shorter period of time. These are the Wheeler proximate goals.
- (d) From each proximate goal, we can derive the specific classroom objectives.

The Wheeler Model suggests that one could start the curriculum development process at any point in the cycle.

Wheeler requires us to work through a system of different levels of aims, from the general to the specific when we plan our curriculum.

Wheeler differentiates between content and learning experiences.

The first step on which all else hinges is the statement of aims, goals and objectives.

Wheeler's Model is similar to Tyler's in that the initial set of aims, goals and objectives are taken for granted.

THE TABA MODEL OF CURRICULUM DEVELOPMENT

Hilda Taba draws a widely accepted distinction between aims and objectives. Aims are broad statements of purpose and intention to transmit culture or to develop a democratic way of life.

The main purpose of stating aims on such a general level is to provide an orientation to the main emphasis in educational programmes.

The general aims can only be achieved if individuals acquire certain knowledge, skills, techniques and attitudes. These latter represent a more specific platform of goals. The outcomes at this more specific level are usually referred to as educational objectives.

The chief function of the more specific platform of objectives is to guide the making of curriculum decisions on what to cover, what to emphasize, what content to select and which learning experiences to stress.

Since education does not consist solely of mastery of content, objectives also serve to clarify the types of powers, mental or otherwise which need to be developed.

Objectives serve as a guide for the evaluation of achievement.

Within this conceptual framework, Taba has proposed a seven-phase model for curriculum development. Her model consists of the following phases:

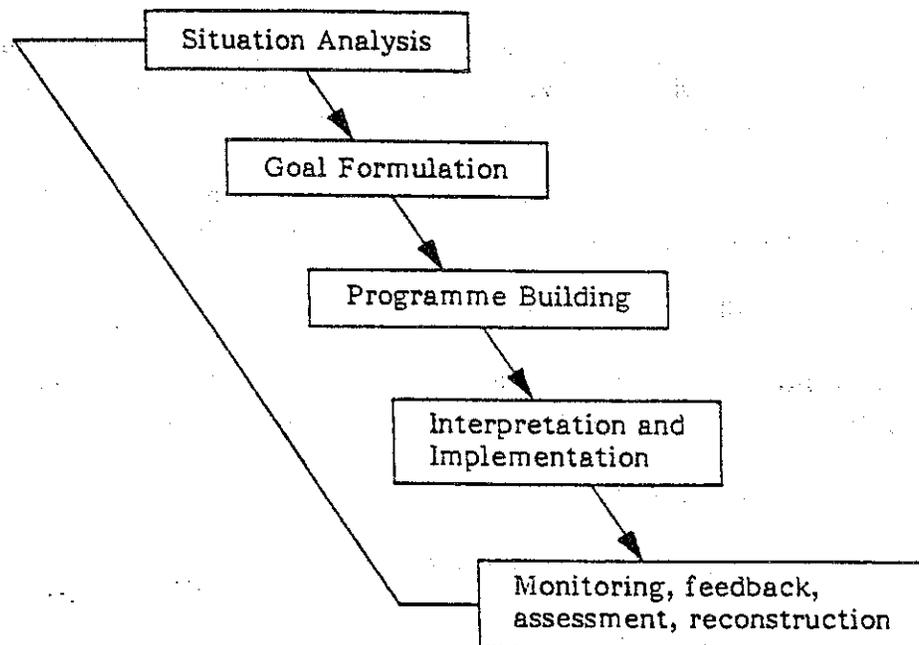
- Step 1 : Diagnosis of needs
- Step 2 : Formulation of objectives
- Step 3 : Selection of content
- Step 4 : Organization of content
- Step 5 : Selection of learning experiences
- Step 6 : Organization of learning experiences
- Step 7 : Determination of what to evaluate and of the way and means of doing it.

Taba believed that the development of a curriculum should be preceded by a situation analysis in order to determine learning needs.

THE SKILBECK FRAMEWORK OF CURRICULUM DEVELOPMENT

Another model of curriculum development is that of professor Skilbeck. His model consists of five phases as follows:

1. Situation Analysis.
2. Goal formulation.
3. Programme building.
4. Interpretation and implementation.
5. Monitoring, feedback, assessment and reconstruction.



