
UNIT 1 TOWARDS CURRICULUM DEVELOPMENT

Structure

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1.0 OBJECTIVES

After completing this unit, you should be able to:

- state the educational purposes which are relevant for framing a curriculum;
- select appropriate learning experiences to suit a given set of educational purposes, with a provided task;
- organise learning experiences for effective instruction;
- evaluate the effectiveness of learning experiences, in a given situation;
- analyse your own educational situation in terms of curriculum- frame, i.e. purpose, learning experiences, organisation and evaluation, and to say where it leads.

Let us take up for discussion the theme of the Unit under consideration.

1.1 INTRODUCTION

In Unit 1 (Block 1 of this Course) we expressed an interest in arriving at a conclusive definition of the concept of curriculum and traced the evolution of curriculum as a field of study. We then argued that curriculum theory is as scientific as any other scientific theory insofar as both happen to be plans of action. We placed curriculum as a field of study in its social, philosophical, psychological and historical context in (Block 1). That curriculum-frame should be flexible enough to incorporate social changes and corresponding social needs has been implied in the same Unit. We have dealt with this theme in some detail with reference to curriculum for adult education

Read this piece:

“The concept of curriculum design brings into focus the way, in which curricula are created, especially the actual arrangement of the parts in the curriculum plan.... The term curriculum design – sometimes called curriculum organization – refers to the arrangement of the elements of a curriculum into

a substantive entity. The parts, sometimes called components or elements, that are arranged in a curriculum design are: 1) aims, goals, and objectives 2) subject matter 3) learning experiences and 4) evaluation approaches.” (Ornstein and Hunkins, 1986).

Now look at the structure of this Unit. Can you link up what has been described in the above paragraph with the “structure” of this unit? You are right? This Unit consists of the ‘what’ and ‘how’ of the curriculum-frame, i.e., the relevant considerations needed for framing the curriculum. We intend to take up the dominant curriculum paradigm and discuss it briefly for illustrative purposes.

1.2 CURRICULUM PARADIGMS

In this Unit, we shall be talking about three paradigms of curriculum. They are:

- i) the practical paradigm;
- ii) the emancipatory paradigm; and
- iii) the empirical paradigm.

Of these, the last one, i.e., the empirical, also known as the perennial or analytic, is considered the dominant curriculum paradigm. Therefore we shall devote a complete section i.e., section 1.3 to discussing it. In this section, we shall discuss the others at reasonable length.

Paradigm Defined

Let us begin our discussion with an activity. Look up the meaning of paradigm in the dictionary. Now read what we mean by paradigm here and check whether the meaning you have found in the dictionary matches this. To us, a paradigm is a connected set of ideas, values, and rules that governs the conduct of an inquiry and, the ways in which data are analysed and interpreted. It suggests that in a paradigm, anomalies are bound to occur from time to time. In the physical sciences, for example, the interactions of matter and energy within the atom could not be explained sufficiently by Newtonian physics. Similarly, problems regarding the speed of light and the nature of time and space in the universe of astrophysics necessitated new forms of inquiry. Similarly we can refer to other revolutions and changes in paradigms in science and even to the gradual acceptance of a ‘round earth’ instead of a ‘flat one’.

By implication, we say that a paradigm cannot be static. It is dynamic as it incorporates changes from time to time. Nevertheless a paradigm is essential to guide an inquiry.

Having thus outlined what we mean by a paradigm, we shall now talk about it in the context of curriculum.

Let us consider the following two questions:

- i) **What** considerations are most relevant when we frame a curriculum?
- ii) **How** do we think about these considerations?

The first question or the ‘what’ question does not directly pertain to the ‘what’ that should be taught; instead, it centres on what considerations we should keep in mind when framing, analysing or developing a curriculum. And, the ‘how’ question refers to ‘how’ inquiry/research should be conducted. Obviously, these questions invoke the consideration of paradigms.

1.2.1 The Practical Paradigm

In the practical paradigm, curriculum is defined as between continuous interaction among teacher, learner, subject matter and environment. The definition of the practical paradigm admits the entire culture of the classroom as the curriculum. This includes everything that happens there, both subject matter and environment. Curriculum is, thus, anything that influences or shapes the thought, feeling, outlook and behaviour of learners.

In essence, practical curriculum work entails the conscious orchestration of these four factors to produce a desirable influence on the thoughts, feelings, outlook, and behaviour of learners. To conduct such orchestration, one must thoroughly be involved in the educational situation in question. Thus, the practical orientation sees curriculum as evolving from the educational situation rather than being a pre-designed and subsequently implemented organization that engages teachers, learners, and curriculum developers in ongoing deliberation about their influence on subject matter, socio-cultural milieu, and one another.

A common complaint has been that curriculum is dying due to its preoccupation with a theoretical paradigm in educational research. Schwab (1969) identified signs of crisis evident in the educational researchers' neglect of the phenomena that they claim to study i.e., actual educational situations. To change this situation, according to him, we required a paradigm shift from the theoretic to the practical, quasi-practical and eclectic. Obviously, his concern is not about what the curriculum should be like; on the contrary he emphasizes how curriculum inquiry should proceed. (This should not, however, narrow down our perspective to the view that practice always has an edge over theory). Schwab himself emphasised the need for practical researchers to have a broad, liberal background in as many bodies of theoretical literature as possible. If one has little theoretical background, one has little capacity to be eclectic. If one has a reasonably sound background of theories, it is necessary then to learn to use them in the resolution of practical problems. In essence, theory and practice should be looked at as complementary to each other.

