First Edition

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MODULE OVERVIEW

Introduction

Curriculum development, implementation, evaluation, reform and innovation are very important to the teacher, curriculum developers and educational administrators and to all those who have an interest in education. A curriculum is after all the very substance of schooling, the central business of any educational institution and thus the *raison d'etre* for teachers in schools and educational administrators. Hence teachers, student teachers and all educators need to acquire the right knowledge, skills and attitudes of the curriculum and understand the processes by which curricula may be planned, designed, developed, implemented, monitored and evaluated. In this module therefore, the author will take you on a journey of curriculum discovery through the foundations of a curriculum and then into the principles of what needs to be paid attention to and done in the process of developing and evaluating a curriculum.

Rationale

This module is vital to all students studying education since it is them who eventually implement the curriculum in schools while some of them monitor and supervise it as administrators. A deep understanding of the foundations and principles of curriculum by in-service teachers, pre-service teachers and educational administrators would mean an effective implementation, supervision and evaluation of the curriculum. In turn this would lead to the provision of quality education in institutions of learning.

Aim

The aim of this module is to help student teachers and education administrators acquire appropriate knowledge, skills, values and attitudes about curriculum design, development, implementation and evaluation.

Learning Outcomes

By the end of this module you should be able to;

1. explain the meaning of a curriculum in relation to education.
2. analyse curriculum foundations.
3. describe curriculum development models.
4. analyse the significance of curriculum designing, planning and situational analysis in the curriculum development process

5. analyse the curriculum development process as it is done in practice.
6. apply the criteria selecting and organising curriculum intent and content during the curriculum development process.

Summary

This module has six units which are arranged in such a way that as you study this course you build curriculum competencies from the theory of curriculum development to its implementation and evaluation phases. The first chapter is a detailed guide on the conceptualization and meaning of a curriculum in relation to education. This chapter is vital for you because it lays a foundation for the understanding of curricula. The second unit is an analysis of the forces that influence curriculum developers as they think about curriculum development and implementation. It is about curriculum foundations. Unit two will help you to appreciate and understand how the three, philosophical, psychological and sociological and cultural foundations influence curriculum development. The third unit is a theoretical synthesis of curriculum development models. Unit three will help to ground you in the theoretical thinking of curriculum scholars about how a curriculum should be mooted. In unit four you will study curriculum designing, planning and situational analysis which are vital preliminary ingredients of curriculum development. Having had adequate competencies of the theory of a curriculum, chapter five will help you contextualize curriculum development from a very practical point of view. The final chapter has three very significant facets of curriculum development. These are curriculum intent, selection of content and organization of content. In this unit you will be expected to apply the theories of curriculum on how the direction of a curriculum is determined, curriculum intent, and how content can be effectively selected and organized. You should thus have noted that this module is such a rich package of curriculum development, implementation and evaluation for the teacher, educational administrator, curriculum developer and anyone who is tasked with the service of providing education.

Study Skills

As you study this module you will need to apply good analytical study skills because the content of this module can be better conceptualized if you apply practical and critical analysis of education and curriculum. You will also need to have good research skills so that you can search for other sources of information especially from on line journals and other educational platforms.

Need Help

If you need help you can call ***+260 977 475999 or +260 979 513215***

Assessment

Continuous Assessment	**50%**
Two Assignments of equal weight	20%
One Test	20%
Presentation	10%
Final Examination	**50%**
Final Mark	**100%**

UNIT ONE

MEANING OF A CURRICULUM AND RELATED CONCEPTS

Introduction

Mulenga (2018:3) in his journal article titled *Conceptualization and Definition of a Curriculum* explained that;

> The study of a curriculum has become an established component of almost all education programmes. ... since education is the basic function that a curriculum saves in any education system and learning institutions. It is also obvious that a curriculum embodies the intentions of education as the programme of education.

That being the case an understanding of what a curriculum is all about has become critical to all those who are involved in education. The academic tragedy however, is that there are so many assumed definitions of what a curriculum is even among those who have studied education without having taken time to have a detailed study and conceptualisation of the concept. This unit will help you to have a basic but clear understanding of this very important aspect of education and the teaching profession.

Learning Outcomes

By the end of this unit you should be able to;

1. explain the meaning of education and curriculum.
2. discuss the relationship between education and curriculum.
3. give a critique on how curriculum is understood by different scholars and educationists.
4. demonstrate an understanding of curriculum dimensions.
5. analyse the curriculum elements.

1.1. Theoretical and Functional definitions of Education and Curriculum

It is essential for you to know from the outset that a curriculum is an area of vital importance to the professional teacher and anyone who is involved in an educational programme especially in a school. Over the past decades the study of curriculum has become an established part of teacher education and all other programmes that are followed by all educationists. Similarly, most educationists undertaking postgraduate studies and professional development activities have been exposed to the concepts associated with curriculum. However, the understanding of curriculum would be incomplete without having a clear understanding of education. After all a

curriculum is the means for achieving educational goals. It is for this reason that in this study you will have to start by understanding what education is.

1.2. What is Education?

What is Education? May be this is not the first time that you have engaged yourself in answering this question. However, revisiting your answers to this very important question will be of help to you. If you have no definite answer, the following paragraphs will help you understand this concept called education.

This is hardly a new argument. In ancient Greece, Socrates argued that education was about drawing out what was already with the student. (As you may know, the word education comes from the Latin word *educere* meaning "to lead out"). There is a dangerous tendency to assume that when people talk about education they mean the same thing. It is for this reason that a definition for education is important to explore. No single definition or meaning however can be assigned to the term education. Similarly, to become educated is a complex process, which cannot be sufficiently explained as an event. Thus, you should be clear from the outset that without understanding the meaning of the term "education" you can be in no position to explain, assess or evaluate what our institutions of education are doing. Similarly, without the conception of what education is, empirical research into educational effectiveness of programmes and strategies cannot begin. Thus, **the understanding of education is key to the study of curriculum since curriculum is the means of achieving educational goals.**

Farrant (1980) education is the total process of human learning by which knowledge is acquired, faculties trained and skills developed.

Mbiti (1981) defines education as a deliberate attempt to acquire and to transmit the accumulated, worthwhile skills, attitudes, knowledge and understanding from one human generation to the next. He further asserts that education includes all activities which are worthwhile and which can be taught or learned through a variety of meaningful ways.

Fafunwa (1984) defines education as "the aggregate of all the processes by means of which a person develops abilities, skills and other forms of behaviour of positive and sometimes of negative value to the society in which he lives.

It is important that you bear in mind that these are just but some of the definitions that can help you to have a clear understanding of what education is all about. Admittedly, they are many scholars who have defined education. However, no matter what the definition of education may be, it is vital to note that education is always a positive process. It is all about the acquisition of worthwhile or desirable skills, attitudes, knowledge and values.

Thus, we can finally say that;

Education is a process of acquiring, developing and transmitting desirable accumulated and new knowledge, wisdom, values, attitudes and skills as a result of growth, maturation and learning which can be best utilized for life in a changing society.

Note**:** In Education the means used in educating must be morally justified. Thus for someone to be seen as educated s/he should have admirable qualities. However, what education hopes to achieve is not what it does at times.

1.3. What is a Curriculum?

Over the past decades many definitions of a curriculum have been provided but because key players in education represent a diversity of values and experience, it is difficult to get wide public or professional consensus. Educators define curriculum in different ways in part because they bring to that task different perceptions of what curriculum should be. Paradoxically, the term 'curriculum' has a long history despite its apparently recent common usage. Curriculum was considered by writers on education such as Plato, Aristole, J.A. Comenius and Friedrich Froebel, although the usage of the term has not been popularised until this century.

Consider the following selected definitions of curriculum:

Curriculum is what is taught in school.

Curriculum is a set of subjects.

Curriculum is content.

Curriculum is a set of materials.

Curriculum is that which is taught both inside and outside of school and directed by the school.

Curriculum is that which an individual learner experiences as a result of schooling.

Curriculum is everything that is planned by school personnel.

To define a curriculum as '**what is taught in schools'** is of course, very vague. Persons often talk about 'school curriculum' in this general way and they tend to mean by this the range of subjects taught and the amount of instruction time given to each in terms of hours or minutes.

A curriculum defined as '**content'** is an interesting emphasis and brings into question another term, namely the 'syllabus'. A 'syllabus' is usually a summary statement about the content to be taught in course or unit, often linked to an external examination. It is typically a list of content areas. A syllabus is clearly a subsection of curriculum and as such is subsumed within the broader concept. This emphasis on what content to be taught is a critical element of a syllabus but a curriculum includes more than this. Characterizing curriculum as subject matter is the most traditional image of curriculum which depicts it as the combining of subject matter to form a body of content to be taught. Such content is the product of accumulated wisdom, particularly acquired through the traditional academic disciplines. You will discover that most teachers when asked to describe their school's curriculum they provide a litany of subjects or subject matter taught to students.

Defining a curriculum as a '**set of performance objectives'** or student learning is a very practical orientation of curriculum. This approach focuses upon specific skills or knowledge that it is considered should be attained by learners. Proponents of this approach argue that if a teacher knows the targets which learners should achieve, it is much easier to organize elements to achieve this end. The strength of this approach is that it focuses upon the learners who are after all the ultimate beneficiaries. You should also understand that this approach can lead to an overemphasis upon behavioral outcomes and objectives. Also a curriculum document which is simply a listing of objectives would have to be very large.

To define a curriculum as '**that which is taught both inside and outside school**, directed by the school' indicates that all kinds of activities that occur in the classroom, playground and community, comprise the curriculum. This emphasis has merit in that it demonstrates that school learning is not just confined to the classroom. However, you will realise that it seems to indicate that the only important learning experiences are those which are directed by school personnel.

To define a curriculum in terms of '**what an individual learner experiences as a result of schooling'** is an attempt to widen the focus. The emphasis here is upon the student as a self-motivated learner.

The definition which refers to a curriculum as '**everything that is planned by school personnel'** is yet another orientation which emphasizes the planning aspect of curriculum. Few would deny that classroom learning experiences for students need to be planned although some unplanned activities will always occur (and these can have positive or negative effects).

Educators and Scholars define curriculum in different ways, in part because they bring to that task different perceptions of what curriculum should be. As seen in the previous paragraphs some educators see the curriculum as a list of subjects to be studied, while others see it as an entire course content. Still others perceive curriculum as a set of planned learning experiences offered by teachers. Another group state that curriculum is a written plan of action. The following are some of the well-known definitions that we can consider.

The term curriculum is derived from the Latin word ***currere***, which means to run or to run the course. Based on this origin, some authorities have defined curriculum as a course of study subject matter. This definition has been found limiting and many authorities have modified it. The following are some of the definitions of curriculum that you will find very useful by renowned scholars in curriculum studies and education.

1.4. Curriculum Conceptualization through the lens of scholars

This section and the next, curriculum dimensions, are based on Mulenga's (2018) reflection of his famous article titled Curriculum Conceptualisation and Definition. Definitions of Curriculum through the lens of scholars and educators have over the years defined a curriculum in different ways because they bring to the task different perceptions of what curriculum should be. Perhaps the most common definition derives from the word's Latin root, 'currere'- which is the Latin infinitive of curriculum, which means 'racecourse'. By coming up with such a definition Pinar (1974) wanted to highlight the running or the curriculum lived experience of the learner. The aspect of learning experiences being emphasised are also seen in Taba's (1962) definition and curriculum development model. In her understanding, Taba focused on the

planned experiences aspect of the curriculum to the extent that planning and organization of curriculum elements preoccupied her thinking about curriculum development. However, as we have explained in the dimensions of curriculum that the curriculum includes not only the planned, but also the unplanned experiences as well. That being the case then it means that Taba's definition had some room for improvement. Are we then agreeing with Zais (1976) who argued that a search for the correct definition of curriculum is not a very productive enterprise? Not at all. It is just that the definitions that exist have a history and context. How then do we benefit from all the thousands of definitions that scholars have come up with? Glatthorn et. al (2012) noted that definitions in curriculum are varied because there are either descriptive, prescriptive or both. Prescriptive definitions provide us with what "ought" to happen, and they more often than not take the form of a plan, an intended programme, or some kind of expert opinion about what needs to take place in the course of study, while the descriptive definitions go beyond the prescriptive terms as they force thought about curriculum nor merely in terms of how things ought to be in real classrooms or any other educational situations (Ellis, 2011). Some authors' definitions of either slant are presented in the following paragraphs. Some of the prescriptive definitions as reflected by Ellis (2011) are: Dewey (1902) explained that a curriculum is a continuous process of educational reconstruction that should help the child move from his present experience into what is represented by the organized bodies of truth that we call studies which present new experiences to the learner. Tyler (1949) stated that curriculum is all the learning experiences planned and directed by the school to attain its educational goals. Print (1993) defined a curriculum as all the planned learning opportunities offered to learners by the educational institution and the experiences learners encounter when the curriculum is implemented. The Indiana Department of Education (2010) explained that curriculum means the planned interaction of pupils with instructional content, materials, resources, and processes for evaluating the attainment of educational objectives. These are just some of the prescriptive definitions of curriculum that exist in literature. But it is also true as mentioned earlier that other definitions are quite descriptive such as the following from Ellis (2011) as well; Ragan (1960) defined a curriculum as all the experiences of the child for which the school accepts responsibility. Brown (2006) stated that a curriculum is all the student school experiences relating to the improvement of skills and strategies in thinking critically and creatively, solving problems, working collaboratively with others, communicating well, writing more effectively, reading more analytically, and conducting research to solve problems. Silva (2009) viewed a curriculum as an emphasis on what students can do with knowledge, rather than what units of knowledge they have, is the essence of 21st century skills. With all these varied definitions of

curriculum from renowned curriculum scholars, there seem to be underlying elements that are commonly agreed as constituent of a good definition of a curriculum. Ughamadu (2006) listed these elements as (1) goals and objectives (the curriculum intent), (2) content or subject and subject matter, (3) learning experiences, and (4) evaluation. These four are referred to in the studies of curriculum as curriculum components, elements or simply pillars of the curriculum. These are what holds the discipline together and any curriculum specialist worth the name will have to understand them pretty well. Thus, Tanner and Tanner (1980:25) provided an accommodating definition of curriculum as: Curriculum is the planned and guided learning experiences and intended learning outcomes, formulated through the systematic reconstruction of knowledge and experience, under the auspices of the school, for the learner's continuous and wilful growth in personal-social competence.

1.5. Curriculum Dimensions

We started this reflection by bringing together the two inseparable concepts, education and curriculum. These concepts also share the same dimensions. Curriculum and education dimensions are different facets of the same reality which help educators have a holistic understanding of teaching and learning. The formal, non-formal and informal curriculum dimensions help to clarify the definitions that should best reflect what a curriculum is about. They act as further parameters of curriculum understanding.

The formal dimension refers to the learning experiences and activities that learners undertake formally in a school. The formal dimension of a curriculum is clearly prescribed by the curriculum specialist in documents such as the syllabus, course outlines or module as the case might be. In most learning institutions one can actually see it on the master time table of the institution. Everything about it is formal. The venues for different lessons or lectures are designated, the facilitator is known, time is clearly allocated and learners and teachers strictly follow it. As mentioned earlier on, one cannot reduce a curriculum to this dimension only by claiming that a syllabus or course outline is a curriculum.

The non-formal dimension also consists of planned learning activities that are undertaken in a school set up. The non-formal dimensions of a curriculum is also selected and organized but it

does not have many formalities as the formal dimension in terms of time, venue and facilitator. It is not necessarily done in the classroom, lecture room or laboratory. These activities include clubs, games, sports, drama and many others. They were previously referred to as extra-curricular activities implying that they were outside the regular learning activities but now they are known as co-curricular activities meaning that they go side by side with the other aspects of the curriculum. There are as significant and as important to the learners' education as the formal dimension.