Situation Analysis

Professor Skilbeck begins logically with a situation analysis. This involves finding out the context in which the curriculum development process is to take place and the feasibility of it being successful.

Situation analysis involves collecting basic information about:

- (a) The educational system.
- (b) The learners.
- (c) The teachers.

Goal Formulation

The statement of goals embraces teacher and pupil actions and the kinds of learning outcomes which are anticipated. These goals imply preferences, values, judgements, priorities and emphases.

Programme Building

- (a) Design of teaching-learning activities: content, structure and methods, scope and sequence.
- (b) Means: Instructional materials of all kinds.
- (c) Design of appropriate institutional settings: laboratories, workshops, field work.
- (d) Personnel deployment and role definition: curriculum change as social change.
- (e) Timetables.

Interpretation And Implementation

Problems of bringing about the curriculum change e.g. clash between the old and new, resistance to change, confusion etc.

Monitoring, Feedback, Assessment, Reconstruction

- (a) Design of monitoring
- (b) Preparation of assessment instruments.
- (c) Problems of continuous assessment.
- (d) Reconstruction: ensuring continuity in the process.

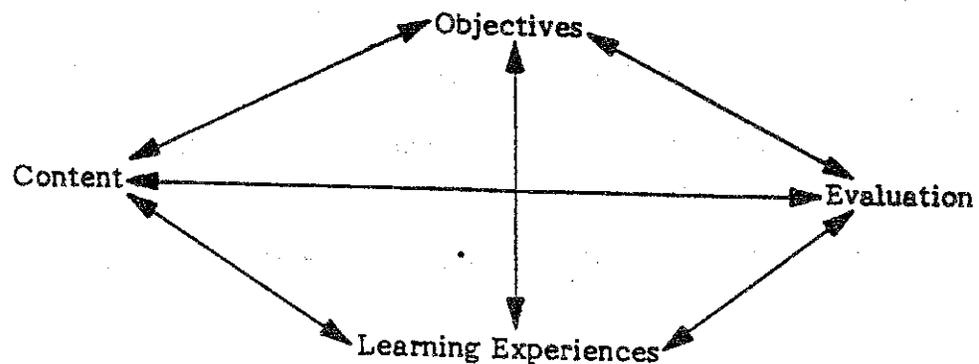
This model differs from the other models of the curriculum development process in the following:

1. It identifies the learning situation; it encourages curriculum developers to think educationally about the situation which is to be changed and not about how to implement a pre-designed model and techniques of change.
2. It encourages curriculum developers to enter the model at whatever stage they see fit.

THE KERR MODEL OF CURRICULUM DEVELOPMENT

Kerr has proposed a model very similar to Wheeler's in which:

- (a) Wheeler's elements have been condensed to four namely, objectives, content, learning experiences and evaluation.
- (b) Each element interacts with three other elements in the model; i.e. every element is related to and influences every other element.



The practical experience of most teachers suggests everyone of these four elements is constantly modified by others and thus the whole business of curriculum development must be seen as one of constant interaction between the elements.

- (c) Double headed arrows have been used to suggest that not only can curriculum development start at any point in the cycle but it can also proceed in any of the three directions.
- (d) Evaluation is done not only on the objectives but also on all the other elements.

Kerr's model is based on and reflects what Kerr thinks the curriculum is. According to Kerr, curriculum is all the learning which is planned and guided by the school whether it is carried out in groups or individually or inside or outside the school.

It is evident from the foregoing that Kerr's model is a more realistic representation of the complex nature of the curriculum development process. The picture we have now built over the years through modifications of Tyler's model is that curriculum development is a cyclic process. What this means is that we now view events, phenomena and relationships in curriculum development as being dynamic, ongoing, everchanging and continuous without a beginning or an end. It also means that an event or phenomenon is one point of the process.

An examination of the Curriculum Development Models described here shows that there are common elements, and the dynamic nature of Curriculum Development is

well illustrated. A meaningful and practical process of curriculum development was deduced from these Models of Curriculum Development.