Looking at the issue from the viewpoint of the classroom, Schwab regarded four features of the classroom as the essence of curriculum. These are teachers, learners, subject matter, and the socio-cultural milieu. The derivation of these features is integrally connected with the principles of practical paradigm. If you want to decide and act with greater understanding in a particular curriculum situation, you should develop insights by interacting with that situation. The insights thus gained should be reflected in the framing of the curriculum. By implication, the most important curriculum deliberation occurs at the local educational site. This has been reinforced by the four predominant assumptions of practical curriculum inquiry.

What are these assumptions?

The practical curriculum inquiry assumes that:

- i) the source of problems is found in the actual state of affairs, not in the hypotheses of researchers who have to find similarities among various situations that cannot be grouped together convincingly;
- ii) the subject matter sought in the process of practical curriculum inquiry is situational insight and is not generalistic;
- iii) the primary end of practical curriculum inquiry is to increase our capacity to act morally and effectively in pedagogical situations, and not to generate generalised knowledge; and

- iv) the method of practical curriculum inquiry is direct interaction with the state of affairs to be studied.

Does this mean that a classroom is the proper setting for practical curriculum inquiry to take place?

If this is the case, the vast array of curriculum decision making bodies that lie beyond the individual classroom will be rendered superfluous. They have a role to play, but perhaps a much reduced one when compared with the usual customary curriculum decision-making structure which works from the top downwards with typical committees devising curriculum purpose, content, organisation and evaluation. While such committees can undoubtedly serve a useful function in setting the tone and general direction of curriculum development, this is done away from the local site. When the local needs are sidelined, it is natural that deliberations cease to be practical. By implication, the institution/classroom itself should be the centre of practical inquiry. A “curriculum group” constituted by the head of an educational institution, representatives from the community, teachers and students can easily conduct the inquiry.

It is quite likely that the question of resources, finance, time and personal considerations would not permit such curriculum groups to come into being. In such a case, is there any alternative means of fostering practical inquiry?

Clearly, yes. The democratic classroom might provide an answer that prevents further cost. Classrooms already exist, and so would not need extra resources. Surely, students and teachers could enter into actual dialogue about what is worthwhile for them to do. This does not, however, imply that practical curriculum inquiry exists only in the classroom setting. It can exist anywhere provided the consequences of the problems studied are made to guide the framing of a curriculum.

From this discussion we can deduce that the practical paradigm offers an active role to learners in curriculum development. Despite possible limitations to engagement of students in practical deliberation, it is a policy that fosters personal responsibility rather than adherence to generalized, expert authority. No one is in a better position than the students to tell educators about their life situations, concerns and needs. We should, however, admit that rarely do children and adolescents express these interests. But then, such expressions of interest require translation into needs through dialogue with perceptive teachers. This dialogue is interaction or deliberation of the practical paradigm, a method by which students become better able to articulate their needs as they more consciously participate in the teacher’s work which is carried out by interaction. In a classroom situation, many of us may think that we independently arrive at the daily design of the learning process.

How tenable is this view? The design of the learning process is a product of interaction with students, subject matter, and milieu. Each of these factors continuously reshapes and mediates the teacher’s decisions.

Does practical inquiry appear to be a mere trial and error approach devoid of theoretical sophistication? Obviously, practical inquiry condemns the ‘theoretic’. However, it does not condemn theory or philosophy in general. We shall elaborate on this. The term ‘theoretic’ refers to research that claims to be useful to educational situation but takes its problems from abstract bits and pieces of many situations rather than from an actual state of affairs with all its contextual variables. The theoretic keeps the researcher detached from situations investigated and so the end-product is a law like generalization. The practical inquiry into curriculum thus condemns the misapplication of research

methodology rather than the use of theories. Having said this, let us now focus our attention on yet another paradigm. Before we do so, please work out the following exercise:

Check Your Progress 1

Notes: a) Space is given below for your answer.

b) Check your answer with the one given at the end of this Unit.

List the basic assumptions of the practical paradigm of curriculum.

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1.2.2 The Emancipatory Paradigm

According to John Dewey (1916), education should reconstruct society. What does it suggest?

It may suggest that to understand the culture of one or more classrooms, we must probe deeply and broadly into the culture in which those classrooms have come into being. Obviously, then, we cannot be content to tinker with in-school problems in the hope of evolving a better society, when the roots of those problems lie deep within society itself.

Critical theorists who are concerned with education ask questions such as

- How is knowledge reproduced by schools?
- What are the sources of knowledge that students acquire in a classroom?
- How do students and teachers resist or contest that which is conveyed through lived experience in classrooms?
- What do students and teachers realize from their classroom experiences? In other words, what impact does the classroom have on their outlooks?
- Whose interests are served by the outlooks and skills fostered by schools?
- When served, do these interests move in the direction of emancipation, equity and social justice, or do they move in the opposite direction?
- How can students be empowered to attain greater liberation, equity and social justice through schooling alone?

Though the above questions pertain to the classroom set up, they also hold good for distance education situations. The questions posed here clearly imply that emancipatory curriculum assumes a state of severe oppression of individuals in their niche that emanates from ideological and socio-economic forces in the broader world. These oppressive forces inhibit educational growth. To those we follow Dewey's views on education, it is imperative to overcome these impeding forces. The term 'emancipation' in our context thus refers to an integration of the theoretical critique of society and action or practice that seeks to improve society and the individual through education. In other words, we shall say that 'emancipation' refers to a liberation of one's self to enable growth and development from the ideology of social conventions, beliefs, and modes of operation.

An emancipatory curriculum draws heavily from the practical assumption that knowledge or reality is inter-subjectively constructed and meanings created within historical, political and social contexts. If the ideology that propels a society is itself created rather than received, emancipatory curriculum paradigm follows that it can be recreated.