The informal dimension is also referred to as the unintended or emerging curriculum. In learning institutions, the teachers and parents may know or not know about it. This dimension of the curriculum is not necessarily on the timetable but it influences the learner in a very strong way. The informal curriculum is very difficult to control because learners pick it from the 'junk yard'. It may include such aspects as learner's appearance during lessons, observing time for different activities in the learning institution, role modelling, etc. The informal dimension is sometimes planned and guided by the school when it includes activities such as observation of school rules and behaviour of teachers as role models. For instance, Mulenga and Luangala (2015:47) stated that "student teachers form their identities by modelling behaviours of those who teach them and thus universities need to examine the placement of staff". Thus we can notice from this that this dimension is actually very influential even in higher institutions of learning. The task of the head teacher, the teacher or whoever is in charge of an educational institution is to remove the negative effects of this dimension by planning it so as to reinforce the formal curriculum. In cases where this dimension is neglected the school is unlikely to achieve its core business. In their study Mulenga and Mukaba (2018:63) actually noted that "it had been realized that schools could not focus on cognitive development only (formal dimension) but also on psychosocial support if education for all are to be achieved hence the need for guidance and counseling in school". Guidance and counseling are activities to support learners in the informal dimension in order to enhance the formal dimension. Why should we spend another time on these aspects of the curriculum? It is because over the years the confusion which had come with the definition of curriculum arise from the lack of understanding of these significant facets of a curriculum. Therefore, if one embarked on the curriculum definition journey it is inevitable that the three dimensions are part of such a definition since they make what a curriculum is comprehensively about.

While there would continually be many more conceptualisations and definitions of curriculum by education scholars, curriculum thinkers and theorists, only definitions that accommodate the essential elements of education and curriculum could pass as valid definitions. As a way of capping this discourse therefore, a submission is being made as a concluding definition of a curriculum as:

Curriculum is all the selected, organized, integrative, innovative and evaluative educational experiences provided to learners consciously or unconsciously under the school authority in order to achieve the designated learning outcomes which are achieved as a result of growth, maturation and learning meant to be best utilized for life in a changing society.

If education is brought about as a result of what is implemented from the curriculum and if education is dependent on what the dynamic society needs, then having a curriculum that will stand a test of time is just wishful thinking. By fulfilling the needs of a dynamic society the conceptualization of a curriculum will continue to slowly accommodate itself with the present educational needs so as to suit the arising need.

1.6. **Further definitions of a Curriculum**

The Ideal or Recommended Curriculum: This is what is proposed by scholars, researchers and evaluators as a solution to meet a need or needs and consequently perceived as the most appropriate curriculum for learners. It is what a nation aspires to achieve.

The entitlement Curriculum: It refers to what society believes learners should expect to be exposed to as part of their learning to become effective member of that society.

The Intended Curriculum: This is what organisations develop for the learners in their educational systems and what should be taught by the teachers in that system. The term is also used to refer to the knowledge, skills, attitudes and behaviours that curriculum developers would like students to learn in school.

The available or supported curriculum: that curriculum which can be taught in schools through the provision of appropriate resources, both human and material.

The Implemented or Instructional Curriculum: This is what is actually taught by teachers in their classrooms as they and their learners interact with the intended and available curricula. The implemented curriculum is often described in teacher's scheme of work, lesson plans and student's notebooks.

The achieved or experiential curriculum: This is what learners actually learn as a result of their interaction with the implemented curriculum. It is what the learner experiences through

interaction with the teacher and the learning resources. The achieved curriculum includes both the intended and unintended experiences of the learner.

The hidden curriculum: This is the type of learning that takes place in educational institutions but is not explicit in curriculum documents. The hidden curriculum includes unintended and negative outcomes from school settings, such as learning to dislike a subject.

Activity

1. What is the relationship between education and a curriculum?
2. What is common is most curriculum definitions of scholars?
3. What is the significance of each of the three (3) curriculum dimensions to the understanding of a curriculum?
4. Briefly explain each of the curriculum elements?
5. After studying this unit how would you define a curriculum?

Summary

In summary we can thus say that education and curriculum are concepts that are very much related. Whereas education deals with the process of knowledge, skills, values and attitudes acquisition, development and transmission, a curriculum clearly defines the knowledge, skills, attitudes and values that should bring about education and also determines the levels at which the acquisition takes place. It is for this reason that scholars such as Cole (2003) defined a curriculum as more than just a list of topics to be covered but as the programme of education and the ways of realising national aims of development. In fact, on further reading of Cole's work and other curriculum scholars, it becomes evident that a curriculum is the sum of all activities, experiences and learning opportunities for which an institution and society takes responsibility of either consciously or unconsciously. Finally, it is critical to remember that a curriculum is the central business of every learning institution.

UNIT TWO
CURRICULUM FOUNDATIONS

Introduction

One of the most important questions that you may ask yourself is that; from where do curriculum developers obtain their basic understanding of education and curriculum? Remember that developers' thinking does not exist in a vacuum, nor does the curriculum development of which they are an integral part. There exists a common pool of information from which curriculum specialists draw their requirements and this database then becomes the foundation upon which curriculum conceptualization is built. Thus, curriculum foundation may be defined as **those basic forces that influence and shape the minds of curriculum developers and hence the content and structure of the subsequent curriculum.** There are generally three categories of sources of curriculum foundations. These are;

Studies of learners and learning theory (psychology)

Studies of life (sociological and cultural)

Studies of the nature and value of knowledge (philosophy)

Learning Outcomes

By the end of this unit you should be able to:

1. explain what curriculum foundations are.
2. demonstrate an understanding of how curriculum foundations influence the curriculum development process.
3. explain each of the components of the philosophical, psychological and socio-cultural curriculum foundations.
4. identify culturally induced biases in your society that may affect a curriculum.

2.1 The Role of Curriculum Foundations

In examining the role of these foundation disciplines in curriculum innovations, a modification of Dennis Lawton's model (1978) is a useful conceptual tool for you. The three sources of curriculum foundations constitute together the principal areas of influence on curriculum developers in their consideration of curricula. These influences affect developers' way of

thinking about curricula and, in the process, produce conceptions of curricula both explicitly and implicitly. Figure 2.1 is an illustration of what has just being introduced here.

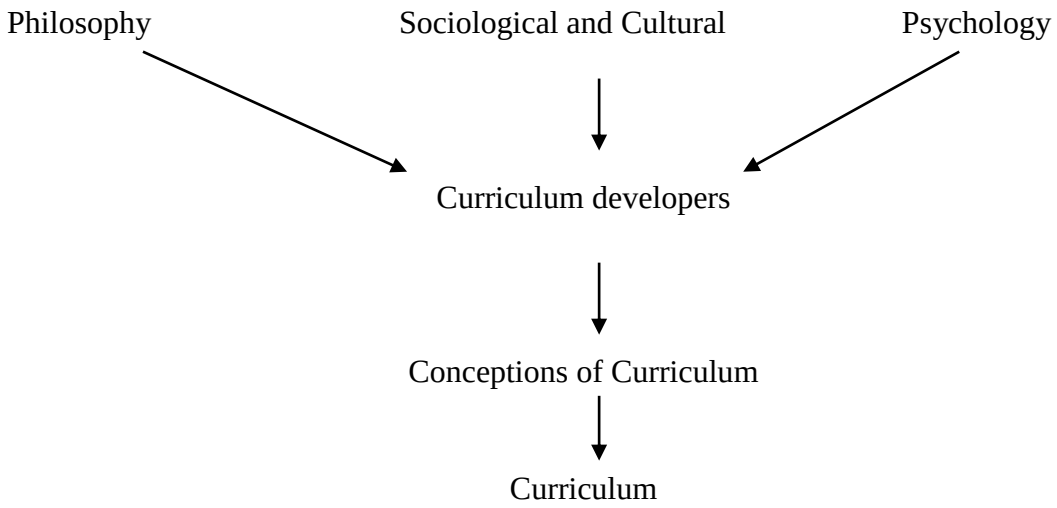


Figure 2.1. The role of curriculum foundations

Source: D. Lawton, 1978

In considering figure 2.1., the following points should be considered in relation to curriculum development.

a. Curriculum developers have opinions about the nature of knowledge and what is worthwhile **(philosophy).**
b. These opinions are then set in the context of the developers' understanding of society, culture and future social needs **(sociological and cultural)**
c. The contribution of psychology – the nature of students and how they learn – then acts to modify the previously assembled opinions and data **(psychology)**

Together these foundation sources provide a background of information upon which the curriculum developers rely to make future curriculum decisions. When merged with the curriculum developers past experiences in curriculum, we see how developers tend towards particular conceptions of the curriculum task. When these foundation sources and curriculum conceptions are seen in relation to differing curricula contexts, we can explain why the final curriculum products are and need to be, somewhat different.

The melding of these points in the early stage of the curriculum development process helps explain why educators, scholars and even curriculum developers have such different perceptions of curriculum and why those differences are maintained to achieve what are often very substantial differing curriculum outcomes.

2.2 Philosophical Foundations

Philosophy and philosophical assumptions are basic to all curriculum foundations as they are concerned with making sense of what we encounter in our lives. To Paul Hirst (1968:39), philosophy is '**concerned with clarification of concepts and propositions in which our experience and activities are intelligible**'. For curriculum then, an understanding of philosophy and a comprehension of one's own educational philosophy are essential in order to make useful and intelligible statements about experiences, which are to be passed on to subsequent generations. Indeed, the principal area of philosophical influence in the curriculum is found in the way curriculum developers handle philosophical issues. How curriculum developers perceive the world and hence education may be determined by posing three philosophical questions: **What is real? What is good? What is true?** Individuals will perceive and answer these questions in different ways and hence individual philosophies emerge. In turn, different philosophies will affect how individuals perceive and relate to the curriculum.

2.2.1 Ontology

Ontology is concerned with the nature of reality and it asks the question: What is real? While this question may appear obvious at first glance, it deserves greater consideration. Different societies, for example, perceive reality in quite different ways as to the individuals who constitute those societies. In medieval society, for example, it was accepted as real that the earth was flat, yet today we would regard that as nonsense.

Thus, what is real to a society is very important when constructing a curriculum that will perpetuate that sense of reality. Indeed, it may well be that some curriculum developers see their role as re-creating reality in society by using the school curriculum as a vehicle of change. In some recent curriculum developments – multiculturalism, gender equity, environmental education, moral education, - have sought to achieve just that.

2.2.2 Epistemology

The philosophical problem that deals with the nature of knowledge and nature of knowing is called epistemology. According to Walker and Evers (1988), 'Epistemology is the study of the nature, scope and applicability of knowledge.' In curriculum, where what we advocate becomes the basis of student learning, we are centrally concerned with the nature of knowledge, how we know and how we know what we know.

When posing epistemological questions in curriculum we ask: What is true? How do we know the truth? How do we know that we know? These are obviously vital questions for curriculum developers to consider, particularly in a society which purportedly values truth and seeks to pass on truth to subsequent generations. Ultimately our position becomes a statement of faith – a stand on those questions which we believe, and are prepared to accept, as true. As such we rely heavily upon our fundamental ontological beliefs (what is real). In this way the close relationship between epistemology and ontology is consolidated.

Thus in any curriculum development activity, the epistemological stance taken by those developers involved is of vital importance. Will they include the accepted truth? What does that constitute? At the very least, curriculum developers should be aware of epistemology and be prepared to pose the fundamental questions involved in such a study.

2.2.3 Axiology

Axiology is that aspect of philosophy that is concerned with the nature of value. Axiological questions are a fundamental feature of our life in that the resulting decisions have a profound effect upon our behaviour. Questions such as: What is good? What is desirable to humans? These are both fundamental to our very existence and constantly present in our daily lives. Thus axiological considerations are important in one's development of a curriculum for future generations.

Zais (1976) contends that axiological questions are usually divided into two main categories: ethics and aesthetics. Ethics is concerned with concepts of good and bad, right and wrong as they apply to human behaviour. When constructing curricula, developers need to be aware of both their own ethical questions and the ethical basis (hopefully not bias) that they are integrating into the curriculum. Thus developers will select objectives and contents that, in their mind, are more ethical both in terms of knowledge and process.

One thing is certain, however, and that is that a curriculum can never be value free in the sense that it can be constructed entirely objectively. We should be well aware that all curriculum developers naturally bring with them certain points of view, preferences, previous experiences and so forth that will influence the way they think about and construct curricula. Therefore in the curriculum development process we expect people to manifest some axiological positions, though hopefully these will not be blatant, excessive and imbalanced.

The issue of vital concern to curriculum decision-makers is how much direct inclusion of ethical concepts and processes should be included with a curriculum. Zais (1976) summarized the situation succinctly: 'Education, after all is a process of deliberately influencing children and youth in such a way that they become what they would not otherwise become. And the curriculum is the master plan by which this purpose is accomplished.'

Aesthetics is concerned with such value issues as beauty and enjoyment of human experience. Aesthetics questions include: What is beautiful? What aspects of the senses produce enjoyment? And what aesthetic experiences yield 'higher-order' enjoyment? The issues involving aesthetics produce particular difficulties for curriculum developers because individuals answer the above questions in very different ways. What is beautiful to one person may be ugly to another, particularly if they come from different cultures. And what produces aesthetic enjoyment to one individual, such as a fine cool morning, may produce hay fever in another. The sensory pleasure associated with a bottle or quality wine may be quite different for one who suffers from allergies. While aesthetics remains essentially relative in their nature, the curriculum developer faces enormous problems over what to include and what to exclude from the curriculum. However, strong consensus has emerged within schooling that a curriculum should include elements of aesthetical appreciation and skill acquisition. Thus, art, music, theatre, dance, craft and so forth are commonly found in school curricula. But should the music be symphonic or rock? Should the art be acknowledged artists or street graffiti and should dance be ballet, hip pop or 'break' dance? And how much of each should be included in a school curriculum?

In answer to these questions, curriculum developers in the past have opted for a more conservative, accepted view of what is beautiful and what is pleasurable. However, in more recent times this position has weakened and we have witnessed the emergence of more 'popular' aesthetics within school curriculum.

These three sources represent the different aspects of philosophy that influence and are in need of consideration by curriculum developers. They raise fundamental questions that require thoughtful examination and consideration. For the curriculum developer, the value of philosophical considerations is abundantly clear. Ontology, epistemology and axiology provide a useful structure for posing and answering philosophical questions which will aid to determine which content is to be put in the curriculum.

2.3 Psychological Foundations

The contribution of psychological sources to the foundations of curriculum is significant and growing. The scope for applying concepts, principles, processes and values to curriculum development is becoming increasingly more apparent.

If the purpose of psychology is the study of human behaviour, then psychologists are concerned with describing, explaining, predicting and investigating the behaviour of humans. Curriculum, therefore, can draw upon psychology, particularly educational psychology, for at least five areas of information.

Educational objectives

Student characteristics

Leaning processes

Teaching methods

Evaluation procedures

The study of psychology does not, at least for the moment, provide a source for content in a school curriculum (other than for a few subjects on psychological studies). Content is drawn from the domains of sociology and philosophy. However, psychology through its understanding of learning and learning procedures, does indirectly influence the selection of specific content for students as well as the selection of learning activities for students to acquire content. Let us briefly examine the psychological sources that the curriculum developer can employ.

2.3.1 Educational Objectives: Knowledge of the psychology of learning helps the curriculum developer devise and phrase appropriate goals and objectives. With this background the developer can determine if goals and objectives are suitable for various developmental levels and ages of learners and hence which are attainable and which are not. Subsequently, the formulation of curriculum goals and objectives has a profound influence upon the selection of content for the curriculum.

2.3.2 Student Characteristics: An understanding of the nature of learners, particularly of individual differences and of personality, will assist the curriculum developer to make appropriate choices in curriculum decision-making. The study of personality can tell us whether different personalities respond to learning experiences in different ways. Indeed, this is something the experienced teacher has long known and concerned teachers have endeavoured

to accommodate these differences within their classrooms. Similarly, an understanding of individual differences is most useful to the curriculum developer.