PROPOSED PROCESS OF CURRICULUM DEVELOPMENT

For the sake of clarity it is proposed to have another look at the elements of the Curriculum Development Process. This will show more clearly the role of objectives in Curriculum Development.

An examination of the five basic elements of the Curriculum Development Process shows that in practice, the curriculum developer has to do the following:

1. **Study the national goals** of education, policy statements and directives.
2. **Determine the goals** or objectives of a cycle of education e.g. Primary Education or Secondary Education or Teacher Education.
3. **Determine a Curriculum** for the various levels of education. In other words, what will be the most appropriate subjects in a curriculum designed to achieve the objectives of the educational system.
4. **Select appropriate learning experiences.** Here we have to decide on the teacher - pupil activities and the teaching - learning experience which will be provided in order to achieve the intended learning outcomes of the educational system.
5. **Select appropriate content.** Selection of individual subject topics and corresponding content. The content selected must contribute to the attainment of objectives of the educational system.
6. **Organize and integrate the learning experiences and content.** This is done in order to facilitate the achievement of the objectives for education. It usually involves:
 - (a) The preparation of a scope and sequence chart.
 - (b) The development of a Teaching Syllabus.

At every stage in the preparation of a scope and sequence chart and in the development of a teaching syllabus, great care has to be taken in order to ensure that the organization and integration of content and learning experiences will promote the attainment of the intended learning outcomes.

7. **Developing Instructional Materials:** This involves the writing of the following teaching - learning materials:

- * Pupils' Books or Text Books
- * Teachers' Guides
- * Teachers Handbooks
- * Other Reference Materials.

In the writing of instructional materials, the curriculum developer is expected to keep in mind that whatever he does, must contribute to the attainment of the objectives of education, proximate, mediate and ultimate.

8. Evaluate the Instructional Materials. The curriculum developer is required to check if the written materials do in fact contribute to the attainment of the goals of education.

IMPACT OF OBJECTIVES

Objectives are the key element in the process of curriculum development. They are the focal point of the work of a curriculum developer. Everything a curriculum developer does must promote or contribute to the attainment of the following:

- (a) The national objectives of education
- (b) The objectives of the particular cycle of education.
- (c) The objectives of the subject at the different levels of education.
- (d) The objectives of the topic or unit.
- (e) the objectives of the lesson.

DEFINITION OF NATIONAL OBJECTIVES OF EDUCATION

One educationist has defined national objectives as statements that describe expected life outcomes based on some value either consciously or unconsciously

borrowed from the philosophy or political ideas and socio-economic aspirations of the nation.

The unique feature of these objectives is that they do not relate directly to school or class-room situations. They are the ultimate goals of education.

As ends, the national objectives of education are so far removed from the school situation that the degree of their achievement can only be determined after completion of school. They can only be achieved in the distant future.

OBJECTIVES IN CURRICULUM EVALUATION

Evaluation is the final phase in the curriculum development process. It is the coming to conclusions about the success or failure of the educational enterprise by means of some measurement or assessment of change in behaviour.

The work in the evaluation phase of the curriculum development process can be considered under several headings.

The first formal purpose is quite clear. Certain goals have been stated. As a result of formal education, certain behaviours are expected. Do they in fact occur? Has the student actually acquired the facts, the knowledge, the skills, the attitudes, the beliefs and values that were intended? And does he habitually respond in the expected ways?

The second task is concerned with the selection of learning experiences and content and the evaluation of the operations that were performed at each of these two phases of the curriculum development process.

Were the experiences chosen suitable for attaining the operational goals or would other experiences perhaps have been more suitable?

Did the selected content contribute effectively or would other content have been more suitable?

Was the integration of experiences and content effective or were related areas of subject matter learned in a compartmentalized fashion?

What sort of concomitant learnings resulted from the organization used? Would a different sort of organization have produced greater change in the desired direction, whether for some or all of the student?

There is another point of view from which evaluation as a part of curriculum planning must be considered. In so far as it is an attempt to change behaviour, education is concerned with behaviour at what may be two different levels.