Let us pause for a minute here.

Check Your Progress 2

Notes: Check your answer with the one given at the end of this Unit.

Three statements are given below. If you agree to a statement or statements, tick mark the Yes-box, and if you disagree, tick the No-box.

Statements	Yes	No
i) Both practical and emancipatory paradigms condemn a generalistic type of curriculum.	<input type="checkbox"/>	<input type="checkbox"/>
ii) Emancipatory paradigm implies learner autonomy.	<input type="checkbox"/>	<input type="checkbox"/>
iii) Practical paradigm gives more importance to educational policy matters than to the learner.	<input type="checkbox"/>	<input type="checkbox"/>

Now, we shall discuss the major thrust of the Unit, i.e., the essential components of curriculum by taking up Tyler's (1949) curriculum paradigm.

1.2.3 The Empirical Paradigm

Over the decades Tyler's (1949) paradigm has been, and remains, a guiding factor in curriculum framing. This paradigm is popularly known as Tyler Rationale or Empirical/Analytic paradigm.

Tyler identified the following four questions that should provide the parameters for developing a particular curriculum:

- i) What educational purposes should curriculum aim for and try to attain?
- ii) How can learning experiences be selected to meet the educational purposes identified?
- iii) How should learning experiences be organised for effective instruction?
- iv) How can the effectiveness of learning experiences be evaluated?

It is advisable not to elaborate on this paradigm here in this subsection, as the purpose of this section as a whole is to acquaint you with only a few curriculum paradigm models, besides which the empirical paradigm deserves a full section to itself. Accordingly, the following section will be devoted to this paradigm exclusively, though of course under a different heading altogether. You must try to see the relation of the "heading" to the thrust of the paradigm.

1.3 ESSENTIALS OF A CURRICULUM

Curriculum research has grown rapidly since the 1950s and much of it can be categorized within each of the key terms of Tyler's four questions – purposes, learning experiences, organisation and evaluation. And we call these items the essentials of curriculum. What Tyler advocated has become the paradigm – the governing rules – for the conduct of educational research and remains prominently dominant today. Here, we shall take up in detail each one of the Tylerian parameters for curriculum.

1.3.1 Setting Educational Purposes

In this subsection, we shall look at the different possible forms that ‘purposes’ may take, and also touch upon the criteria that may be used as a basis for selecting the corresponding learning experiences. However, let us be clear that form and substance exist in dynamic interplay; their separation, as visualized here, is only for our purposes of analysis and ease of presentation.

Educational purposes may be presented in four different forms. They are:

- i) Global;
- ii) Behavioural;
- iii) Evolving; and
- iv) Expressive

We shall touch upon each of them in the given order.

- i) **Global purposes:** These are broad based statements of the purposes of education. We frame curriculum depending on how we perceive the broad purposes of education. For example, Plato saw the virtuous life as the ultimate goal of education, and Aristotle thought “happiness” as the goal of education. The specifics that they advocated for educational practice were directed towards attaining these ends. Throughout the history of educational thought, the guiding power of some global conception of the good life exists in almost every proposal for curriculum and teaching. In recent years, the emphasis on universal education has forced the curriculum specialists to broaden their outlook regarding the ultimate purpose of education which had changed from aiming at the preparation of “cultured men” to best serving the public at large. Global purposes are designed to provide educators with general, prescriptive guidelines. In other words, these purposes are intended as open ended principles supporting the idea that professional educators should not be given curriculum recipes. They should be, however, expected to interpret global goals creatively to fit situational needs.
- ii) **Behavioural purposes:** We can define behavioural objectives as very specific statements of purpose for which an end result, or terminal behaviour is stated in observable terms. We may state that historically behavioural objectives were probably part of apprenticeship systems where apprentices were expected to master certain tasks. This was first advocated for the curriculum field by Franklin Bobbitt, and later Mager and others popularised this approach (Schubert, 1986).

Now we shall attempt to recall, by working out the following exercise, what we have studied so far in this unit.

Check Your Progress 3

Notes: a) Space is given below for your answer.

b) Check your answer with the one given at the end of this Unit.

Explain whether or not the following statement can be considered a behavioural objective.

“The student will know how to use punctuation marks.”

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Our answer to the above exercise would clearly suggest that we should be able to state behavioural objectives pertaining to all that we teach in order that what we are doing be made clearer and more explicit. Further, we can communicate accurately to parents and students exactly what we intend to teach/do. Clearly, by stating objectives in behavioural terms, it is much easier to evaluate the curriculum as well as the performance of students.

In this connection, we may present the taxonomies of Bloom, Krathwohl and Harrow. (Schubert, 1986). Bloom (1956) developed a taxonomy of behavioural objectives in the cognitive domain that covers six phases from lesser to greater complexity. (Note that this will be tackled in greater detail in Unit 3 of this Block).

Recall
Comprehension
Application
Analysis
Synthesis
Evaluation

Similarly, Krathwohl (1956) and others developed a hierarchy of objectives in the affective domain, beginning with receiving a value complex (philosophy of life), and moving through response, evaluation, organization, characterisation in relation to it.

Anita Harrow (1972) developed a taxonomy of objectives in the psychomotor domain that covers also hierarchy through observation, imitation, practice and adaptation. (Remember that you will have a more detailed picture of this in Unit 3 of this Block.)

Most recently attention in the field of cognitive psychology has been given to the conceptualization of the cognitive functioning that underlies the taxonomy educational goals. An understanding has been arrived at the ways of formulating the content specialist's educational goals, so that account is taken of how students organise and use information (Greeno, 1989; Haertel 1983; Snow and Lohman, 1989).