2.3.3 Learner Processes: Perhaps the greatest contribution that psychology makes to curriculum is an understanding of how people learn. The curriculum developer who has a sound grasp of learning and learning theory is in a commanding position to devise an appropriate curriculum for learners. In particular, an understanding of learning is essential to the effective selection of appropriate teaching and learning strategies.

Whether or not one supports a theory of operant conditioning (such as B.F.Skinner), some form of Gestalt theory (K. Lewin), Jean Piaget's approach to growth and development, or some other form of explaining how learning occurs, the final outcome will effect how the curriculum is shaped. Indeed, one of the difficulties encountered by curriculum developers is the vast of theories, paradigms and algorithms that purport to explain the process of learning.

2.3.4 Teaching methods: Psychology makes a significant contribution to both the selection of learning experiences and the way that teaching is conducted in the classroom. In the school curriculum an understanding of psychology is essential to the curriculum developer in devising appropriate learning experiences and conditions for learning. In selecting learning experiences the curriculum developer should have taken account of learning theories, individual differences amongst students, motivation strategies, personality, cognitive and affective development, teaching styles, group dynamics, teaching methodology and learning styles. This extensive list of psychological factors suggests that the curriculum developer can make substantial use of psychological sources when selecting teaching/learning experiences.

2.3.5 Evaluation procedures: Psychology can also provide curriculum developers with directions for undertaking the evaluation of student and teacher performance. Educational psychologists have developed a vast array of techniques for measuring the degree of student learning, student attitudes towards teaching and learning and so forth, as well as the extent of teacher effectiveness.

Educational psychologists, as well as other educators, have been concerned with such evaluation issues as:

a. Norm-referenced assessment or criterion-referenced assessment.
b. The role of formative and summative evaluation.
c. Appropriate instruments to measure student performance.
d. Determination of teacher effectiveness.

The five aspects of psychology outlined in the previous section indicate the range of influence that psychology has upon the development of curriculum.

2.4 Sociological and Cultural Foundations

2.4.1 Influences of society and culture on Curriculum

Society and culture exert enormous influences on the formation of the school curriculum or indeed any curriculum. After all it is society that devised schooling to ensure the survival of the cultural heritage, we would expect to see an extensive influence of society and culture upon curriculum in schools.

Curriculum developers serve the function of translating traditional assumptions, ideas, values, knowledge and attitudes into curriculum objectives, content, learning activities and evaluation. Of these curriculum elements, sociological sources have their greatest influence on content. In acting this way, curriculum developers both transmit and reflect the culture of which they are part. Thus it is not possible to talk about a culture-free curriculum. Rather, one should consider a curriculum as a situation where judgments are made as to what aspects of culture are to be included and why. Consequently, when developers devise curricula the cultural background of those developers will become evident in the content they select, the methods they include, the objectives they set and so forth. Curriculum developers may be well aware of societal and cultural influences and have the deliberate intention in mind of reproducing aspects of that culture in the curriculum.

2.4.2 Culturally induced bias and the curriculum

One particular aspect of the social and cultural influences on the curriculum which deserves specific attention is that of culturally induced bias. As societies perpetuate themselves through implanting values in the learners through institutions such as schools, it is distinctly probable that some of those values will be culturally biased. Indeed, these values may be so effectively integrated within schools and society that they are perceived not as biased but as accepted components, the very fabric of society.

It can be argued that until relatively recently the perception of the traditional occupational role for women was that of child rearing and domestic duties. A small range of stereotypical occupations such as within society. But to imagine some years ago, women lawyers, engineers, politicians, pilots, judges and senior business executives would have been almost unthinkable.

Today however, the former view is perceived largely as ludicrous. But to have achieved this change in values and attitudes many barriers have had to be surmounted, not the least being pervasively held sex-stereotyped beliefs. These beliefs were so tightly woven into the fabric of society they were perceived as natural and essential. In changing these stereotypes, the school curriculum was seen as an important vehicle in promoting and consolidating the new values and attitudes. Traditionally the school had portrayed females as passive, accepting and supportive persons who would subsequently undertake occupations similar in nature such as nursing, secretarial work and teaching. Males, however, were portrayed as active, aggressive and leadership oriented and they would follow appropriate occupations. Ironically these stereotypes, inculcated and reinforced through the traditional curriculum, had an equally negative effect upon both girls and boys.

In order to overcome such stereotypes, the content of literature has changed, course offerings in schools are more flexible (some secondary schools require boys to take home economics as part of a personal development component), career counseling has become more established, role models in schools have changed and more females have obtained senior positions within schools. It can be seen, therefore, that social and cultural forces have a profound effect upon curriculum in both indirect and direct ways. The exact degree that a society and its culture should influence the education system through the curriculum is a more debatable issue. But above all, curriculum developers whether at systematic, local or school level within educational enterprise-should not forget that they are a product of their culture and that every decision that they make will be culturally related.

Activity

1. What are curriculum foundations?
2. Briefly explain how the three categories of sources of curriculum foundations may influence curriculum developers.
3. Analyse some of the culturally induced biases that exist in your community that may negatively influence curriculum development and implementation?

Summary

To conclude this section, the contribution of philosophy, sociology and psychology to curriculum has been seen to be fundamental in nature. When curriculum developers undertake their task-whether they be a group working at systematic level, a group of classroom teachers, or those in educational but non-schooling situations-they will, knowingly or unknowingly,

decide upon certain views of knowledge and values, interpret the nature of society to devise their content and employ psychological principles to make selection for their curriculum. The premise upon which this unit has been based claims that a sound awareness of and familiarity with these foundation sources will facilitate more effective curriculum development.

UNIT THREE

CURRICULUM DEVELOPMENT MODELS

Introduction

In order for you to comprehend the context of the stages of curriculum development presented in the subsequent units, it is vital to appreciate the range of models that you can employ in curriculum development and have a clear understanding of each of them. Since this unit is a bit longer than the ones that you have read earlier, a set of revision questions in form of activities are provided for you at the end of each model. Take some time to answer them so that you would assess yourself as to whether you have understood each of these very important models which you may employ in curriculum design and development. The models that have been explained in this unit are not an exhaustive list of the curriculum development models that curriculum scholars have proposed. These are just but some of the models that have been used in this unit for the sake of this study. Otherwise, they are a lot of models for curriculum development that are there.

Learning Outcomes

By the end of this unit you should be able to;

1. clearly describe with the aid of a diagram, the rational models, cyclical models and dynamic models
2. evaluate each of the models in this unit by discussing its strengths and weaknesses.
3. describe the main features of each model.
4. explain the importance of each model to curriculum development today.

What is a Model?

According to Graves (1979), a model is a simplified representation of complex reality which enables us to understand the process of curriculum development better. Killen (1986) defines a curriculum development model as a means of representing the components and structure of the curriculum. You can also describe a curriculum development model as a theoretical framework for designing what students are to learn in a particular subject, based on desired objectives, learning experiences, teaching techniques and evaluation procedures.

A model is often depicted in a diagrammatic form. The purpose of a model is to provide a structure for examining the variables that constitute reality as well as their interrelationship.

Thus, curriculum development use models to examine the elements of a curriculum and how those elements interrelate. In curriculum we frequently use graphical models as they enable curriculum developers to visualize curriculum elements, their relationships, and the processes of development, implementation and evaluation.

3.1 The Rational /Objective Models

The objectives model was first proposed by Ralph Tyler (1949). Also referred to as the rational, academic or classical model these approaches to the curriculum process emphasize the fixed sequence of curriculum elements, beginning with objectives and following a sequential pattern from objectives to content, method and finally evaluation. In this pattern objectives serve as a basis for devising subsequent elements, with evaluation indicating the degree of achievement of those objectives. Two principal proponents of rational models are Ralph Tyler and Hilda Taba.

3.1.1 Ralph Tyler's Objective Model

In his seminal work *Basic Principles of Curriculum and Instruction* (1949), Tyler argued that curriculum development needed to be treated logically and systematically. His book attempted to explain '… a rationale for viewing, analyzing and interpreting the curriculum and instruction program of an educational institution.' Further, he argued that to develop any curriculum, one had to pose four fundamental questions:

What educational purpose should the school seek to attain?

What educational experiences are likely to attain these objectives?

How can these educational experiences be organized effectively?

How can we determine whether these purposes are being attained?

Sometimes referred to as the father of the curriculum movement, Tyler sought to instil in developers of curricula a more logical, systematic, meaningful approach to their task. His work has been underrated by some curriculum writers because of the rigid nature of his objectives model. However, over time much of his work has been misinterpreted, treated superficially and even ignored. Brady (1992) for example in referring to the four questions posed above, suggests that: 'The four steps are sometimes simplified to read "objectives", "content", "method", and "evaluation". And yet Tyler quite emphatically referred to 'learning experiences in question two as ' … the interaction between the learner and the external conditions in the environment to which he can react' (1949:63).

Figure 3.1. Tyler's model of Curriculum process

Objectives	What educational purposes should the school seek to attain?
↓	
Selecting	What educational experiences can be provided
Of learning experiences	that are likely to attain these purposes?
↓	
Organising	How can these educational experiences be
Learning experiences	effectively organized?
↓	
Evaluation	How can we determine whether these purposes are being attained?

In addition, some writers on curriculum development have argued that Tyler does not adequately explain the source of objectives (Skilbeck, 1976; Kliebard, 1970). Yet Tyler devotes half of his book to just that task. He describes and analyses sources of objectives that come from learners, studies of contemporary life, academic subjects, philosophy and the psychology of learning.

Indeed, Tyler has had a significant effect upon curriculum developers, scholars and writers for the past three decades. As shown in figure 3.1, Tyler saw the task of curriculum development as a logical, sequential resolution to the four questions posed. Once objectives had been determined, appropriate learning experiences could be selected which in turn would require effective organisation. The final step in Tyler's process was to determine whether the objectives had been achieved.

3.1.2 Hilda Taba's Objective Model

Out of the several books that Taba wrote, the most well-known and influential was *Curriculum Development: Theory and Practice* (1962). In this book Taba outlined her approach to the process of curriculum development, modifying Tyler's model so as to become more representative of curriculum development. While still linear in approach, Taba argued for more information input at each stage of the curriculum process. She particularly suggested a dual consideration of content (logical organisation of the curriculum) and the individual learner (psychological organisation of the curriculum). To emphasise her point, Taba claimed that all curricula are composed of fundamental elements. 'A curriculum usually contains some selection and organization of content.'

Figure 3.2. Taba's model of the curriculum process

Step 1. Diagnosis of needs

Step 2. Formulation of objectives

Step 3. Selection of content

Step 4. Organisation of content

Step 5. Selection of learning experiences

Step 6. Organisation of learning experiences

Step 7.Determination of what to evaluate and ways and means of doing it

Taba argued for a rational, sequential approach to curriculum development rather than a rule-of-thumb procedure. Furthermore, to be rational and scientific in one's approach, Taba claimed that decisions on the fundamental elements should be made according to valid criteria. These criteria may come from various sources – from tradition, from social pressure and from established habits. The differences between curriculum decision-making which follows a scientific method and develops a rational design and one which does not is that in the former the criteria for decisions are derived from a study of the factors constituting a reasonable basis for the curriculum. In our society at least, these factors are the learners, the learning process, the culture demands and the content of the disciplines. Thus, Taba, contended scientific curriculum development needs to draw upon analyses of society and culture, studies of the learner and the learning process, and analysis of the nature of knowledge in order to determine the purpose of the education system and the nature of its curriculum.

Finally, Taba claimed that if curriculum development was to be a logical, orderly task, then one needed to examine closely the order in which curriculum decisions are made and how they were applied. Taba perceived that the orderly way of developing curricula would follow seven sequential steps as outlined in figure 3.2.

These steps, presented sequentially represent a brief outline of Taba's systematic, logical approach to curriculum development. Although she is more expansive than Tyler, her approach with its emphasis upon the learner comes in part from her extensive interaction with schools in California. Working with teachers she realized that they would become the major curriculum developers of the future and a systematic logical model would be valuable to them.

Strengths of rational models

Tyler and Taba have found the inherent logic that underpins the construction of curricula, at least from a rationalist perspective. Using the sequence of developing objectives, formulating content and learning activities and finally evaluating the extent to which objectives have been achieved, does have an obvious logical, rational appeal to it.

The very nature of the rational model – its logical, sequential structure – provides it with a useful base for planning and devising curricula. By providing a recipe-type approach, these models have simplified what is a confusing, daunting task to many prospective curriculum developers. Given the pressure that curriculum developers work under, a rational model provides a straightforward, time-efficient approach to meeting the curriculum task.

By emphasizing the role and value of objectives, this model forces curriculum developers to think seriously about their task. By forcing people to conceptualise and then state objectives, rational thinking is encouraged a clear guide to later planning is provided. Proponents of this approach argue that all curriculum developers, regardless of their approach to curriculum, have objectives in mind, although some do not think about them systematically or state them logically.

Should one begin with other elements, such as content or evaluation, one would have little direction or purpose in curriculum planning and confusion could well result. Besides one could argue that those developers who commence planning with other curriculum elements have in reality thought about what they want to achieve, but have not formalized that thinking or not stated their objectives overtly.

Weaknesses of rational models

Over time it has become increasingly apparent that the objectives model has flaws in terms of the reality of curriculum development. To a large extent one might claim that these apparent weaknesses are due to different ways of thinking and approaching curricula as well as the background experiences.

A significant weakness of the objectives model arises from the unpredictable nature of teaching and learning. The model prescribes specified objectives to be achieved, but often learning occurs beyond these objectives due to factors that could not have been foreseen. For instance, in a geography class certain objectives form the basis of the ensuing curriculum that is being taught. However, new information becomes available (a new theory, more information from space

experiments, new approaches to research) that would be both pertinent and useful to the geography curriculum. Should it be included if it is not consistent with the established objectives? What impact will this have on other elements of the curriculum? If we include this content does its inclusion invalidate the curriculum? These are reasonable questions to pose about the objective model.

Overemphasis on formulating measurable outcomes (such as behavioural objectives) has caused significant problems for the rational model. With limited time available some curriculum developers have found themselves spending inordinate amounts of that scarce commodity on writing precisely phrased behavioural objectives.

Finally, some critics have frequently criticized Tyler that he does not adequately explain the sources of objectives. (Kliebard, 1970; Skilbeck, 1976; Marsh, 1986). In part the answer to this criticism lies in a sound reading of Tyler's and Taba's original works where surprisingly, considerable space is devoted to explaining where objectives should come from. And in part the answer lies with the use of a non-specific, indeterminate term such as 'adequate'. What is adequate for some is obviously inadequate for critics.

Activity

1. i). What is a curriculum development model?
   ii). Why are curriculum development models important in curriculum design?
2. What is the main feature of the rational or academic models?
3. State the four fundamental questions that Tyler argued that one needs to pose in order to develop any curriculum.
4. i) Why have some critics underrated Tyler's objective model?
   ii) Are these critics right? Explain.
5. What does Hilda Taba mean when she claims that decisions on the fundamental curriculum elements should be based on valid criteria?
6. Explain three strengths of the rational model.

3.2 Cyclical models

Cyclical models are basically an extension of the rational models in that they are essentially logical and sequential in approach. They incorporate elements of both the rational and dynamic models. However, differences do exist. Most importantly, cyclical models present the

curriculum process as a continuing activity, which is constantly in a state of change as new information or practices become available. Society pressure such as the need for well skilled manpower, improved physical health, for instance, may require re-orientation of aims, and thus content, methods learning activities and evaluation. In this way the cyclical model is responsive to needs and indeed it is argued that these needs are ongoing, necessitating constant updating of the curriculum process.

Secondly, cyclical models view elements of the curriculum as interrelated and interdependent, so that the distinctions between the elements, as in the rational model are less clear. For example a developer, who is considering content, may also suggest ideas for teaching methodology, although the consolidation of these teaching strategies would come later. Instead of regarding them as rigidly separate categories, cyclical models more realistically accept a degree of interaction between the various curriculum elements.