1. There is initial behaviour, the behaviour that the individual or group displays before the educational experience which may be called the actual outcome.
2. There are the behaviours which are specified in the goals. These are the intended outcomes.

In order to make adequate plans to change behaviour, it is necessary to know where to start. This means that some assessment of initial behaviour must be made so that appropriate learning experiences with content may be selected and organized. This would seem to show that specific objectives cannot be properly determined until some assessment has taken place. This indicates that there is a close relationship between the objectives and evaluation and emphasizes the inter-relationships among all the phases in the curriculum development process.

Evaluation of any education sequence rests upon the difference between initial behaviour and actual outcomes and the relation these bear to intended learning outcomes. Measures of how far the student has come and how far he still has to go are fundamental to curricular decisions.

There is a certain amount of inter-dependence between objectives and evaluation because in the process of translating aims into various kinds of goals, some forethought must be given to the means and processes of evaluation. Similarly, the various aspects of evaluation may and should affect the derivation of goals, the selection of educational experiences and their organization into sequences.

IMPLICATIONS OF POLICY STATEMENTS AND DIRECTIVES ON CURRICULUM DEVELOPMENT

It is not only the National Objectives of Education which have a direct influence on the work of curriculum planners. Policy statements and directives issued from time to time will also determine the direction which the curriculum developer is to take.

Curriculum planning and curriculum development involve a consideration of many inter-related issues and the involvement of many people in the community.

The objectives of individuals, families, communities and government can and do have a far - reaching effect on curriculum planning and curriculum development and the educational system as a whole. Clearly articulated goals of education, policy statements and directives always provide a good basis for the work of curriculum developers.

Note The following

1. A policy directive to introduce universal access to education for twelve years has implications for curriculum developers.
2. A policy of automatic promotion in the primary school has far reaching implications for curriculum planners. It means that the curriculum must provide for a very wide range of abilities and individual differences.
3. A restructuring of Teacher Education implies a change in the curriculum and may equally have implications for primary education.
4. A directive to increase or reduce the length of primary education implies the development of new syllabuses, and a rewrite of all the instructional materials.
5. A radical change in the philosophy and political ideology of the state, suggests a change in the objectives and hence in the curriculum as well (e.g. a change from a democratic society to a socialistic ideology).
6. If a Government decides to raise the qualifications for admission to a Teacher Training College from one level to the next higher level of education, this would automatically necessitate a change in the curriculum content of Teacher Education.

7. A policy of universal access to education for up to three years of secondary education implies a radical change in the curriculum for both Primary and Secondary Education.
8. A directive to introduce English as a medium of instruction from the third year of Primary Education instead of in the fifth year implies that the instructional materials should be rewritten in English and that the syllabus for teaching English in the primary schools should be re-examined in order to make it consistent with the demands of the change in policy.
9. A planning decision to provide professional training for all the untrained teachers has implications for the curriculum planner who has to design a curriculum, select learning experiences and content for such a course of training over a specified period.

ROLE OF THE AFRICAN CURRICULUM ORGANIZATION

It has become increasingly clear that Curriculum Development Centres will not and cannot have well trained professional staff unless the African Curriculum Organization can be and is actively engaged in the process of facilitating seminars, workshops and courses for its member countries. Training within and outside the Curriculum Development Centres must take place as a matter of routine and must be designed to have a multiplier effect and its impact must be permanent.

The African Curriculum Organization is not and will not be able to carry out its mandate unless it has funds and has a dedicated and committed leadership, men and women who are prepared to promote the activities of the organization.

Regrettably, no Organization can function without a reliable financial base. The members of the African Curriculum Organization have not, for more than a decade, paid their subscriptions, and what little was paid, it has not been possible to get out of Nigeria.

For more than a decade, the African Curriculum Organization has been supported by the German Foundation for International Development. This source of finance has dried up and is no longer available and the Organization itself does not have an Executive Secretary; nor does it have a Chairman.