However, some object to taxonomies with the contention that they inappropriately separate integrated aspects of human functioning. In other words, they may cause teachers and curriculum developers to perceive students as having separate cognitive, affective or psychomotor sides. A teacher, for example, may believe that a lesson is 'cognitive' and so ignore its 'affective' consequences and implications. Nevertheless, it should be clear to us that this was not the intent of Bloom, Krathwohl and Harrow. Instead these taxonomies have been developed as analytic tools to help researchers and practitioners look more clearly at the relationship between educational objectives and the complex processes of cognitive, affective and psychomotor functioning.

- iii) **Evolving purpose:** Evolving purposes suggest that objectives are not the pre-specifications of educational experience, but the outcomes of such experience. For example, students as human beings want to engage in learning experiences that satisfy their needs. In this context, we as teachers should discuss with them the probable consequences of these student-centred purposes. Together when we work out a process of problem solving, it enriches the students' experience by enabling them to reconstruct and reflect on their situation with greater understanding. For teachers and students, such purposes are not directives, documents

or curriculum guides; rather, they are a sense of direction that gives importance to growth.

‘Evolving purposes’ may sound good in principle, but there are constraints which make them too idealistic. Some of these constraints are as follows:

- The use of evolving purposes requires teachers who are able to engage in meaningful dialogue with students. It is a fact that most of us, unfortunately, have not been trained to do this.
 - Reluctance to use this interactive method because of the extra effort and planning it requires.
- iv) **Expressive objectives:** Expressive objectives assume that it is sometimes desirable to provide activities for students without pre-specification or even a clear idea of what the outcomes will be. The rationale behind this argument is that students should not be constrained by pre-determined goals. Teachers and students should be able to discover what the experience has in store for them.

Having acquainted ourselves with different forms of educational purposes, we should also look into substantive criteria for selecting these purposes.

How do we select purposes?

Tyler (1949) identified the following sources for selecting purposes:

- i) Study of learners;
- ii) Study of contemporary life outside the institution; and
- iii) Suggestions from subject specialists.

Hilda Taba perpetuated the study of learners, knowledge and society or culture as a foundational prerequisite for the process of curriculum planning (Taba, 1962).

For developing a curriculum, we should be able to identify the target audience and their needs. Of course, deciding on the needs of the potential target group will to a great extent be based on assumptions. As external factors, i.e., the socio-cultural milieu play a vital role in shaping learner-needs, it is imperative that these factors be studied in detail. Further, past experiences should also be considered.

1.3.2 Deciding Learning Experiences

We use the term “learning experience” in place of “content” in order that the former is clearly distinguished from the desirable notions of the latter.

Orientations to content

Content has long been considered a central curriculum concern. Many would go so far as to consider it the major component for curriculum developers to determine. Content does directly address the question: what shall be taught?

We should mention here that in the practice of curriculum development more often than not this ‘what’ question is often addressed without much attention to purpose, i.e., the ‘why’ question. Some argue, however that when content is determined, purposes are implied. It is unfortunate if we look at them synonymously.

The relation of purpose to content varies depending on how content is looked at. Let us elaborate on this point here. The following three widely divergent interpretations of 'content' have played central roles in curriculum thought and practice:

- i) emphasis on subject matter;
- ii) emphasis on learning activities; and
- iii) emphasis on learning experiences.

Let us take up and discuss each one of these interpretations in the order in which they are given.

- i) **Content as subject matter:** Traditionally content has been treated as knowledge to be acquired. The emphasis, however, is on knowledge to be disseminated from educators to learners. 'Content', in the course of time, came to be equated with the material covered in the text, and curriculum guides often list pages that are to be covered or mastered by different dates on the calendar. Lectures and text books remain dominant providers of contents as subject matter. Subsequently, a major market has emerged for publishers of text books. Besides text books, now a variety of integrated systems of worksheets and individual study materials, programmed materials, computer software and so on have been developed focusing in different ways on the same topics. Although major studies have been made from the days when the subject matter was conveyed exclusively by text and word of mouth, i.e., lectures, to the individualized learning materials, multimedia systems, use of computer, etc., the purpose is very much the same. It is to impart concepts, knowledge, principles and skills to learners. Thus, curricular content is that which is to be learned, namely, the subject matter derived from the disciplines of knowledge and rendered appropriate for different age groups and ability levels.

What does it suggest?

The emphasis on subject matter takes for granted that curriculum is a matter of pre-specification. This implies that experts know what is best for teachers to teach and learners to learn. Thus it is elitist in exerting control over the education of others without allowing them active participation in learning. Furthermore, emphasis on subject matter relegates content to disciplines alone. By implication, it presupposes that personal experiences and activities of learners have bearing upon what they learn. Thus, content has been, and still is viewed as a product to be received and not a process to be experienced.

- ii) **Content as learning activities:** The history of curriculum practice prior to the twentieth century was almost exclusively dominated by a subject matter approach to content.

At the beginning of the twentieth century there was a shift in this approach. The emphasis urged that curriculum should respond to the needs of contemporary society.

How shall we translate such needs into curriculum?

Bobbitt suggests that the needs of a society can be identified by observing the activities of the adult population. The needs have to be then translated into behavioural objectives and the objectives, in turn, into learning activities for the students. Obviously, more emphasis was placed on what students did than on what subject matter was bestowed upon them. (Schubert, 1986).

Today, we hear the term 'learning activities' used frequently. The use refers to what students should do as contrasted to that which they are presented with and expected to learn or know. (For example, instead of reading about or listening to how a law is made by introducing a Bill in the Parliament, the students may be engaged in the activity of simulating such processes). By implication, the approach to content emphasizes the observable. We can see an activity performed, but subject matter being assimilated or an experience being inculcated cannot be seen easily. Thus, besides involving students in activities, the activity approach to content serves the purpose of making what is to be done explicit and observable.