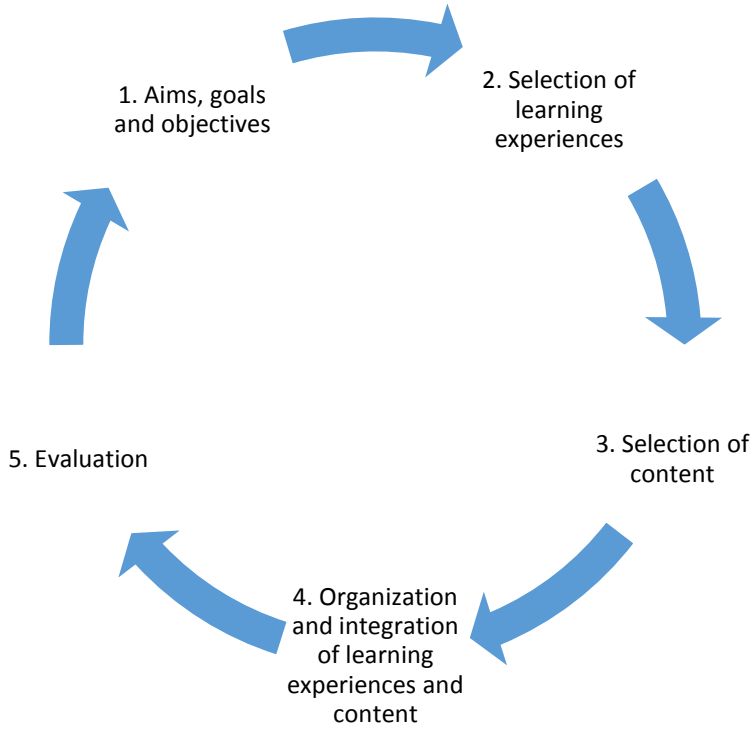
In the 1970s a new element called situational analysis was introduced into the curriculum process of cyclical models. **Situational analysis involves the analysis of those factors which exist in the environment where the curriculum is to be introduced**. In this way the subsequent curriculum more accurately reflects the needs of the learners for whom it is intended. This element is integral to the dynamic models. Of the many cyclical models that are there, two will be discussed in the following paragraphs. The two that are selected for this study have both been influential over the past two decades.

3.2.1 D. K. Wheeler's cyclical model

Wheeler (1967), argued in his book *Curriculum Process* that curriculum developers should employ a cyclical process in which the elements are related and interdependent to each other. His approach to curricula development as mentioned earlier is still essentially rational in nature. Each phase is a logical development of the preceding one, thus one phase cannot be attempted until some work has been done in a preceding phase.

Wheeler developed and extended the ideas forwarded by Tyler and particularly Taba. He suggested five interrelated phases in the curriculum development process which when developed logically would produce an effective curriculum. Though presented in a different manner the phases incorporate the essential elements outlined by Tyler and Taba.

Figure 3.3 Wheeler's model of the curriculum process



Source: After D.K. Wheeler, 1967.

Wheeler's greatest contribution to curriculum development is his emphasis on the cyclical nature of the curriculum process and the interdependent nature of the curriculum elements and this contribution has stood the test of time well. As outlined in figure 3.3, the diagram shows how the rational approach is still evident by requiring curriculum developers to follow steps 1 through 5 in a sequential pattern. The figure also indicates that these steps are in continuous cycles that respond to changes within education.

3.2.2 Audrey and Howard Nicholls cyclical model

In their book *Developing a Curriculum: A Practical Guide* (1978), Audrey and Howard Nicholls devised a cyclical approach that covered the elements of curriculum briefly but succinctly. The Nicholls model emphasized the logical approach to curriculum development, particularly where the need for new curricula emerged from changed situations. They argued that ' … change should be planned and introduced on a rational and valid basis according to a logical process, and this has not been the case in the vast majority of changes that have already taken place' (Nicholls & Nicholls, 1978:17).

Figure 3.4 Nicholls model of the curriculum process

Source: After A. and H. Nicholls, 1978.

They refined the work of Tyler, Taba and Wheeler by emphasizing the cyclical nature of the curriculum process and the need for a preliminary step – a situational analysis. They further contended that before the more obvious elements in the curriculum process are undertaken, the context or situation in which curriculum decisions are made requires detailed and serious consideration. Situation analysis then is a preliminary stage upon the curriculum they are devising. The Nicholls assets that the five interdependent stages needed in this continuous curriculum process are:

The inclusion of the situation analysis phase was a deliberate move to enable curriculum developers to be more responsive to their environment and particularly to the needs of the learners. They also argued for a much wider and more comprehensive approach to diagnosis ,an analysis of all the factors which make up the total situation followed by the use of knowledge and insights derived from this analysis in curriculum planning.

Strengths of cyclical models

While cyclical models incorporate the advantages inherent in objective models, they also overcome many of the latter's disadvantages as well. Thus, cyclical models exhibit the strengths derived from a logical sequential structure upon which curricula may be devised. For example, such models, by emphasizing the role of aims, goals and objectives, require the curriculum

developer to have conceptualized the task before proceeding. This enhances rational thinking with the probability that a more effective curriculum will result.

By employing situational analysis as a starting point, cyclical models provide baseline data upon which effective objectives may be devised. Although Wheeler did not refer to situational analyses specifically, he did examine the sources of aims and goals. Certainly objectives cannot be phrased in a vacuum and it is the data, both quantitative and qualitative (including intuitive), that are obtained by undertaking a situational analysis that helps curriculum developers make effective decisions.

The nature of cyclical modes is such that the various elements of curriculum are seen to be in continuous motion, able to cope with new situations and consequently reacting to changing circumstances. The model is flexible in that as the situation changes so corresponding changes are made to subsequent elements of the model. The model allows for, and indeed demands, a revision of the new situation and subsequent changes to the other curriculum elements.

In countries where the curriculum is decentralized, the cyclical models being less rigid in their application, are more relevant to school situations and hence are more appropriate to curriculum development by teachers.

Weaknesses of cyclical models

Inherent weaknesses within cyclical models are more difficult to locate largely because curriculum developers so successfully employ this approach to the curriculum process. As a model must begin somewhere, the cyclical model commences with a situational analysis and then proceeds through the successive elements of curriculum.

Once the cycle has been established it is possible that the stimulus for change may be originated from any curriculum element. For instance, where a school curriculum is in operation the need to revise the cycle may originate with new content, a different approach to teaching-learning being adopted from the results of an evaluation. Nevertheless, once the stimulus for revision has been initiated within the cycle, it needs to run its course as it impacts on subsequent elements.

A second weakness of this model arises for many people from its apparently logical and sequential nature. For many, cyclical models are little different from rational models and hence maintain the weaknesses described in the rational models.

Third, the manner in which the model is implemented may be construed as a weakness. A fundamental problem in utilizing such models is the amount of time required to undertake an

effective situational analysis. In order to be well appraised of the situation, developers must employ numerous techniques to elicit data about the learning situation. This can become extremely time consuming.

Activity

1. Cyclical models are essentially an extension of the rational model. However, there are two major differences between the two models. Explain these differences.
2. What is the Nicholls major contribution to Curriculum development and design?
3. Situational analysis has been identified as a weakness of the cyclical model. Why is this argument paradoxical?

3.3 Dynamic or Interactive models

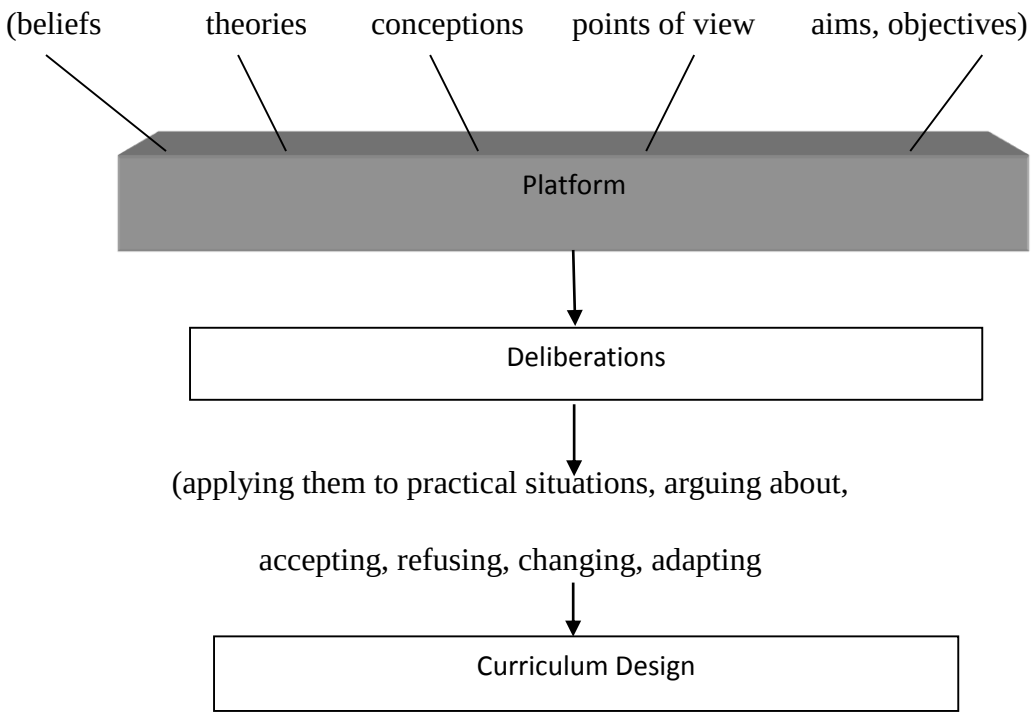
The interactive or dynamic models offer an alternative view of the process of the curriculum development. Proponents of these models argue that the rational and cyclical models do not reflect the reality of curriculum development in educational organizations. The curriculum process, they contend does not follow a linear, sequential pattern. Rather, curriculum development can commence with any curriculum element and proceed in any order. Indeed, curriculum developers may move through the various elements of curriculum several times before they are satisfied with the final curriculum product. Moreover, the needs of learners are seen as more important in determining curriculum planning than some predetermined set of information to be acquired.

It should be noted that the dynamic models have emerged from a more descriptive approach to curriculum where researchers have observed the behaviour of teachers and developers as they devise curricula. This they argue represents the essential base for formulating theory. Several writers have produced interpretations of dynamic models of the curriculum process. However, two significant contributions outlined in the subsequent paragraphs have been developed by Decker Walker (1971) and Malcolm Skilbeck (1976).

3.3.1 Decker Walker's Dynamic Model

In the early 1970s Decker Walker argued that the objective or rational models of the curriculum process were, contrary to accepted opinion in the literature, neither popular nor successful. Walker (1971) contended that curriculum developers do not follow the prescriptive approach of the rational sequence of curriculum elements when they devise curricula. Rather, they proceed through three phases in their preparation of curricula as seen in figure 3.5.

Figure 3.5 Walker model of the curriculum process



Source: After D. Walker, 1971.

Walker's model was derived from his analysis of reports on curriculum projects which he personally participated in. This analysis led him to describe what he saw as a 'natural' model of the curriculum process. It is a naturalistic model in the sense that it was constructed to represent phenomena and relations observed in actual curriculum projects as faithfully as possible with a few terms and principles.

Walker argues that in the first stage, 'the platform', curriculum developers recognize statements. These statements consist a hotchpotch of ideas, preferences, points of view, beliefs and values that are held about the curriculum. They may not be defined clearly or even logically, but they form the basis or platform upon which future curriculum decisions are made by curriculum developers. Walker further suggests that 'The platform includes an idea of what is and a vision of what ought to be and these guide the curriculum developer in determining what he should do to realize his vision' (1971:52).

Once the interaction between individuals begins, they are then said to enter the deliberation phase. During this phase individuals defend their own platform statements. Together these events provide a situation where developers seek to clarify their ideas and reach a consensus. From this apparently chaotic period, the deliberative phase produces considerable illumination.

The deliberation phase is not precisely laid out in a series of steps or procedures as would occur in an objectives model. It is a complex randomized set of interactions that eventually achieves an enormous amount of background work before the actual curriculum is designed.

The final phase of Walker's model is what he terms 'design'. In this phase developers make decisions about the various process curriculum elements. Individuals reach decisions after extended discussion and compromise. The decisions are then recorded and these become the basis for a curriculum document or specific curriculum materials.

To conclude, it is useful to view Walker's model in comparison with the classical, objective model that he condemned.

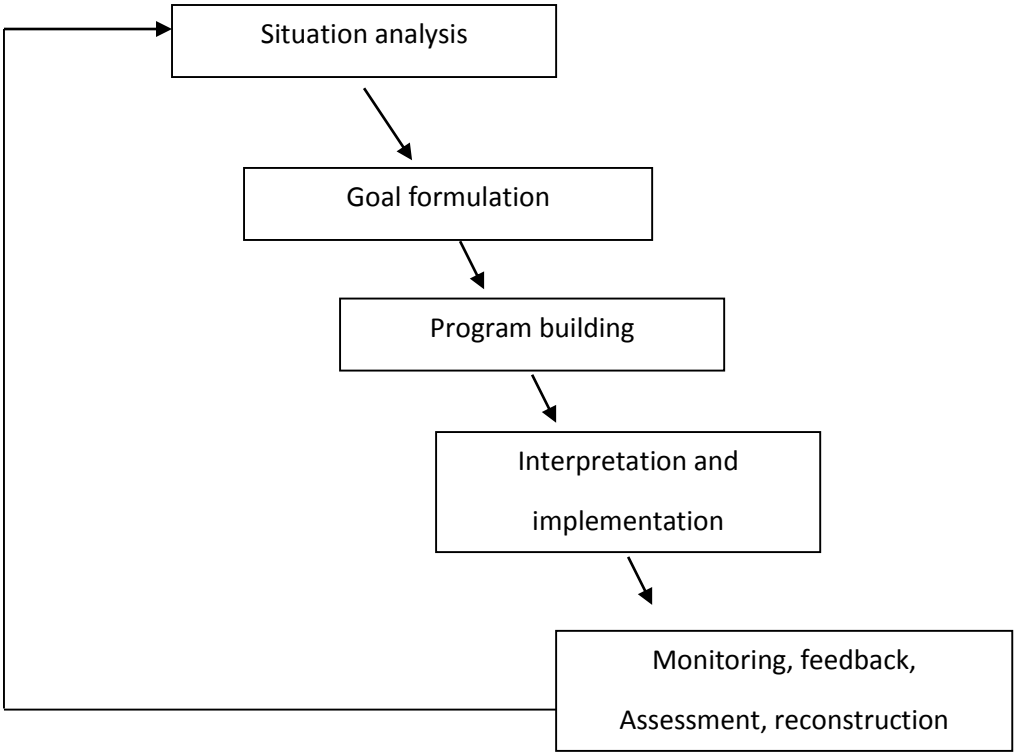
This model is primarily descriptive, whereas the classical model is prescriptive. This model is basically postulates a beginning (the platform), an end (the design), and process (deliberation) by means of which the beginning progresses to the end.

In contrast, the classical model is a means-end model: it postulates a desired end (the objectives), a means for attaining this end (the learning experience), and a process (evaluation) for determining whether the means does indeed bring about the end. The two models differ radically in the roles they assign to objectives and to evaluation in the process of curriculum development. (Walker, 1971:58-9)

3.3.2 Malcolm Skilbeck's Dynamic Model

A former, director of Australia's Curriculum Development Centre, Malcolm Skilbeck, posited an alternative interactive or dynamic model. In a well-publicised article, Skilbeck (1976) suggested an approach for devising curriculum at the school level. To support his argument he provided a model by which teachers could realistically develop appropriate curricula.

Figure 3.6 Skilbeck's model of the Curriculum process.



Source: After M. Skilbeck, 1976

Dynamic or interactive models suggest that the curriculum developer may commence with any curriculum element and proceed in any sequence rather than the fixed sequence advocated by the rational model. Skilbeck supports this notion, although he adds that it is important that developers be aware of the source of their objectives. To understand these sources, he contends, a situational analysis must be undertaken. The model claims that for school based curriculum development to work effectively, five steps are required in the curriculum process.