Experience has shown that there is need for an active African Curriculum Organization with funds and a dedicated and committed leadership. Secondly it is a necessary and sufficient condition that the governments should be committed to the existence of the African Curriculum Organization, to understand and appreciate its role and the impact that it can promote within their respective educational systems.

It is hoped that arrangements can be made which would render the African Curriculum Organization Operational within each country, regionally and internationally across the continent from the East to the West and from the South to the North.

SOME MAJOR PROBLEMS - IN CURRICULUM DEVELOPMENT

The factors which militate against confidence building in school curricula and also against more effective and efficient curriculum planning, curriculum development, implementation and evaluation are many and vary from country to country within the region. Many stem from a general lack of understanding of the process of Curriculum Development and the major factors which tend to contribute to the effectiveness of curriculum planning and curriculum development and hence to the efficiency of the school system. These factors are discussed briefly as follows:

1. Relevant curriculum planning for a school system is very difficult unless there are clearly defined national goals of education and funds are available which would facilitate effective curriculum implementation and evaluation.

The ailing economies of our countries do not permit efficient curriculum planning and implementation.

2. Relevant and effective curriculum planning and the determination of subject content and teaching - learning experiences is dependent upon a clear definition of the national goals of education, an understanding of the curriculum development process and the inter - relatedness of the steps in the process.

A recurrent problem is a lack of conscious awareness that school curricula must be designed to be consistent with the purposes of education within a given country. Clearly, there must be correspondence between school curricula, what is taught and how it is being taught and each of the goals of education stated generally and specifically.

3. The national goals of education are often very difficult to interpret and to translate into easy to understand specific objectives which can be used to develop a curriculum and instructional materials designed to achieve the objectives of education.

Further more, most curriculum developers have not been trained, not only to interpret the national goals of education, but also to write individual subject and instructional objectives. Equally, in the preparation of curriculum materials, not enough effort is made to achieve one to one correspondence between instructional materials, presentation of learning experiences and the instructional objectives which derive from the subject objectives which in turn are curriculum oriented and consistent with the national objectives of education.

4. Objectives in curriculum planning, development and implementation play an important role and they have to be specific and clear. It is not possible to evaluate a school curriculum in all its facets without a clear definition of objectives. Yet it is vital that school curricula should be subjected to both formative and summative evaluation. Otherwise it becomes irrelevant.

A recurrent danger is that the success of a school system is often determined by the number of passes in any one year and not necessarily in terms of observed behavioural changes in respect of each individual and the community, in general.

Most curriculum developers have not had any rudimentary training in curriculum evaluation and the evaluation of instructional materials. This would necessarily help re-inforce a conscious awareness and importance of the three domains of objectives, namely cognitive, psychomotor and affective and their far-reaching impact on more efficient class room teaching.

5. As a result of the constant societal changes and the ever worsening economic crises in our countries, curriculum development has to be dynamic and this implies a periodic review of the curriculum. However, it has been observed that inadequate recognition is given to the importance and value of periodic evaluation and review of curriculum materials, policies and objectives. There is also inadequate financial planning for this purpose.
6. Developing countries are constantly formulating new development strategies and policies which also give rise to the need to develop new policies and objectives for education and hence a review of existing school curricula.

A major problem is that school curricula cannot be changed ad hoc at any time. Once a curriculum has been approved and being implemented, then it has to run a complete cycle of education. Hence education has not always been in step with development policies and objectives. Unless and until there is a greater understanding of the curriculum development process by policy makers and there is increased cooperation between curriculum designers, policy makers and those who formulate development strategies, development strategies for education will always appear to be irrelevant.

7. Training for curriculum developers is inadequate and where it exists, it is not relevant to the work of a curriculum developer. Theory is not realistically translated into practice so that it becomes meaningful. Also it is noted that Ministries of Education do not have a planned programme of training for curriculum development workers and others whose work have a direct relationship to education development strategies and school curricula. There is no specific budgetary provision for such professional training.