It is obvious that the subject-matter-emphasis assumes that learners are passive recipients, and such view clearly negates much that developmental and cognitive psychologists have made known to us. The learning activity approach focuses on behavioural outcomes. We cannot, however, consider behavioural outcomes the ultimate purpose of learning. Students who have had different life experiences prior to encountering a learning activity will invariably display different learning outcomes. In essence, it becomes a way of involving students in something that grasps their attention but need not necessarily attend to their basic needs. In practice the activity actually becomes an end in itself. Merely doing the activity emerges as the purpose rather than using the activity to fulfill a purpose/need.

Having studied two different approaches to content, let us now turn to the third one.

- iii) **Content as learning experiences:** Tyler (1949) seems to have intentionally used the term learning experiences to differentiate his own position from that of those who emphasized 'subject matter' and 'activity' as content. He expressed that the term 'learning experience' is not the same as the 'content' with which the course deals nor the 'activities' performed by teachers/learners. Instead, it refers to the interaction between the learner and the external conditions in the environment to which the learner can react.

Let us elaborate on this. In a teaching/learning process, learners and teachers engage in an academic dialogue. Teachers, usually, have broader experience in relation to the general purposes of curriculum. Learners have greater understanding of their own life experience. When they engage in a dialogue, then what is in the best interest of the learner to experience emerges naturally. For instance, in a classroom situation, a skilful teacher begins with the current, often superficial, interests of students and through discussion, helps develop a mutual realization of deeper interests which these surface interests may represent. The teacher then, draws upon an eclectic awareness of the disciplines of knowledge and relates existing knowledge to fundamental needs and interests of the learners.

A word of caution

Our stand is that the concept of content must move beyond what is externally imposed on the learner to that which is internally realized as valuable for growth. When content is conceived as learning experiences, it becomes a part of the learners' being, real to his or her life, a springboard to self-realization and is governed by self-control as opposed to elitist control. Thus, the content in this sense is a psychological construct as contrasted to the idea of content as subject matter to be delivered or activity to become engaged in. Of course, we should say here that to conceive of content as experience in the minds of others, or what they realize as a result of experience is much too intangible. Obviously, we cannot get inside the minds of other persons to monitor how every environmental episode that they encounter affects their outlook.

However, if we cannot know how environment affects the outlook of the learner, we may not have any basis to suggest curriculum inputs. This position leaves too much of the learning process in the control of students. But then, at a lower level, due to immaturity, it is difficult for them to decide what is best for them to learn. In this situation, the onus is on the curriculum developers to interact meaningfully with the students and bring to the surface what is best for them to learn.

Check Your Progress 4

*Notes: a) Space is given below for your answers.
b) Check your answers with the ones given at the end of this Unit.*

We have studied three interpretations of ‘content’. They are:

- i) Content as subject matter;
- ii) Content as learner activities; and
- iii) Content as learning experiences.

What is the major thrust of each of these interpretations?

- i) Content as subject matter emphasizes

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- ii) Content as learning activities gives emphasis to

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- iii) Content as learning experiences stresses on

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Among other things, our discussion of different interpretations of content clearly indicates that selection of content primarily depends on how we perceive it. However, irrespective of what our approach to content, there are a few common criteria for selecting content.

Let us look into them now.

Criteria for selecting content

Various influences, which include our interpretation of ‘content’, govern decisions about what content should be offered. For our immediate purposes, we shall consider the following eight criteria which influence the selection of content:

- i) **Social needs:** As curriculum is seen to perpetuate socio-economic values and structures that exist in a society, content as a part of curriculum should be selected to serve this purpose. A great deal of content selection depends on the nature of the needs that a society visualises for itself.

- ii) **Test of survival:** The duration of time can be considered an indicator of what should be taught. If any content has endured the changes of decades and centuries, it must be worthwhile. However, we should note here that all that persists may not be the result of conscious choice, Very often, it may obtain from tradition or even from mindless habit.
- iii) **Structure of the disciplines:** Here the suggestion is that each discipline has an inherent, deep structure of its own. Therefore, curricular content should be presented in a form that enables students to comprehend this structure.
- iv) **Utility:** Curricular content is selected because it is useful to the learner as an individual and the society as a whole. For example, in a rapidly changing world, it is necessary to develop coping strategies, or life skills. These might include critical thinking, problem solving and the kind of resourcefulness that allows one to find one's way around in new or difficult circumstances.
- v) **Publishers' decision:** Although it may not appear as altruistic as some of the other criteria for content selection, some argue that curriculum developers at the school level exert little impact on the content taught. Generally, the practice has been that they merely select which series of textbooks or instructional system to adopt. It is a fact that most of the publishers have greater expertise at their service than institutions have. For instance, they can hire noted scholars from different disciplines to develop content for their texts and put the materials in a form that appeals to students' interests and motivates them. Through marketing strategies, they can easily find out what educators want to buy and what appeals to and works well with students.
- vi) **Political pressure:** Those who are at the helms of affairs at educational institutions are forced to cater to public demands and to partisan politics. Such demands surface at many levels – from school to community, from state to nation, from interest group to international conflict – and influence the curriculum accordingly. A Third World nation may, for example, try to overcome colonial overtones and thus saturate its social studies curriculum with patriotic messages.
- vii) **Learner interest:** It is an important and very crucial criterion. We should be able to base curriculum content on the interests of the learners. The point is that learners should be allowed to study what they are interested in. Content should, therefore, be so selected that it satisfies the interests of the learners. Either these interests are seen as a motivating device by which to lead students to knowledge deemed relevant to them, or it is believed that students actually know what is best for them. Of course, many positions lie between these extremes. As far as the adults are concerned, they are in a better position to determine content, simply because of their experience and self-knowledge. Through dialogue, sensitive teachers can help academically immature students to discover the more fundamental interests that underlie their momentary whims.
- viii) **Democratic action:** Does the curriculum content foster democratic action? The assumption is that if we want to build a society that can live better together and make decisions more effectively through cooperative deliberation then it is essential that we should select such curricular content as to lead the students in this direction. However, to involve the young and immature students in democratic action is an inefficient, time-consuming and wasteful way to determine curricular content.