While it is tempting to argue that the apparent logical order of the model is rational by nature, Skilbeck warns not to fall into the trap. He suggests that curriculum developers may commence their planning at any of the five stages and proceed in any order, perhaps even handling different stages concurrently. Thus the model outlined does not presuppose a means-end analysis at all; it simply encourages teams or groups of curriculum developers to take into account different elements and aspects of the curriculum development process, to see the process as an organic whole and to work in a moderately systematic way.

Strengths of interaction models

Proponents of dynamic models of the curriculum process claim that these are far more realistic ways of handling curriculum development. By avoiding the obsession with writing objectives, and indeed behavioural objectives at that, developers are free to be more creative. Certainly

there is substantial teacher resentment to the writing of excessive number of objectives, particularly when they are required to be expressed in behavioural terms. Thus interactive models are more realistic, feasible procedures for curriculum development, especially from the viewpoint of the overworked classroom teacher.

Such models also offer developers considerable flexibility when approaching the development task. This flexibility emerges from the suggestion that developers may commence at any point in the curriculum process that is appropriate to their needs. Certainly the objectives model, and to a lesser extent the cyclical model, require developers to proceed in a rigid, sequential order. Furthermore, dynamic models allow for flexible movement within the curriculum process so that developers may move about in any order of events, retrace their steps and proceed in whatever way they find preferable. This lack of constraint is prized highly by many developers of curriculum.

Finally, it can be argued that interaction models reflect the reality of curriculum development, albeit complex and confusing. By reflecting the situation, particularly in schools, it can be claimed that a more suitable, less dysfunctional approach is advocated to those learning the task of curriculum development.

Weaknesses of interaction models

Interactive models provide little guidance to curriculum developers and this facilitates confusion rather that clarity. A question that is often asked by opponents of interaction models is – How do you know where you going if you pose few or no objectives? If objectives provide guidance and direction, the argument goes, then they must be stated in order to be effective. Although Skilbeck refers to goals, he plays down their impact, particularly in terms of their planning capabilities. Walker also refers to aims and objectives but sees them as only one of several factors that comprise platform statements. Thus one important weakness of models, some would claim, is the lack of emphasis placed on the construction and use of objectives and the direction they can provide.

It could also be claimed that by not following a logical sequence in developing curricula, curriculum developers waste significant amounts of time meandering around the curriculum maze, spending time in the deliberative stage is time lost from effective development and, in turn, this may partly account for the curriculum confusion evident in schools.

They are numerous weaknesses with the interaction model of the curriculum process. However, this must be tempered with the knowledge that other approaches to devising curricula have weaknesses as well.

Activity

1. Why do the proponents of the interactive models say that the academic and cyclical models do not reflect the reality of curriculum development?
2. How is Walker's model naturalistic?
3. Summarize Walker's model with a sentence for each phase.
4. Why does Skilbeck suggest that a situational analysis must be undertaken at the beginning of the curriculum development process?
5. How do Interactive models offer developers flexibility in their approach to the development task?
6. Which weakness of the dynamic models brings about a difference with the rational model?

Summary

The three types of models that have been discussed in this unit are just a part of the many models that exist in curriculum development. However, studying these models helps a student of curriculum development to lay a good foundation on the subject of curriculum development. You may have noticed as you read through this unit that no model is perfect since each one of them has a number of strengths but as well as some weaknesses. What is vital for the curriculum specialist is to use the strengths and weaknesses to the advantage of the curriculum development process depending on the situation in which a particular curriculum is being developed.

UNIT FOUR

CURRICULUM DESIGNING, PLANNING AND SITUATIONAL ANALYSIS

Introduction

In the previous units you have been looking at theories and principles that govern curriculum development and design. In this particular unit we would like you to have an understanding of curriculum design and situational analysis which are preliminary ingredients of curriculum development. Although these concepts may appear so theoretical in this unit, the best way to understand them is to draw examples from your own practice as a teacher and co-administrator in school.

Learning Outcomes

By the end of this unit you should be able to;

1. distinguish between curriculum planning and curriculum design.
2. demonstrate an understanding of the following curriculum design in relation to situational analysis.

4.1 Curriculum Planning and Curriculum Design.

Curriculum planning and design are essential preliminary ingredients in the curriculum development process. Before the detailed construction of a curriculum document occurs, curriculum developers are involved in planning and designing their proposed curriculum. **Curriculum planning is a process whereby curriculum developers conceptualize and organize the features of the curriculum they wish to construct**. (Print 1993).

This involves a broad analysis of the curriculum intent and context (what you wish to achieve), conceptualizing the curriculum's design (what it will look like), organizing the sequencing of developmental tasks (how to construct the curriculum) and arranging for the process of implementation and evaluation. Thus curriculum planning is an integral part of the curriculum development process.

Curriculum design refers to the arranging of elements of curriculum into a coherent pattern. An essential feature of any curriculum is the conceptualization and organization of its various parts. These parts are known as curriculum elements and they are the essential building blocks of any curriculum. I hope you still remember what we looked at in unit one concerning curriculum elements. By organizing curriculum elements in particular ways, different designs

emerge. Curriculum design usually takes place as part of the curriculum planning process. That is, early in the conceptualization of the curriculum decisions are made about the nature and arrangement of the various curriculum elements. Thus, curriculum design refers to the interrelationship between all curriculum elements. However, before one sets out to design and plan a curriculum, situational analysis must be done. What then is situational analysis?

4.2. Situational Analysis

Situational analysis is a term that has gained credence in the field of curriculum in recent years and was outlined by Taba (1962) in what she described as a 'diagnosis of needs'. Simply put Situational analysis is a process of examining the context for which a curriculum is to be developed and the application of that analysis to curriculum planning. It involves a detailed analysis of several factors that relate to the context. This analysis is then incorporated within the subsequent planning for the development of curriculum intent, curriculum content, learning activities and evaluation. This argument claims that a systematic analysis of the situation must be conducted in order for a curriculum to be developed effectively. Just what the situation is exactly, and at what depth and breadth the analysis will be conducted, vary significantly. A situational analysis may be conducted at broad educational levels, such as groups of schools, regions or provinces within an educational system or even at entire systematic levels. Nicholls & Nicholls (1978:22) refer to the process of situational analysis as:

> … a situation which is made up of a number of factors such as pupils, pupil's homes and background, school, its climate, its staff, facilities and equipment. Analysis of these factors, together with a self-analysis, followed by study of their implications for curriculum planning constitutes one step towards the rational approach…(of curriculum).

The need for conducting a situational analysis is a fundamental precept of effective curriculum development. Developers commencing their task should ask important questions such as: 'what do we know about the context – the learners, teachers, school environment, the administration – of this curriculum and why is it needed?' This provides them with an information base to pose an even more fundamental question: 'What do our learners need?'

Many developers believe they intuitively know the answers to these questions and hence a formalized situational analysis to them is unnecessary. They rely on their past experience and their intuitive understanding of the curriculum context. But how do they know that they are accurate? They don't – they believe they are but only an effectively conducted situational analysis can determine if, indeed, their intuition is accurate. Thus the real need for conducting a situational analysis is to collect useful data that can become a basis or springboard from which

other curriculum elements can be devised. With such a base developers are better able to devise appropriate curriculum aims, goals and objectives, better able to develop appropriate content and so forth.

A situational analysis is an obvious commencement point for the construction of a curriculum. It is an ideal opportunity for curriculum developers, aware of the curriculum presage factors affecting them, to bring a reasoned, rational approach to the development of curricula. Above all it is an opportunity for curriculum developers to take account of local factors when developing curriculum to meet learners' needs. Although such tasks may be difficult, time consuming and demanding, their value to effective curriculum development is obvious nevertheless. The argument for undertaking a situational analysis may therefore be summarized as:

1. Identifying local needs of learners, parents, teachers and the community.
2. Understanding the local curriculum context.
3. Facilitating planning and subsequent curriculum development.
4. Providing a systematic database for devising curriculum goals and objectives.

4.3. Needs assessment

A useful technique for determining the starting point of a situational analysis, for collecting data within a situational analysis, or for undertaking reviews of aspects of curricula at other times is the technique known as needs assessment. John McNeil defines needs assessment as:

> the process by which one defines educational needs and decides what their priorities are. In the context of curriculum, a need is defined as a condition in which there is discrepancy between an acceptable state of learner behaviour or attitude and an observed leaner state. (McNeil, 1985:74)

Essentially a needs assessment is a means of reaching consensus over future directions for a curriculum by determining the discrepancy between current and preferred situations. In turn this requires a procedure to ascertain the nature of the discrepancy. A needs assessment may be used for curriculum developers to determine and prioritize educational needs. This is extremely useful in facilitating a situational analysis and for laying the foundations for an effective set of curriculum aims, goals and objectives.

4.4. Conducting situational analysis

While the need for undertaking a situational analysis is considered beyond dispute in most of the curriculum literature, it may nevertheless be resisted by uninitiated curriculum developers

who perceive it as a difficult, time-consuming task. Some curriculum developers may argue that they do not need a situational analysis to understand the contest of their curriculum. After all, they have an intuitive understanding of student needs and necessary curricula to meet those in need. However, we should question curriculum developers as to where this intuitive response comes from and to what degree it is valid.

Amongst other things, a situational analysis provides a clearer vision of the curriculum context as well as a systematically devised database, both of which provide a more reliable and valid source for later curriculum decisions. This is not only a more systematic way of conceptualizing and conducting curriculum development than an intuitive understanding approach, but one likely to gain substantially greater support from other participants in the curriculum development process. The approach of curriculum developers being remote and isolated from curriculum context and then imposing the devised curriculum upon users is long gone.

How, then, does one conduct a situational analysis? Several sets of procedures are available and they may appear somewhat daunting and formidable. Nevertheless, time effort spent on understanding an effective situational analysis will be well rewarded in the later stages of curriculum development and in terms of the overall effectiveness of the curriculum development task. To understand this critical appraisal Skilbeck suggested a review of factors that are both internal and external to the school which constituted the situation (see table 4.1)

4.5. Situational analysis procedure

A recommended approach to conducting a situational analysis involves four steps: (i) identify problems in context; (ii) select appropriate factors; (iii) data collection and analysis; (iv) make recommendations. Curriculum developers beginning the development process should devote considerable time and effort to situational analysis as it will pay handsome returns with the development of other curriculum elements.

Table 4.1 Situational analysis factors

External factors to the school
1. **Cultural and social changes and expectations**: This includes major changes to society such as unemployment patterns, societal values, economic growth and family relationships. Parental, employer and community expectations of schools.
2. **Educational system requirements and challenges**: This includes systemic influences such as policy requirements, inquiry reports, external examinations, major curriculum projects and significant educational research.

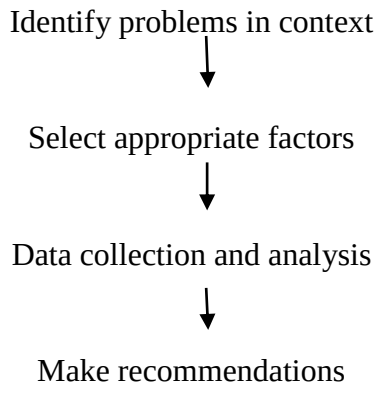
3. **Changing nature of content**. The subject matter taught in schools requires constant revision to update it with developments in the outside world. Examples include new knowledge acquired, technological development and new literature.
4. **Teacher support systems**: A variety of external systems can contribute to enhancing teaching/learning strategies, content updates, evaluation techniques, institutions, educational institutes, local teacher centres, curriculum consultants, advisory teachers, in-service courses and subject associations.
5. **Resources**: Curriculum developers need to be aware of the availability and flow of resources into the school. These may come from state education departments, the community and business organizations.

Internal factors to the school

1. **Pupils**: Significant data that may be gathered on students include abilities, physical and psychological development, aptitudes, emotional and social development and educational needs. An accurate understanding of the nature of students allows for effective curriculum planning.
2. **Teachers**: What are the skills, experience, teaching style, values and special strengths and weaknesses of a school teaching staff? Special strengths may broaden curriculum offerings and allow for curriculum enrichment and extension.
3. **School ethos**: The school climate/environment is a significant factors influencing curriculum and includes principal involvement, power distribution, social cohesiveness, operational procedures and professional cohesiveness.
4. **Material resources**: What exactly does the school possess in terms of buildings, equipment, resources (books, curriculum materials), land and vehicles as well as financial resources for future purchases?
5. **Perceived problems**: Major stimulus for curriculum change emanates from a perception of needs or problems. Curriculum planners ascertain these from parents, teachers, students and the community. Needs-assessment techniques may be used.

Source: After M. Skilbeck, 1975

Figure 4.1. Situational analysis procedure



4.5.1. The Problem

The problem that initiates a situational analysis may be specific, general or fundamental. The need to address these problems could well be so obvious that the system would encounter significant difficulties if they were ignored. A thorough analysis of student needs and expectations is required as a preliminary to later curriculum development. It may be that teachers and developers are not well aware of problems and felt needs of learners and society. Regular investigation of these attitudes is a useful activity by teachers for keeping the curriculum relevant and valued. This approach requires an analysis of the following: pupil abilities and backgrounds; teacher strength and weaknesses; school environment/climate; school resources and so forth.

4.5.2. Appropriate factors

Upon determining which needs and problems are to be addressed in the situational analysis, the curriculum developer can then relate to the appropriate factors suggested by Skilbeck. A careful consideration of Skilbeck's factors will illuminate the nature of the problems concerned.

4.5.3. Data collection and analysis

Interviews, school records, systematic observation, questionnaires, external exam, staff profiles and inventory checklist can be used to collect data. Curriculum developers then analyse these data to determine their significance in the context of the specific situation. The use of the above instruments will vary with the nature of the situational analysis being undertaken. Once data have been collected they must be analysed to determine trends and areas of consistency. This does not usually require sophisticated statistical treatment but rather a systematic analysis and synthesis of the collected data to determine what patterns are revealed. Then from these patterns developers are able to recommend directions for action.

4.5.4. Recommendations from a situational analysis

The final step in a situational analysis model requires curriculum developers to make recommendations based on the analysed data. This would typically consist of a list of recommendation actions based on the previous goal statements.

For instance:

1. Students need substantial writing skills to establish secure English communication skills.
2. The High school grade ten geography curriculum have appropriate resources to address the needs of locally based gifted and talented students.

Summary

The value of undertaking a situational analysis is diminished considerably without the translation of results into recommendations or plans of action. The resulting recommendations will serve to guide the curriculum team with the development of goals and learning outcomes, content, learning activities and strategies for evaluation. This will eventually give guidance to curriculum design and planning

UNIT FIVE

THE CURRICULUM DEVELOPMENT PROCESS IN PRACTICE

Introduction

The curriculum models that you studied in unit three have given you a theoretical idea of what curriculum scholars think the curriculum development process follow. However, curriculum development in practice though it borrows a lot from the models is done according to the demands and peculiarities of each education system in every nation. I the previous unit you have analysed how situational analysis directs the designing and planning of a curriculum. This should teach you that curriculum development though have the same ingredients or stages it takes a variety of orientations in each country. What is common for most education systems especially in Africa is that most of the processes of curriculum development in these nations is centralised and cyclical. In this unit a generic curriculum development process of most Anglophone nations especially in Africa is described.

Learning Outcomes

By the end of this unit you should be able to:

1. describe what is involved at each stage in the curriculum development cycle.
2. explain the importance of curriculum evaluation in the curriculum development process.
3. discuss with examples the role of the teacher in the curriculum development process.