8. There are other professional officers in the Ministry of Education such as Educational Planners and Inspectors of schools who need to have some knowledge of the Curriculum Development Process if their work is to be coordinated meaningfully. There is no policy decision to provide such training. Those who get it do so by default rather than by design. This lack of training militates against efficiency and relevance in curriculum planning implementation and development.
9. No curriculum, however good, can achieve its objectives unless it is understood by the teachers and they are trained to implement it. It is maintained that in order for teachers to be effective, there must be dedication and commitment supported by some understanding of the curriculum development process which at present is not an element of the Teacher Education Programme, and this does not help to promote efficiency in curriculum implementation, a step in the curriculum development process which depends upon the efficiency and effectiveness of the teacher
10. For curriculum planning to be relevant and implementable, it is necessary that there should be cooperation and extensive consultation with various stake holders within the profession. These consist of Curriculum developers, inspectors of schools, teachers at all the levels of education and many others. In our sample survey of what takes place in practice, it has been found that teachers are rarely ever consulted. They may take part in the development of instructional materials even though they are never provided with any form of training in curriculum development. This is an extremely unsatisfactory state of affairs.
11. One of the major weaknesses within Curriculum Development Centres and the professional staff of these centres is that there is virtually no routine communication between and among them. There is very little sharing of information and ideas and regular exchange of curriculum materials. Any exchange of information, ideas and materials only takes place when there are meetings or seminars or a course. Meetings of curriculum developers have not taken place for several years now.

PROPOSALS FOR THE FUTURE

Provided that The African Curriculum Organization is operational and is targeted to fulfil its mandate, it can make a far - reaching impact on the professional efficiency of the Curriculum Development Officers. Thus it is essential that something should be done to give the Organization a new lease of life. It should be noted that the Organization will only function effectively and efficiently if, and only if, its members are committed to its existence, objectives and ideals and they give it maximum support. Thus it is recommended as follows:

1. Member countries should be asked to rededicate and commit themselves to the continued existence of the African Curriculum Organization. The annual membership subscription fee should be included in the budget of each Curriculum Development Centre. It is suicidal for the Centres to rely solely on the assistance of Donor Agencies.
2. Arrangements should be made for the directors of Curriculum Development Centres to meet, as a matter of urgency, at a chosen location, in order to select;
 - (a) Members for the Governing Council of the Organization;
 - (b) the Executive Committee of the Council;
 - (c) The Executive Secretary and Chairman of the Organization.

In addition to the above, the Directors should also discuss and decide on a headquarters for the Organization as well as its finances.

3. The African Curriculum Organization should seek funds to do the following;
 - (a) The Organization should adopt a five year plan for the training of professionals from each member country; the training envisaged should extend over a period of six to eight weeks annually and should concentrate on the Theory and Practice of Curriculum Planning, Development, Implementation and Evaluation. At least three participants should be selected from each country.

The African curriculum Organization should actively seek to raise funds for the proposed course. Ministries of Education should also resolve to make a budgetary provision in order to make a contribution to the training of its personnel.

The Organization should immediately identify a Course Director whose responsibility will be to plan the course and recruit the rest of the teaching team.

4. In order to facilitate contact among Curriculum Development Personnel from different countries, the Organization should, through its Secretariat, organize regional seminars and workshops which would deal with different aspects of the Curriculum Development Process. The Secretariat would provide Resource Persons for these activities. Again each member country should be required to contribute to the costs of these activities.
5. Since some form of training is needed for all who are involved in the development of instructional materials, it is recommended that each Centre should institute an in - house training programme. These may be scattered

throughout the year in two week sessions for different members of staff who may have reached different levels of understanding of the Curriculum Development Process. Only one Resource person may be required and would be assisted by two or three selected members of staff who are more advanced in their training, and professional expertise.

In-house training is very important and is an essential ingredient of professionalism in a Curriculum Development Centre. This is the kind of training which requires the barest minimum of financial resources and should be encouraged.

6. It is proposed that the Directors of Curriculum Development Centres should meet once every two years in order to:
 - (a) review the activities of the past two years;
 - (b) develop a programme of activities for the next two years.
 - (c) approve a budget for the period
 - (d) discuss some aspect of the Curriculum Development Process, the objective being to sharpen themselves professionally in the field of Curriculum Development.