Now let us look at yet another essential curriculum-component, i.e., 'organization'.

1.3.3 Organizing the Content

Among the essential components of curriculum, 'organization' is the most multifaceted. It includes the issues about scope of curriculum offerings and those about sequence, i.e., how to order the content. We should reiterate here that irrespective of how content is interpreted, scope and sequence are crucial organisational decisions. In this subsection, we shall deal with alternative responses of the problem of scope, and investigate criteria used in determining sequence. Besides, we shall consider learning environment within the purview of curriculum organisation.

Scope

We must be aware of the fact that almost every year the expansion of knowledge yields new fields of inquiry. Considering the magnitude of knowledge explosion, it is only natural for us to raise the question: what kind of knowledge and how much of it should be provided to the students? Clearly, we should admit that there is not enough time to offer all existing areas of study. Thus, by the middle of the twentieth century, the following five approaches to scope had emerged.

- i) **Separate subjects:** According to this approach, disciplines represent discrete bodies of knowledge that should be studied separately and that some disciplines are more essential than others. The convention has been, therefore, that a few subjects are seen as most worthwhile, and we should offer those, and reject other areas of knowledge as less basic. For example, it is not uncommon to hold that one discipline, such as science, is highly useful and another, such as music or art is a frill added on to this 'real' knowledge.
- ii) **Broad fields:** This approach clearly negates the view expressed in item (i) above. It correlates subject areas and fuses them together in practice. For example, in a unit on World War-II, the student will be asked to read appropriate literature and write essays on the issues concerned. In doing so, they will study the historical, geographical, and socio-economic aspects of the issues for a unified purpose rather than consider them as individual subjects.
- iii) **Projects:** The projects approach involves students in an overreaching project and relates many subject areas to it. The project approach demonstrates to students that it requires a perspective based on many different disciplines to understand any single facet or problem of our culture, society, personal lives, or intellectual interest. The main criticism against this approach is that usually projects are artificial rather than genuine outgrowths of student interest.
- iv) **Core:** The core curriculum brings the disciplines together under the organising centre of social problems. For example, a social problem such as poverty, population, war, ecological issues etc., can be studied by engaging students in research that enables them to draw insights from many different disciplines as well as from practical experience.

The core demonstrates the use of knowledge by applying it as it is learnt. It motivates students by engaging them in the study of problems that are of broad, general interest. But then social problems are too abstract for most students. They fail to see a connection between them and their own lives. Also, 'core' has a totally different meaning today. It now refers to a basic set of required courses in a programme, following which students may select electives.

- v) **Integration:** This approach is based on the assumption that an individual student, or a group of individuals, is the organizing centre that defines the scope of curriculum. The idea is that together and/or as individuals, students sense direction in a process guided by the overall purpose of personal and social growth. The implication is that the students should be engaged in academic dialogue with resourceful teachers. They together develop a framework for students' growth drawing upon a wide range of personal and academic resources. At a certain stage, it is possible that a new direction emerges. Accordingly, what has been designed may undergo a revision. And this is an ongoing process. Besides updating the curricular content, this approach enables students to realise that they are authors of their own life and learning. However, we should accept that it is difficult to follow this approach in a situation when academically immature students are involved.

Having talked about scope, we shall now deal with sequence in curricular content. Both of them go hand in hand as two coordinates on a graph of curricular content.

Sequence

By 'sequence', we mean the order in which content is/should be taught. While developing a curriculum, if we are certain about the scope of the curricular content offered to the students, we should be able to say categorically in what order it should be presented.

Criteria for determining sequence

The following six criteria for determining sequence are widely used.

- i) **Textual presentation:** Teachers usually follow the sequence that is so common in textbooks. But the problem is that the sequence of content presented in the text may not cater to the needs/interests of individuals in learning situations. Moreover, those who design texts by and large assume the role of entrepreneurs providing what is desired and not necessarily what is desirable.
- ii) **Educator preference:** Generally, curriculum designers can operate on generalizations about populations to be served by texts, packages, units and other documents which they create. By implication, teachers must be treated as professionals who decide the extent to which these guide work in their situations. Depending on the situation they need to accept, reject, adopt and supplement what is given to them. However, experience shows that many teachers may not be able to do this.
- iii) **Structure of the disciplines:** Curriculum developers should rely on the expert interpretation of subject matter specialists who reveal the logical patterns that give shape to their disciplines and imply the order in which its elements should be learnt.

It should be mentioned here that the structure of an area changes shape as new discoveries are made. If we do accept the existence of structure, sequence still depends on other factors such as prior knowledge, learner intents, and perceived relevance. Recent investigations in cognitive psychology reveal that a large number of variables will have to be considered when making decisions about the sequence and not merely the structure of the disciplines.

- iv) **Learner interest:** Sequence should be based on the supposition that knowledge is most relevant when it fulfils learner needs. When knowledge is relevant, it is more readily learnt than when it is presented according to an outsider's conception of learner needs or logical order. However learner interests cannot always be relied on to develop a curriculum sequence since

learners do jump from one whim to another with little reflection. Students, therefore, need the controlling mechanism of adult guidance. Professional educators can study students carefully as a basis for developing sequence according to their needs, and not mere interests.