5.1 National Curriculum Development Centres

National curriculum development centres or institutes of education such as the Curriculum Development Centre in Zambia, the Kenya Institute of Education, the Tanzania Institute of Education and Malawi Institute of Education have been established in most Anglophone African countries to develop curriculum for schools and colleges. They have subject panels which are composed of teachers, teacher educators, inspectors of schools, university lecturers, religious leaders and other interested parties that develop curriculum materials under the direction of the staff of the curriculum development centres. The legal responsibility for curriculum development belongs to these centres. Most if not all of these centres are legally established by an Act of parliament though depending on each country the Act may be amended severally so as to meet the changing needs of a nation. However, the roles of these centres retain their original philosophies which are to:

a. Prepare new and relevant curriculum materials
b. Revise the existing curriculum content

c. Co-ordinate with other Ministries of Education departments teacher education programmes
d. Initiate and promote programmes to improve the quality of education.

Thus from the above philosophies it can be deduced that the mandate of curriculum development and research centres is to:

1. To conduct research and prepare curricula and syllabuses for all levels of education except colleges and universities.
2. To prepare support materials that are appropriate for implementation of curriculum.
3. To organise and conduct in-service courses and workshops for teachers and other officers carrying out trials and new curriculum syllabus and teaching material.
4. To organise orientation courses for education officers in order to keep them informed on new developments in curriculum.
5. To prepare and transmit radio programmes through mass media to support implementation of school curriculum.
6. To evaluate the appropriateness of curriculum support materials to be used in schools.
7. To conduct research and prepare correspondence courses for learners and teachers.

5.2 Main stages of the curriculum development process

Curriculum development is a complex and continuous process which is carried out systematically with the involvement of interested parties (see figure 5.1). As mentioned earlier, this process allows for substantive input from subject area specialists, teachers, inspectors of schools, religious leaders and representatives of other relevant organizations. In most Anglophone countries, the curriculum goes through the following steps:

Stage One: Policy Decisions

Policy decisions are concerned with general education issues or with proposals for development of specific subjects, e.g computer studies, aviation technology and so on. Matters of general policy include aims and goals of education, structure of the education system, place of technical education and curriculum areas of different levels. Education policies are normally used as guidelines by curriculum development teams. The government through the Ministry of Education is responsible for policy making for education. It is important for the political system to appoint or contract researchers and evaluators to define the problems facing the country or society at large, collect data, analyse it, draw conclusions and make recommendations on the type of education the learners should receive, the system of education that the country should have and the most appropriate curriculum for the education. As much as possible political,

personal or simplistic personal opinions of the people should be avoided as the bases for making educational policies and decisions. The scientific approach should prevail in guiding policy and other decisions in education.

Stage Two: Conceptualisation

During this stage the project team conducts a needs assessment whose main objective is to determine student's, teacher's, parents' and community leader's views about exiting and intended curricula. Curriculum developers should also project into the needs of society in a few years' time.

After the baseline surveys, national workshops are held. The main aim of the workshops is to define needs and problems and create a consensus. The participants include educators, representatives of non-governmental organizations, religious leaders and professionals from other fields.

After the workshop, curriculum specialists carry out a situational analysis of the existing curriculum to find out the extent to which the proposed content has been included in various subjects. This is followed by a study on educational theories and a survey of educational practices in other countries. It is during this stage that the curriculum development team identifies problems in the existing situation, the needs of the learners and society and conceptualises the curriculum which if implemented will contribute to the solution of the problems.

Stage Three: Planning

During this stage, the strategy for developing and implementing the proposed curriculum is formulated. Issues examined include the following:

Which subjects will be taught and how much time will be devoted to each of them?

The scope and sequence of each subject;

The ways and means of financing curriculum development and its implementation, including sources of funds;

Timing of change-When will the process of developing new curriculum materials start and end?

Who will be responsible for the construction of buildings and provision of facilities and equipment?

Recruitment and deployment of teachers;

Training of teachers, standards and quality assurance officers, teacher advisory tutors and examiners;

How the curriculum should be implemented – should it be piloted or not?

Assessment and examinations; and Plan of action.

Using data from baseline surveys, the situation analysis and the national workshops, curriculum development teams develop a plan of the curriculum. It is during this stage that curriculum designs and syllabuses are drafted and presented of the course panel and academic board for approval.

Stage Four: Development of Instructional Materials

During this stage, pupil's books and teacher's guides are developed by teams of writers including teachers, teacher educators, quality assurance and standards officers, teachers' advisory tutors, curriculum developers and other professionals.

Stage Five: Try out/Pilot of the New Curriculum

After the material have been developed, and evaluated and the necessary modifications made, they are piloted in selected educational institutions. At this stage the curriculum materials, teaching strategies and activities are tried out among a sample of learners for whom the curriculum is being developed.

i. Selecting pilot schools in close collaboration with provincial directors of education and district education officers.
ii. Informing head teachers, teachers, teacher advisory tutors, quality assurance and standards officers and educational administrators involved in the pilot project about the project.
iii. Using the mass media and other forums to sensitise teacher educators, parents and community about the projects.
iv. Conducting orientation courses for teachers, quality assurance and standards officers, and other people involved in the implementation of the project.
v. Distributing trial materials to schools and teachers' advisory centres.
vi. Utilizing the material in pilot schools.
vii. Monitoring and evaluating the implementation of the project in the pilot schools.
viii. Curriculum material are revised on the basis of feedback from the pilot stage.

Stage Six: Curriculum Implementation

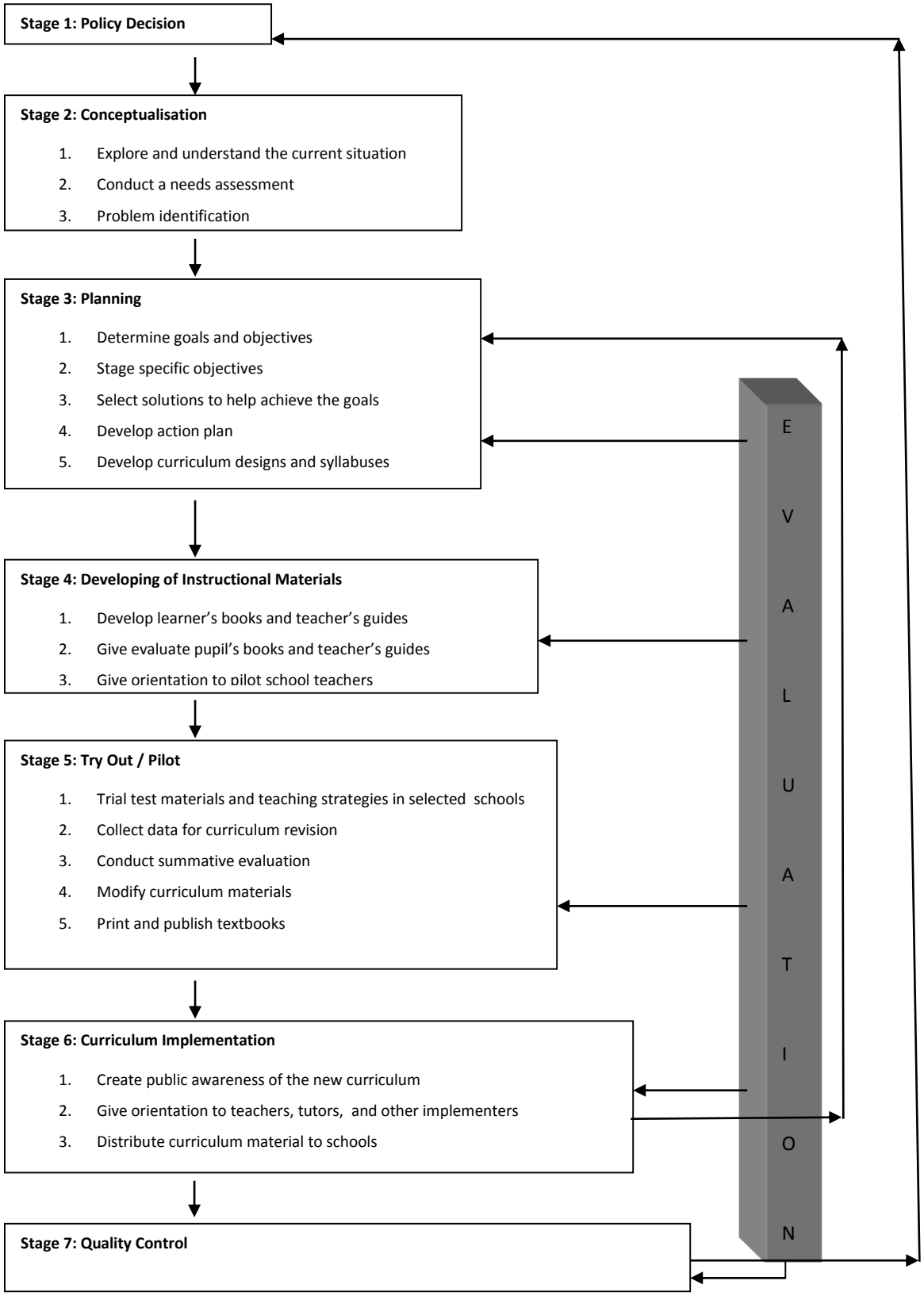
After the new curriculum material have been thoroughly evaluated and revised, they are implemented nationally.

Stage Seven: Quality Control

During this stage, quality assurance and standards officers, and teacher advisory tutors organize courses for teachers in local centres and nationally. In addition, the curriculum is continuously monitored and evaluated to determine its effectiveness.

The next page figure 5.1 gives a diagrammatical illustration of what has been explained in the previous sections.

Figure 5.1. Major Stages in the Curriculum Development Cycle used by most Curriculum Development Centres in Africa



5.3 Curriculum Evaluation

Curriculum evaluation is the process of collecting, analysing and interpreting data for the sake of facilitating decision making at various stages of the curriculum development and implementation processes. Evaluation of curriculum materials, such as syllabuses, textbooks, teacher's guides and radio programmes, goes on all the time throughout the curriculum development process as indicated in figure 5.1. Curriculum developers are expected to systematically gather evidence during all stages of the curriculum development and implementation processes for the purpose of improving the curriculum and reviewing aspects of the curriculum that are too difficult for the learners to comprehend.

5.3.1. Functions of Curriculum Evaluation

The functions of curriculum evaluation are briefly described below:

a. Identifying Educational Needs

The first function of curriculum evaluation is to identify educational needs. Before a new curriculum is developed, it is normally necessary for curriculum specialists to carry out a needs assessment to identify appropriate educational objectives. This is because the curriculum of schools and colleges in any country must be a reflection of the felt needs of the community if education is to be relevant to the needs of society.

b. Curriculum Revision

A second function of evaluation is to revise the curriculum. The process is known as formative evaluation. It's major aim is improvement of the curriculum that is being developed. At the national curriculum development centres, the curriculum goes through a variety of stages before the final product. One of these stages focuses on an evaluation of the objectives and content of the curriculum before learning activities are created. Once the curriculum has been implemented, the curriculum developer and evaluator visit the classroom to watch the class use the materials and to observe the teacher and talk with him/her about the materials.

c. Determining if objectives have been achieved

A third function of curriculum evaluation is as a means of determining whether the curriculum brings about desirable changes in learners' knowledge, skills, values and attitudes as well as finding out the effects of the curriculum on learners.

5.4 The role of the Teacher in Curriculum Development

It is clear that teachers participate in a multiplicity of curriculum activities at classroom and school levels. These are the very substance of their daily teaching tasks and include such activities as selection of specific content, selection of teaching strategies, formulation of specific objectives, use of audio-visual teaching-learning resource and so forth. Regardless of the country and continent in which one teaches, it has become obvious in recent years that all teachers are participating more in curriculum decision-making at the school level. The nature of this participation may be seen in the various roles that teachers adopt in the decision-making process. Teachers may participate in any combinations of four curriculum decision making role at the school level as; implementers, adapters, developers and researchers.

As **'implementers' or 'receivers'**, the teacher's role is to apply curriculum developed elsewhere. In this role the teacher has a significant responsibility and involvement in the curriculum development phase of the curriculum process. In this phase teachers play a vital part in implementing, monitoring, supervising and evaluating the curriculum. Thus, teachers' support and training in curriculum change and other innovations is essential for the effective implementation of any curriculum. Hence it is important that teachers interpret the curriculum correctly.

Teachers could also adopt the role of **'adapter or modifier'**. Here an externally developed curriculum is interpreted and changed to meet the needs of a particular school population. This modification occurs because teachers on the school's staff perceive that the curriculum concerned does not always meet the needs of their students. It is fair to say that most teachers, most of the time, adapt the written curriculum they receive in some ways. Indeed some centrally prepared curriculum documents are deliberately constructed in a way that provides teachers with options to adapt or modify the curriculum to the school's context.

The **'curriculum-developer'** role involves the teacher in designing and developing, usually as a member of a group, a curriculum to meet learner needs. Through the use of techniques such as situational analysis and needs assessment, teachers have been able to determine the nature of appropriate curriculum to meet those needs.

Finally, teachers may undertake the role of **'curriculum researcher'**. Here staff may be involved in improving one's own practice, testing curriculum materials, evaluating new curricula, testing teaching strategies and collecting data on student records needs. In recent years an increasing number of teachers have become involved with action research, a role which has

made them involved both with curriculum research and curriculum reflection. Action research is a process of change aimed at the improvement of an individual's or groups own practice. It is not engaged in because someone else is forcing the teacher to change or because there is evidence provided by someone else that there is need for change. It is a process entered into by the teacher because s/he wishes to improve his/her own practice, and understand in a more critical manner the reasons and basis for such practice and the context in which it takes place.

In participating in one or more of these roles at a school level, teachers will find themselves inevitably questioning traditional curriculum practices and decision-making procedures. To stimulate this process one might consider the following questions:

1. Who makes major curriculum decisions at the school level?
2. Who should make these decisions?
3. To what degree do teachers identify with or have 'ownership' over the curriculum in a school?
4. What curriculum decisions should be made at the school level? And what should be left to external organizations?
5. What should the curriculum include? What should it exclude?
6. What emphasis should be placed on specific subjects, or areas of learning within a curriculum?

In conclusion you can say that the teacher's role in the curriculum can be described as Nacino, Oke and Brown (1994:35) puts its that:

> The curriculum is not so much what is found in the printed guide (syllabus or scheme of work) as what the teacher makes of it in the classroom. It is his/her adaptation of it to meaningful learning experiences that really counts. They should use the guide as a framework and must feel free to express his teaching methods in the way that can best help make him/her a success in the classroom.

From the above statement you will obviously see that the curriculum can be of great success or a dismal failure, depending on the teachers. They are the key persons who can make the curriculum design achieve what it was designed to achieve. It they are dedicated, hardworking and imaginative they can enliven what would otherwise be dull and lifeless.

It will require a lot of imagination and inventiveness on the part of the all teachers to make the syllabus vital and stimulating in the classroom. In addition, the teacher's efforts as a team will to a very large extent determine whether the learners total experience in school will later be pleasantly remembered or best forgotten.

Outside the classroom the teacher also has an important part to play in the curriculum. Her informal contacts with learners in the dining-room or the sports field will give her valuable information about the characters and personalities in her students. The students for their part

will also be making value judgements about the teacher. To some extent the teachers teaches what she is herself; long after students have forgotten the content of the subjects they were taught they will remember their teachers as caring, kind, lazy or even indifferent.

Of all the personnel involved in curriculum implementation and design, the teacher is almost certainly one of the most important. She is the one who implements the ideas and aspirations of the designers. What do you think about the above ideas about the teacher?

The teacher also has a role to play in curriculum design as a source of feedback to the school authorities and ministry representatives. If certain recommended practices or elements of the syllabus are not satisfactory, the teacher should endeavour to see that they are changed or eradicated. Educational administrators sometimes lose touch with what is happening in actual classrooms and need this important element of feedback from the teachers to keep them informed.

Activity

1. Why is it important for the political system to involve researchers and evaluators at the Policy Decisions stage?
2. Why is the planning stage of curriculum development important?
3. Give a summary of the Pilot stage.
4. i) What is curriculum evaluation?
   ii) Explain three functions of curriculum evaluation?
5. Briefly explain the roles of a teacher in curriculum development.