7. The national goals of education are a necessary prerequisite for curriculum development work, and it is important that these should be understood, Hence it is recommended that each country should organize a workshop for policy makers, education planners and Directors of Curriculum Development Centres on;
 - (a) the formulation of the national goals of education;
 - (b) the interpretation of the national goals of education
 - (c) the role of goals in the Curriculum Development Process.

Such a workshop would need the services of two well informed Resource persons.

8. It is recommended that all Teacher Education Programmes should include an element of Curriculum Development.

Depending on the academic background of the Teacher Trainees, the section on curriculum Development could deal with;

- * Selected models of curriculum development;
- * Analysis and critique of these models
- * A practical model for curriculum development
- * Role of objectives in Curriculum Development
- * Hierarchies of objectives.
- * Developing class-room objectives
- * Evaluation in the class- room
- * Developing class-room evaluation instruments

9, In any educational system, teachers are a crucial and critical factor in order to ensure a measure of successful curriculum implementation programme. There is a great deal which teachers should understand about the curriculum development process, curriculum implementation evaluation and their particular role in the development of instructional materials. Thus it is recommended that countries should endeavour to organise courses on the basic principles of curriculum development for the following target groups:

- * Local District Inspection of Schools
- * headmasters of Primary Schools

These should, in turn, organize orientation courses for teachers in their own areas and in their own individual schools for in-country seminars and workshops as well as a contribution towards regional ACO activities.

- (c) The Secretariat of the Organization or who-ever is authorized to do so, to begin to identify international donor agencies in order to raise funds for the programmes of the Organization and who would be prepared to operate as a partner with the African Curriculum Organization.

It is important to remember that it helps a great deal with donor finance if the Organization itself can, at every stage, show what it can do for itself. If subscriptions are paid, this will assist. Donor agencies will always want to know what the Organizations contribution will be. It is stressed that it requires dedication and commitment on the part of the members if the Organization is to achieve its objectives. Of paramount importance is for the Organization to attempt to attain professional excellence of the highest order.

CONCLUSION

There is an unending struggle to tread the path that leads to the attainment of our ultimate goal which is professional excellence in the practice of curriculum planning, curriculum development and curriculum implementation.

The main thrust of the operations of the African Curriculum Organization is on professional training of the manpower needed in the curriculum development activities of the Curriculum Development Centres of the member countries of the Organization. The various training programmes recommended in this paper will need careful planning over a five year period and an indication of cost.

The availability of finance is a necessary prerequisite for the implementation of the type of programme which is envisaged. Finance for these programmes may derive mainly from three different sources as follows:

- * Subscription fees from the member countries;
- * Budgetary provision by each member country for its own Curriculum Development Centre mainly for in-country training programmes and partly also for attendance at regional seminars and workshops.
- * Support given by Donor Agencies.

If it is intended to keep the African Curriculum Organization alive and active, then it is strongly recommended that;

- (a) Curriculum Development Centres should plead vehemently for the approved annual subscription to be paid regularly. Lack of foreign exchange should not be used as an excuse for non-payment.
- (b) Member countries, should as a matter of routine make an annual budgetary provision.

I wish you well and give you my blessings as follows:

1. Blessed are those who are determined to succeed for they are more likely to reach the summit of the mountain where there is professional excellence.
2. Blessed are those who are dedicated and committed to the cause of high quality education for our children for there is hidden treasure at the summit of the mountain of professional excellence, and hope for the children of our continent.

3. Blessed are the dedicated and committed professional soldiers who are determined to fight the good fight against ignorance, poverty and disease, for they will have contributed to the attainment of god's purpose to humanity - good quality education.
4. Blessed are those who are prepared to work as part of a team committed and dedicated to the attainment of a common purpose in the improvement of the quality of education for the purpose of nation building.
5. Blessed are those who yearn to achieve professional excellence of the highest order and are determined to attain that purpose through hard work and purposeful action, dedication and commitment.
6. Blessed are those who are dedicated and committed to the success of the African Curriculum Organization and who are prepared to work for its success.