- v) **Learning hierarchies:** Learning should proceed from the simple to the complex. Neither learning theory nor research, which serves as its basis, points to conclusive evidence that supports the overall effectiveness of hierarchical modes of sequence. Some researchers suggest we should move from the particular to the general, while others advocate a move in the opposite direction. There may be bits of truth in all these positions; one may work well for some students and another for others. In general, we need to admit that there may not be any ideal hierarchical sequence suitable for all types of learners.
- vii) **Developmental appropriateness:** Curricular sequence should correlate content with the sequence of human development. Piaget’s work on developmental psychology shows that learners move from sensorimotor to preparational, to concrete operational, to formal operational stages of cognitive development. However, we know little about translating the stages suggested by Piaget into curriculum sequences (Schubert, 1986).

Check Your Progress 5	
<p>Notes: a) Space is given below for your answer. b) Check your answer with the one given at the end of this Unit.</p> <p>List the approaches to ‘scope’ and the criteria for determining ‘sequence’.</p>	
Approaches to determining ‘Scope’	Criteria for determining ‘Sequence’
i)
ii)
iii)
iv)
v)

So far, we have seen ‘organisation’ with regard to scope and sequence of curriculum content. When we look at ‘organisation’ from a broader perspective, it should include learning environments too and so we shall touch upon this aspect as well.

Environmental organisation

Here we are focusing on environmental features internal to specific teaching/ learning situations, not wider contexts such as community and socio-economic surroundings.

For our immediate purpose, we do not want to deal with the different types of learning environments. Instead, we shall touch upon various learning environments familiar to us. We can easily identify the following:

- i) Self-contained classroom
- ii) Departmentalisation
- iii) Non-gradedness

- iv) Open space
- v) Open education
- vi) Tutorial
- vii) Community-based curricula
- viii) Non-school education.

Though most of the ‘environments’ presented here are familiar to us and self-explanatory by themselves, we shall say a few words about each of them in the given order.

- i) **Self-contained classroom:** The most prevalent form of environmental organization at the school/university level still is the self-contained classroom, comprising a teacher and a group of students who remain together during the learning/teaching process which is usually obtained by means of prescribed texts, etc.
- ii) **Departmentalisation:** The characteristic organisational environment in the secondary and higher educational setup finds teachers placed in departments based on their subject specialisations.
- iii) **Non-gradedness:** Students should be enabled to progress through prescribed studies at their own pace. This can be done by establishing flexible mechanisms for students to engage in advisory dialogue with teachers, to become aware of their own sense of direction, to learn individually and in groups and to make use of a variety of personal and material resources for learning.
- iv) **Open space:** The suggestion is that teaching/learning should take place in the open. By and large, neither teachers nor curriculum leaders have favoured open space environments. While rare cases of successful adaptation exist, the usual reaction is one of negation.
- v) **Open education:** The philosophy of open education holds that students are active and learners learn best when they pursue their own life problems. (There is a detailed discussion on this theme in Course MDE-411, Block 2.
- vi) **Tutorials:** This old university tradition of learning through a process of one to one exchange is still maintained successfully at a few institutions. Recent research by Bloom (1984) and his students indicates that the tutorial may be the best setting for the achievement of mastery.
- vii) **Community based curricula:** It is on the basis of work-study programmes that engage students in academic study for half a day and then schedule them to work with a business or industry for the rest of the day. The purpose of such programmes is to acquaint the students with the world and at the same time ease their eventual transition into the job market. A considerably different image of community - based curricula was developed under the title “school without walls”. The underlying philosophy it proposed was that the community itself is a better learning environment than the classroom. Thus, students were involved in expeditions to all parts of the country to learn from the richness of experience it embodies.
- viii) **Non-school education:** It does not teach lessons based on a formalized curriculum. To illustrate this, we refer here to the implicit curricula and learning environments that saturate our culture through television, radio, pop music, church, scouting, movies, street gangs, homes, families, peer groups, jobs and the like. Each of these is a learning environment.

In Unit 1, Block 1, we talked about how ‘instruction’ has been viewed. Some use the term synonymously with curriculum and some treat the two as two different phenomena.

Should instruction be considered separate from or as part of curriculum?

Operating on the assumption that curriculum is affected by instructional transactions; we thought it reasonable to bring in some details about the types of instruction here.

Arrangements for instructional transactions

Before we look into the mainstream discussion, let us say that we have considered only the main arrangements. Obviously, a comprehensive treatment would probably be impossible because new forms are devised frequently, depending upon the needs of the moment.

The items we have taken up for our present purposes are:

- i) Instruction in large groups
- ii) Instruction in small groups
- iii) Individualized instruction
- iv) Team teaching

We shall discuss each one of them in the given order.

- i) ***Instruction in larger groups:*** Large group instruction is the mainstay of traditional education. In our context it ranges from large lecture hall to whole class presentations. The purpose of a course is to pass on a fairly large quantity of information, ideas, or affective inputs in a relatively short period of time to a large body of students. Our experience shows that the success of large group instruction depends upon the performance of the teacher and the willingness of learners to pay attention to what is being taught. We can cite the following as drawbacks of this system:
 - i) lack of personalization;
 - ii) ineffective performance of the teachers;
 - iii) lack of teachers who are able to motivate large groups, and
 - iv) lack of individual attention, i.e., it is unlikely that all learners in a large group would want or need to know the same things.