Summary

As earlier mentioned in the introduction, curriculum development has benefited a lot from the thinking of scholars of curriculum development models. Thus, each nation has a version of how they go about the process taking into consideration the unique features of each of their education systems and the needs of their societies. However, there are stages such as situational analysis, planning, piloting, development of teaching and learning materials and evaluation which must not miss in any curriculum development process. Moreover, the sequence of these stages which be well done. For instance, implementing the curriculum to every school in the nation or just doing a try out or piloting of it before developing teaching and learning materials will be a disaster. The role of the teacher in all this is paramount, otherwise the implementation of a curriculum will be impossible without involving teaching at all the critical stages of its development.

UNIT SIX

CURRICULUM INTENT, SELECTION AND ORGANISATION OF CONTENT

Introduction

This unit this is a little bit longer than the other five. In order to help you conceptualise what is in this unit there are a set of questions for you to answer after each section.

You may have noticed that 'Curriculum intent' is a term, which is not widely used in the literature yet as a concept it is commonly and constantly applied in practice. It may be defined as the direction that curriculum developers wish learners to go as a result of participating in the curriculum. It is important for you to understand that Curriculum intent incorporates the various forms of aims, goals and learning outcomes found in curriculum documents, which together provide directions that will hopefully be achieved by learners as they interact with the curriculum. As such, aims, goals and learning outcomes provide guidance to teachers and developers (as well as learners) to plan appropriate content, learning opportunities and evaluation strategies for learners.

In unit three about curriculum development models you read that in some curriculum models it is suggested that the sequencing of curriculum elements is unimportant and that developers may commence with any element and progress in any order. Nevertheless, there is logic in dealing with situational analysis and curriculum intent before developing content, learning activities and evaluation procedures.

If the formulation of aims, goals and learning outcomes is undertaken at this point in the development process, a clear direction is provided for subsequent selection of content, learning activities and evaluation strategies, the curriculum developer has a sound foundation for later decision-making by using the stated goals and learning outcomes to provide direction. Thus from objectives comes content, from objectives and content together comes learning activities and the three elements together then help to direct evaluation strategies. This has far more value than constructing goals and learning outcomes after content, as proposed by some models. The latter approach requires learning outcomes to fit the content, rather than the other way round and questions the very purpose of writing learning outcomes at all. It is both logical and useful, therefore, to use a situational analysis as a starting point for formulating curriculum intent, and for facilitating the formulation of other curriculum elements.

Learning Outcomes

By the end of this unit you should be able to;

1. define Curriculum Intent and Situational Analysis.
2. explain what are aims, goals and learning outcomes.
3. analyse the sources of Curriculum Intent.
4. assess the features of an effective learning outcome.
5. explain the nature of curriculum content.
6. demonstrate an understanding of how to select content.
7. clearly explain how to organise content for effective learning.

6.1. Aims, Goals and Learning Outcomes

You may want to start this section by asking yourself the following questions. What are aims, goals and learning outcomes, and what are the relationships between them? The literature abounds with various terms that describe curriculum intent and it is fair to say that substantial confusion occurs over the use of the respective terms, though not the concepts underpinning these terms. In recent years this confusion has spread to the public arena with the publication of numerous documents which amply demonstrate this confusion. A study of the literature reveals minor levels of confusion over the terminology associated with these concepts. A few writers in the field (Brady, 1992; Pratt, 1980) refer to the components parts of curriculum intent in the order-goals, aims and learning outcomes, rather than aims, goals and learning outcomes. This is regrettably confusing to learners when the great majority use the hierarchical relationship indicated previously. After studying this section, you should be in a position to clearly explain the difference and give a clear relationship that exists among these very important concepts. Students of curriculum studies and curriculum scholars should not be part of the confusion that exists but give clarity to the confused.

Aims: - A useful way to think about educational aims is to consider them as statements of societal expectations and desires. More particularly, aims are broadly phrased and general statements that describe expected life outcomes of education based on some value either consciously or unconsciously borrowed from philosophy. As life outcomes, aims are realizable in a distant future after the learner has left school. Aims are purposely stated generally because they are developed for a general level of education and by society (whatever form that may take). Aims are long term in nature and may cover a time span of many years, even the entire school life of a learner. Aims conventionally comprise of four categories namely;

1. Individual development and self-fulfilment;
2. Socialization;
3. Economic productivity; and

4. Further learning.

Examples of aims are: -

Education must assist in fostering and promoting national unity;

Appreciating ethnic cultures, customs and traditions, and upholding national pride, sovereignty, peace, freedom and independence;

Education must promote effective citizenship;

To promote equality of educational opportunities and to provide for groups with special-learning needs;

To provide a foundation for further education and training, in terms of knowledge and skills, respect for learning and positive attitudes for life-long education.

As is evident from the examples above, statement of aims are usually written in non-behavioural terms. They are normally formulated at national or regional levels by education commissions or policy makers. Examples of aims may be found in most government curriculum related documents.

Goals: - Derived from aims, curriculum goals are precisely worded statements of curriculum intent. Usually phrased in non-technical language, goals are directed towards student achievement by emphasizing content and skills. Another way to conceptualize goals is to consider them as the ways institutions and organizations within society facilitate the achievement of educational aims. That is, if an aim of an education system is to make learners literate and numerate, then goals are the ways by which educational institutions generally address those aims. Curriculum developers often devise goals, as do others working at higher levels of curriculum development such as syllabus committees. Goals are medium to long term depending upon how they have been translated from aims. The examples below provide a range of goals.

Students will examine the main issues in Zambian history from 1900 to 2000.

To understand the rules and exhibit the appropriate skills in phonetics.

To prepare and cook a variety of foods to meet the requirements of three nutritionally balanced meals.

Students will communicate effectively in English.

According to Zais (1976), curriculum goals refer to school outcomes and are normally specified for an institution or field of study.

Learning Outcomes: - These are specific statements of curriculum intent, that is what learners should learn through interaction with the curriculum. They are expressed in terms of changed learner behaviour. Derived from an analysis of aims and goals, learning outcomes are phrased in such a way that they show exactly what skill, value or attitude the learner needs to acquire after learning has taken plan.

A hierarchical relationship exists among aims, goals and objectives where the first two are regarded as abstract, vaguely worded statements of program intent, while objectives are specific, teacher-prepared statements of what learners will experience. As earlier explained, there exist a direct relationship among the three levels of curriculum intent. The aims of any curriculum are translated into many goals. Each goal in turn is translated into numerous learning outcomes. At this point a prepared curriculum document may well evidence adequate specificity for the later curriculum elements-content, learning activities and evaluation-to be determined. Finally, at the practitioner level such as the classroom teacher, learning outcomes are devised based upon the curriculum's unit areas. Learning outcomes thus guide the teacher as the curriculum is put into practice in a school.

6.2. Sources of aims, goals and learning outcomes

Where do the ideas that form the basis of curriculum aims, goals and objectives come from? Certainly our conceptions of curriculum will be an influential factor in determining how appropriate curriculum intent is perceived. Similarly, past experience in teaching and curriculum development will influence how aims, goals and learning outcomes are arrived at. However, there are other influences of importance that should be considered when developing aims, goals and learning outcomes. The following are the major depositories from which curriculum developers draw their inspiration for creating statements of aims, goals and learning outcomes.

6.2.1. Empirical sources

Two sources of data have emerged that provide guidance to the curriculum developer in formulating statements of curriculum intent. Curriculum foundations play a very important role as sources of curriculum learning outcomes.

Studies of Learners: By examining the needs, abilities, interests and problems that learners encounter, educators can determine what should be included in a curriculum. The important

question to poses is: What does a person need to function as an adult? When studying the needs of the learners, the curriculum developer should compare the information s/he has obtained about the learner with some desirable standards so that the difference between the learners' present condition and the expected condition can be identified?

Studies of Society: By looking at existing society, educators can pose the question: What do we wish to pass on to the next generation? To ask this question a preceding question must be posed, namely, what knowledge is of most worth? How these questions are answered will affect the curricula and what should be included therein. A study of contemporary society will determine the needs and problems of the society which can be solved through the provision of relevant educational experiences. In recent years, for instance, growing acceptance of multi-culturalism and ethnic diversity as important components of the school curriculum and the pressures from what has been called 'economic determinism' have influenced the nature of curriculum intent.

In both studies of learners and the society, empirical data can be collected to provide a base for stating objectives, that is, data empirically collected provides information about the current situation upon which to base statements of curriculum intent.

6.2.2. Philosophical sources

These sources provide suggestions as to what ought to happen to children and adolescents in our schools. Curriculum developers need to pose the philosophical questions – What is a good life? What is of value? What is true? What is real? When considering curriculum intent. By examining these questions from a philosophical perspective, educators can make meaningful contributions to a curriculum's aims, goals and objectives. In so doing, educators manifest notions of a philosophy of education as well as a personal philosophy on life. The curriculum is usually a reflection of the country's philosophy of life. Therefore, curriculum developers are expected to take the philosophy of life of the country into account when developing the curriculum. This ensures that the statements of learning outcomes conform to the values of the nation and school community.

6.2.3. Psychological sources

The selection of curriculum objectives is also guided by psychological principles of learning. In selecting curriculum objectives using ideas from psychology, the curriculum specialist seeks to find answers to questions pertaining to issues such as appropriateness of the objectives to the

age of the learners, their attainability within the available time and their relationship to the experiences of the learners outside the school.

6.2.4. Subject-matter sources

Zais (1976) suggests that the most common source of aims is probably subject matter, that is, the established body of knowledge from which school subjects are derived. In most countries subject-matter sources have been particularly influential at the level of formulating goals. The aims of education are general, but when applied at the level of goals they are translated through the medium of subject matter. This is particularly the case when subject syllabus committees develop curricula in their respective subject areas. Subject specialists normally know the most recent developments in their subjects and are therefore in a position to assist curriculum developers to generate possible objectives which should be pursued by educational institutions.

6.2.5 Curriculum conceptions

Curriculum conceptions represent the culmination of many factors and in turn synthesize those influences into an approach when dealing with curriculum matters. These conceptions also provide a source of and influence over the selection of aims, goals and objectives. Those who favour a humanistic conception for instance, will tend to support the inclusion of humanistically oriented aims, goals and objectives. These may emphasize the enhancement of individual self-concept, personal interaction skills, an understanding approach towards other and so forth.

In similar ways, proponents of the social reconstructionist, technological and academic conceptions.

6.2.6. Situational analysis

An obvious source of curriculum intent may be found in the deliberations undertaken in a situational analysis. When teachers, curriculum developers and other educators participate in a situational analysis an enormous amount of data can be generated. This data reflects student interest and abilities as well as teacher strengths, parental wishes, school resources and so forth. A distillation of this information will produce a set of recommendations suitable for inclusion in a statement of goals and objectives.

6.2.7. Educational forces

The increased politicization of education in general, and of curriculum specifically, has witnessed the creation of numerous curriculum policy documents which impact upon curriculum development. These documents have consequently exerted a significant influence over the

formulation of curriculum intent by curriculum developers, both at systemic and school levels. One such document in Zambia, for example is the National Policy on Education, 'Educating Our Future' documented in May 1996. In fact, national aims of education in every education system serve as another educational force in influencing the creation of curriculum intent within curriculum development.

Thus, when curriculum developers undertake the task of considering curriculum intent they are increasingly being forced to take cognizance of such policy documents. This is all the more apparent in the past decades with the increasing politicization of both educations in general and curriculum in particular.

As a general statement then, we can say that curriculum developers do not create statements of curriculum intent in vacuum. Rather, they are influenced by a myriad of factors and forces which impinge upon the way they construct aims, goals and learning outcomes.

6.3. Features of effective objectives

As a measure to determine the effectiveness of objectives, one can employ the following criteria. Effective objectives will thus require these features to be present to a substantial degree. It is incumbent upon curriculum developers and teachers in particular, to refer to these criteria when constructing objectives.

6.3.1. Comprehensiveness

To be effective, objectives must cover everything established by the previously designed aims and goals. If aims and goals give a curriculum its broad purpose, objectives provide its specific intent. And in that specificity, objectives must be comprehensive.

Other major guides useful in the construction of objectives are the various taxonomies developed in the past. The best known and comprehensive of these are those developed under the leadership of Bloom (1971), Krathwohl et al. (1964) and Harrow (1972). Bloom and his associates classified objectives according to a *cognitive domain*, while Krathwohl and his group extended the taxonomy of educational objectives to include the *affective domain*. Later Anita Harrow (1972) developed a taxonomy for the *psychomotor domain*. For objectives to be effective they must cover the three taxonomies.

6.3.2. Consistency

Not only should objectives be comprehensive but they must also be consistent with each other and with the goals from which they come. When constructing objectives it is important to see

that objectives relate effectively to each other. To maintain a logical development and extension of the fundamental curriculum intent, objectives must be consistent with the statements of aims and goals. One source of confusion within schools for instance would occur where objectives have been written without consideration of goals or wider-level aims.

6.3.3. Attainability

For objectives to be viable they must be attainable by learner. Levels of learner competency and experience, the availability of resources and time must be taken into account when devising objectives in order to ensure they are attainable. It may well be sensible for students to describe and appreciate, for example the Great Rift Valley in east Africa. However, it would be extremely difficult, in terms of time and cost, for students to acquire that learning experientially. If the objective is important, it would need to be constructed in a way that is attainable (by visual material perhaps). Similarly, an objective on nuclear science may be unattainable for learners in basic school. Such an objective may well be beyond their level of cognitive understanding and experience.

6.3.4. Suitability

The issue of suitability of objectives is a vexed one as educators hold different opinions as to what those needs are and who will decide them. Curriculum developers agree that objectives must be suitable to learner's needs, but what are these needs and who decides if they are suitable? Furthermore, are the objectives suitable for learners given their level of maturation and the social context within which they function?

Curriculum developers may decide, for example, that all learners in primary school should be introduced to sex education. This appears to a logical need of learners, particularly in the context of modern society where the acquisition of such knowledge may be, at best, haphazard. But do all curriculum developers, parents, the government and other education stakeholders agree that this learning should be acquired or do certain adults suggest they do? Are objectives based on this knowledge suitable for students? These are some of the fundamental questions that must be posed in order to determine the issue of suitability of objectives. And underlying this is the fundamental issue – who decides what is suitable for pupils and students to learn?

6.3.5. Validity

In order to be valid, objectives must reflect the reality they purport to represent. In other words the objectives must state what the developers wanted them to state. If, for instance, a set of aims

and goals refer to standards of student literacy and the ensuing objectives refer only to literature, then these objectives are invalid. Similarly, if a sent of objectives was created to cover the period 1901 – 1970 in African history, but the objectives did not include the role of African countries in the Second world war or the independences from colonial masters, they would be in part invalid. This criterion is particularly important when applied to the assessment of student learning where it is essential that what is being measured is indeed part of the curriculum.

6.3.6. Specificity

To avoid ambiguity and to be readily understandable to all concerned, objectives should be phrased precisely. Objectives that lack specificity and thus perhaps clarity are likely to be misunderstood by both learners and instructors. To some curriculum developers this means writing objectives in behavioural terms. However, objectives can be written precisely, although not in strict behavioural terms, and still meet the criteria of specificity.

Together these criteria serve the useful function of enhancing the effectiveness of objectives. As so much of curriculum is concerned with the statement of objectives, and as they are so important in subsequent curriculum planning, it is a worthwhile investment of time and effort to make them effective. Using the above criteria as a screening device, curriculum developers will enhance their objectives and hence their subsequent curriculum.

Pose a little while and find out from the activity below how much you have understood so far.

Activity

1. With examples define aims, goals and objective.
2. What are the main sources of Curriculum Intent?
3. Discuss the features of effective objectives

6.4. Curriculum Content

Many people involved with curriculum development, including many teachers in schools, believe that the starting point for constructing a curriculum lies with the formulation of content. Is this type of thinking about curriculum development familiar with you? This appears to be a natural phenomenon as the teaching of content is the daily fare of teachers in schools. Consequently, many teachers tend to think in terms of what content students should learn and what content is of value to learners when they begin to plan for curriculum development.

However, this is a tendency that must be resisted. Like driving a car before one has integrated the constituent skills of driving effectively, curriculum developers can end up in a crash if they begin with content without taking cognisance of other curriculum elements.

To those who may wish to commence curriculum development by first formulating content one should ask: How does one know what content to select if some form of objectives have not been formulated? "I just know," says the experienced teacher. But is intuition a sufficient source for content selection, even if based upon years of experience? The reality is that all curriculum developers employ objectives in some way when constructing curricula. Most follow the path suggested in the previous chapters and write objectives based on predetermined aims and goals. We can see these in the many syllabus documents which are created by educational authorities and distributed to schools as a basis for schools' curricula. In short a curriculum developer who is guided by statements of curriculum intent, is able to plan and develop appropriate curriculum content effectively.

6.5. The Nature of Content

All too readily 'content' is equated directly with 'knowledge'. However, it should be realised that knowledge is general and broad and content refers to what has been selected for a particular level for the purpose of learning. However, for our purpose **content is defined as the subject matter of the teaching-learning process and it included the selected knowledge (facts, concepts, generalisations, principles) processes or skills associated with that knowledge base and values associated with subjects or whatever is being learnt**. R. Hyman, for instance, has defined content as consisting of: 'knowledge (i.e. facts, explanations, principles, definitions), skills and processes (i.e. reading, writing, calculating, dancing, critical thinking, decision-making, communicating) and values (i.e. the beliefs about matters concerned with good and bad right and wrong, beautiful and ugly)'. (Hyman, 1973:4) Thus content may be described as the subject matter of the teaching-learning process. Therefore, a social studies curriculum, for example, would include not only the facts, concepts and generalisations associated with this particular body of content, but also the related skills and values (including attitudes) from the social sciences. In the past years a new domain of educational research has addressed the issue of the content knowledge of effective teachers. The results of these researches indicates that prospective teachers need to be knowledgeable about the subjects that they teach i.e. the subject matter knowledge, the skills, value and the attitudes associated with that content area. This

content knowledge has three components which teachers require in order to be effective practitioners and curriculum implementers:

Subject matter knowledge – facts, principles, generalisations and so forth found in the subject concerned.

Pedagogical content knowledge – the methods used by the teacher to translate subject matter knowledge into meaningful understanding for learners.

Curricular knowledge – understanding of the curriculum requirements of the context to teach the subject matter knowledge.

6.6. Curriculum content selection

One of the first tasks facing a curriculum developer, armed with a set of learning outcomes and recommendations from a situational analysis, is to select appropriate content to meet those learning outcomes. **Content is defined as the subject-matter of the teaching-learning process which incorporates the knowledge, skills and values of subject**. One needs knowledge to establish one's perspective and provide background but it is also essential to be able to acquire more relevant information through the use of appropriate skills.

They are not presented in order of merit or worth, and not all would be applied equally. Nevertheless, they provide a useful guide for the selection of appropriate content. These criteria are particularly appropriate where a group of curriculum developers must decide upon the appropriate content to meet the needs as stated by the curriculum intent. What we all too frequently may find is developers arguing for content inclusion based upon personal preference rather than substantive criteria as discussed below.

There is no doubt that the selection of subject content is a highly political activity, in that curriculum developers argue, negotiate, debate, and caucus each other in an attempt to control the content included in the curriculum.

Significance

The criterion of significance applies where content is judged in terms of how essential or basic it is to the discipline or theme under study. Where content is considered to be of value to the subject area, it is deemed to be significant and thus worthy of inclusion in a curriculum. For most curriculum developers this criterion involves an appropriate balance between concepts,

ideas and facts. In short content is significant when it is worthwhile, important and of value. We do not what to waste the learners' time and resources. Every discipline has important ideas or elements which the learner should acquire at a certain level.

It is however, important at this point to ask for whom the content should be significant. Certainly those who are involved with the curriculum development process will bring differing perspectives to that task and many argue that nowhere is the impact of that decision more important than in deciding what significant content for inclusion into a curriculum is.

Validity

An important criterion to apply when selecting content is that of validity. Content may be regarded as valid when it is authentic or true, and to a large measure this means whether the content is accurate. Accurate or true information says what it is supposed to say. For instance, content purports to cover the geography of Zambia should do just that and not include Tanzanian geography or Zambian economics.

A significant test of the validity of content is to determine the degree of its obsolescence. In this rapidly changing world, the obsolescence of content is a continual problem faced by curriculum developers and those who implement curricula. Some school subjects, such as maths, sciences and social studies, appear to be in a state of almost constant flux.

The criterion of validity of content may also be measured in terms of the relationship between content and objectives. For content to be valid it must reflect the stated objectives. Tyler (1949) says objectives are the criterion by which content is selected. Thus, if objectives claim one thing while the content selected for the curriculum teaches something different then it is regarded as invalid. For instance, if an objective seeks to achieve learner's understanding of Zambia's political structure, and the ensuing content deals only with one political party, then the content would be invalid (let alone biased!)

This use of the validity criterion is particularly important for practising teachers who implement syllabuses developed by Curriculum Development Centres. Exact congruence between explicitly stated intent and evident content should not always be taken for granted. Situations may arise where a subject-syllabus committee agrees on the intent of the curriculum and then proceeds to develop content more in line with the results of political pressures amongst committee members rather than the agreed objectives.

Social relevance

A somewhat controversial criterion for content selection is that of social relevance. This criterion suggests that content for inclusion in a curriculum should be selected on grounds of its relevance to the social development of the individual, but within the context of a community oriented perspective. Thus this criterion is concerned with content relating to moral values, ideals, social problems, controversial issues and so forth that would assist learners to become more effective members of their society. But what content would be included on these grounds? In a thinking, responsible society, curriculum developers may well incorporate content that reflects:

1. Democratic principles and values.
2. Understanding of cultural groups.
3. Social awareness and criticism.
4. The facilitation of societal change.

Utility

A related criterion to consider when selecting content is that of utility. This criterion appears similar to the criteria of significance and social relevance but the term is defined in a rather specific manner in terms of individual learners. When employed to select content for a school curriculum, the criterion of utility applies to the usefulness of content in preparing students for adult life. As such it implies a very direct relevant and functional approach to the selection of content that will lead to a desired outcome on behalf of the learner.

This criterion is also individually oriented, reflecting the concept of the value or usefulness of the content to individual learners experiencing the proposed curriculum. This is compared with the notion of value to learners in a social sense as discussed in the social relevance criterion. Together with the notion of usefulness for adult life, the utility criterion is an important consideration to be made when content is included in a curriculum. As a criterion, utility is extremely valuable to those who favour a more functional school curriculum because it can be instrumental in maintaining real-world relevance in schools.

Learnability

While it may appear obvious to select content that learners are able to assimilate, this criterion has to always be applied. The learnability criterion is particularly appropriate to curricula that have to meet the needs of large numbers of learners with diverse backgrounds and a wide range

of ability. In these cases, if the content is to be acquired by all learners, then consideration must be made not to make the content too difficult for this group of learners. This is where it is extremely important for the developer to consider the psychological stage of the learner.

By contrast, there may be times when a curriculum developer is unsure just how able the learners may be. Creating a curriculum for high-ability learners, the so called gifted and talented, demands that content challenge such learners and so the learnability criterion would be used in a different manner. In the more general context, however, it is often difficult to take account of individual differences and hence aspects of content may not be learnable by some learners. Thus, the classroom teacher, acting as curriculum implementer and curriculum adapter, is in an appropriate position to consider learner readiness. Effective teachers have been making such curriculum decisions for many years.

Interest

The interest of learners in the curriculum's content is generally considered to be an important criterion in the selection of that content by curriculum developers. After all, this is good sense. However, it appears to be one of those criteria more valued in the theory than in the reality. Certainly curriculum developers have accorded this criterion the lowest priority in practice.

The problem associated with the learner interest criterion is the dilemma it causes when determining just how significant a role this criterion should play. At one extreme curriculum developers could ignore learners' interest as selection criterion. They could argue, perhaps justifiably so, that they know what content students should learn. However, this extreme position loses the potential of a strong student motivational force and hence may be counterproductive.

Alternatively, curriculum content selected largely upon a learner-interest criterion possibly suffers whim, immature development, and individualistic emphasis. The range of students' interests may appear to be unlimited and they are frequently of a transitory nature. Therefore, some accommodation of both arguments must be taken into account when constructing curricula.

Economy

If the selected content brings about the achievement of several learning outcomes then we are talking about economy. This applies to both learning activities and teaching-learning resources. Thus when selecting content, the above criterion has to be kept in mind. The selected content should also be;

a. Related to national aims of education
b. Capable of producing desired outcomes
c. Based on the needs of learners and society
d. Capable of promoting the transfer of knowledge into social reality and expected future demands
e. Not deter student's transfer from one type of institution to another type, or from one level to another
f. Reflect subject matter needs
g. Capable of attainability within a given period and with available resources.

6.7. The architectonics of content

After content has been selected what then is the next stage? Thus, after you have read the section on the criteria for selecting content you might have been asking yourself the following questions. What happens to content once it has been selected? Where is it placed in the overall curriculum? Why is it placed there? Curriculum developers faced with the enormity and bewildering array of content available have sought refuge in various criteria to assist them in arranging content appropriately for learners. An orderly and rational scheme of organising content facilitates effective curriculum development, implementation and evaluation and to this end we shall analyse the architectonics of content. The organising principles could, however, apply equally well to any other learning situation requiring the structuring of content for a curriculum for the purpose of facilitating learning. The term 'architectonics' relate to the structures needed to present a curriculum and the principles which assist the curriculum developer to organise the content of a curriculum in such a way so as to achieve maximum effectiveness for learners. Hence the following principles are applied:

6.7.1. Scope of curriculum content

The term 'scope' refers to the breadth and depth of content to be studied in the curriculum at any one time. That is, how the content is arranged at a specific point in time and the degree of depth of that content to be covered at that particular time. The term refers not only to the range of content areas represented, but to the depth of treating each area is accorded. Sometimes scope is referred to as horizontal organisation of horizontal integration.

A useful stating point when dealing with the scope of content in a curriculum is to pose questions about the nature and balance of that content. For example, in the context of a school curriculum we might ask the following questions:

How much of each content area should students study at any one time? That is, what should be the ratio of time spent on maths, science, English, social studies, physical education, music and so forth?

Is there a body of common content that all students should know? Should all students leave school being exposed to a set of common learning?

If one supports the notion of a core plus electives approach to content, what should be the role of elective content?

What content should be excluded from the curriculum?

Nevertheless, the following concepts are helpful in determining the scope of content for a curriculum:

Time is a major constraint when determining the scope of content. Breadth of content is always bought at the expense of depth, and the reverse is also applicable. Breadth may be greater time spent on a particular subject theme or may represent more subjects to be taught in a given time period. The balance that occurs between breadth and depth will be resolved by the political forces in the school and the curriculum forces found in the head office of systemic curricula.

The notion of a **core or common** content appears acceptable to educators and society. The core concept suggests that there is a body of content that all learners should acquire as a result of their schooling experience. Just how much the core should constitute and exactly what should be included in the core content are subject to debate.

The scope of content may also be influenced by the notion that schools should provide content to meet the **special needs** of children and adolescents. This might take the form of electives or options to accommodate learner interests and social contexts. Alternatively, special content might be devised to meet the needs of less able and more able learners.

Integration of content is to be encouraged in order to provide some sense of reality to the leaner. How do subjects relate to each other? Disciplines should relate to each other without losing their identity.

6.7.2. Sequence of curriculum content

Sequence is defined as the order in which content is presented to learners over time. In other words, content is broken down into manageable sections that can then be presented to learners over a period of time in varying arrangements or order. The order in which those parts are presented to learners is called sequencing. How should content be arranged for learner? In

attempting to answer this question, several important, related questions need to be posed, as suggested by Robert Zais (1976:340):

i. What criteria should determine the order of content?
ii. What should follow what, and why?
iii. When should learners acquire certain content?

Traditionally, subjects have been sequenced according to a logical criterion, that is, the 'logical' approach of the decision-making involved. However, in reality this was little more than an intuitive response to past practices and the nature of the subjects involved. Thus, arithmetic was studied before geometry and grammar before literature. While this approach seemed to work it was rarely challenged and was perceived by teachers as a natural sequencing of content to learners. The following four principles have become increasingly acceptable as criteria for sequencing content:

Simple to complex: This approach to ordering content is traditionally found in sciences, mathematics, grammar, music, foreign languages and many other subjects taught in schools. In this situation, sequence is seen as a progression from simple, subordinate components to complex structures, which in turn are the subordinate components of even more complex superordinate structures. To understand long division, for instance, one needs to understand multiplication, subtraction and addition at the very least. To understand multiplication, the learner need to know …

Prerequisite learning: This principle is followed in subjects which consists largely of laws and principle such as physics, grammar and geometry. To understand one set of laws or principles, the learner must acquire the prerequisite learnings. To apply a law of motion in physics to a practical problem, for example, one must first know the law. It is difficult to deny the need for some consideration of prerequisite learning in any educational activity. Indeed much of the basic and high school curriculum in Zambia is based upon the notion of prerequisite learnings.

Chronology: This principle suggests sequencing content according to the chronology of recorded events. This is particularly important if one accepts a causal relationship between events such that to understand an event one need to understand what preceded it. History, music and literature use this approach, as does any subject that examines its own history, such as the history of science. The chronological principle can be applied forward or backward form any particular point in time.

Whole-to-part learning: The rationale for this principle is that understanding the whole makes possible the understanding of partial or constituent phenomena. In literature it is useful to study

a novel as a whole before an analysis of its constituent parts. Typically a literature curriculum would recommend students read a novel as an entity before undertaking character and plot analysis. Commonly used in geography, for example, this principle suggests that the learner first examines the globe, then associated global concepts (time, seasons), followed by specific local topics such as weather. Similarly in biology, the student learns about the whole animal before one learns about its parts.

These four guiding principles have been expanded to include two additional approaches to sequencing:

Increasing abstraction: Content can be sequenced according to the idea that one learns most effectively what is closer or more meaningful to the learner. Thus, we can commence ordering content with one's own experiences and proceed to more remote learnings. For example, content can be ordered to study one's own family unit, then similar cultural structures, before studying social structures from different cultures. This principle is often applied to the sequencing of content in primary schools. In a similar manner, content may be sequenced from concrete to abstract, that is, understanding concrete concepts before moving into abstract, idealistic or theoretical concepts. For example, underrating distance on the ground before studying scale in geography or technical drawing.

Spiral sequencing: This term was described by Bruner (1965) in connection with whole curriculum organisation, but most often it is applied to smaller components of a curriculum. In the process of Education, Bruner noted that students should be exposed to the content's basic ideas repeatedly, thus building on basic understanding until the whole concept or lot of learning has been acquired. As a learner progresses through the curriculum, the spiralling process allows the content (knowledge, skills, values and attitudes) to be reinforced and extended. The end result is a learner is familiar with the requirements of the curriculum.

Activity

1. Why do most teachers think that the selection of content is the starting point for constructing a curriculum?
2. Analyse three components that teachers require in order to be effective curriculum implementers.
3. Explain in detail which criteria can you use to select content?
4. What is meant by the term architectonics of content?

5. Why is it important for a curriculum developer to understand the scope of curriculum content of a particular subject area for different learners?
6. Explain different ways in which content can be sequenced.

Summary

In this unit the author has tried to make curriculum development as practical as possible by giving very down to earth explanations of how the selection and organisation of curriculum intent and content can be effectively done. It is important to keep in mind that all this stems from situational analysis through to designing, planning then selection of curriculum intent and then content. The evaluation of all these phases are key to the success of any curriculum. The criteria given for stating of learning outcomes and the selection and organisation of content are all done according to the different needs of a particular education system which are defined during situational analysis.

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