Some may argue, however, that the advent of the 'print' and electronic forms of communication may pre-empt the need for large group instruction.
- ii) ***Instruction in small groups:*** It ranges from discussion groups, seminars, workshops and practical tasks at laboratories to tutorials. Obviously, most small groups are established on some basis of homogeneity – interest in a topic, readiness for a particular level of study, or ability to perform. Thus, the intent in small groups is to provide for differences in need and/or interest that cannot be catered to by large-group instruction. The contention, however, is that students grouped homogeneously do not learn from experience what it means to live in a pluralistic culture. In addition, they experience academic disadvantages from association with only those who are most like themselves. There are logical criticisms as well. For example, when one teacher attempts to orchestrate learning activities for several groups simultaneously, some are necessarily neglected because it is possible to focus directly on only one group at a time.
- iii) ***Individualized instruction:*** Individualizing instruction generally implies that the intent is to cater to the needs of individuals. We could diagnose the needs of the students and design projects for and with them. This kind of individualization may vary on a continuum that ranges from extensive to little teacher involvement once the students begin to work out projects.

However, teachers would be monitoring the progress at convenient stages. One main criticism against individualization is that it centres on the point that is overly ideal, and that even at its best such an approach may not prove suitable when the number of students is large.

- iv) **Team teaching:** Generally team teaching refers to a wide variety of instructional arrangements in which more than one teacher works with a group of students. The purpose of team teaching is to allow the teachers to capitalize on their strengths. It emanates from the fact that most teachers do not do all aspects of teaching equally well. Besides, in team teaching different teachers can specialise in large-group, small group or individualized instruction; or they may specialize in subject matter areas; or affective, cognitive and psychomotor domains etc. However, the implications of team teaching make it appear quite alien to our situation. The implication is that we need to re-educate the teachers if team teaching is going to be meaningful in our context.

So far we have talked about instructional arrangements pertaining to a classroom set up. Let us now move away from such a set up.

- v) **Distance education:** As you are familiar with distance education, we think it is not advisable to go into great details about it. However, a few words about it are stated. Distance education is an educational process in which teaching/ learning takes place at a distance through print, electronic media and limited human contact at counselling centres. Obviously, it is different from large group instruction arrangements and is somewhat closer to small group instruction. However, the role of the human element is relatively minimal in distance education. As distance education is a student centred approach, it is highly individualized. Further it is essentially a team teaching arrangement with the difference that in distance education we follow the principles of division of labour on a much larger scale and in a more organized manner.

Check Your Progress 6

Notes: a) Space is given below for your answer.
b) Check your answer with the one given at the end of this Unit.

Sum up sub-section 1.3.3.

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1.3.4 Deciding Evaluation Schemes

In this subsection, we begin by examining the role played by evaluation in curriculum development. Besides, we have also touched upon the following contrasting paradigms of evaluation.

- i) The paradigm which concentrates on measuring the outcomes of the instructional system.
- ii) The paradigm which pays more attention to what happens during the educational processes itself:

Finally we list the range of diagnostic techniques which are commonly used as part of an evaluation strategy. (We shall take up the review of these techniques and discuss the respective uses, strengths and weaknesses of each technique in detail in Unit 4).

Role of evaluation in the curriculum

The theory and practice of curriculum evaluation has passed through several stages in this century. It began with an emphasis on marking and grading, and proceeded to develop a specialized connection with systematic measurement. Later evaluation began to focus on the improvement of programmes rather than the assessment of students alone.

Usually, in a teaching/learning process the prime symbol of student is the mark grade. We rate performance in examinations, class participation, daily assignments, special projects, papers etc. according to the hierarchy of grades assigned to them. This is the approach to evaluation that has guided us so far, and it is still widespread today despite the emergence of many alternative concepts available today.

The purpose of judgement as a basis for grading and marking students implies a faith in wisdom that comes with experience. However, obviously personal prejudice plays too large a role in grading. We know that different teachers judge the same student's performance quite differently. By implication, the process of evaluation needs to be conducted more systematically and measurements carried out with the help of established criteria or norms.

For our present purposes we stop here, i.e., we are not going to discuss the issue under consideration any longer. The simple reason is that we have talked extensively in other courses of this programme of study, where we have dealt with the following four themes in four units respectively:

- i) Evaluation in educational programmes
- ii) Characteristics of a good test
- iii) Characteristics of a good item
- iv) Grading and question/Item banking.

These themes should have given you a clear idea about the complexities and intricacies involved in student evaluation.

Though the terms 'assessment' and 'evaluation' are often used virtually synonymously in common parlance, here we shall define 'assessment' as those activities that are designed to measure student learning achieved as a result of a teaching/learning situation and 'evaluation' as a series of activities that are designed to measure the effectiveness of a teaching/ learning system as a whole. However, we should note here that the results of student assessment form part of the wider evaluation process.

Within the systematic approach to curriculum development, the role of on-going monitoring and evaluation of the system has been shown to be of vital importance to its development and evaluation. Due to the cyclical and interactive nature of the system, each cycle can benefit from the experiences and feedback obtained cycles. Whether it is a complete course, part of a course, a particular teaching session, a self-instructional programme or a teaching aid, i.e., film or video, we can never be satisfied with the first attempt or even with revised versions. If we agree that the system can always be improved, it is quite natural on-going evaluation will always be an integral part of the design process. However, the scope and depth of evaluation that is carried out in any particular case will vary according to the nature of the situation, as indeed will the evaluation methods used. Whatever the

circumstances, nevertheless, we cannot underestimate the importance of using appropriate evaluation procedures to monitor the instructional system and provide the basis for improvements. Obviously, then, feedback obtained from such evaluation should shed light on the appropriateness of the methods of course production, teaching methods used, the structure adopted, the implementation strategy, the student assessment methods etc .

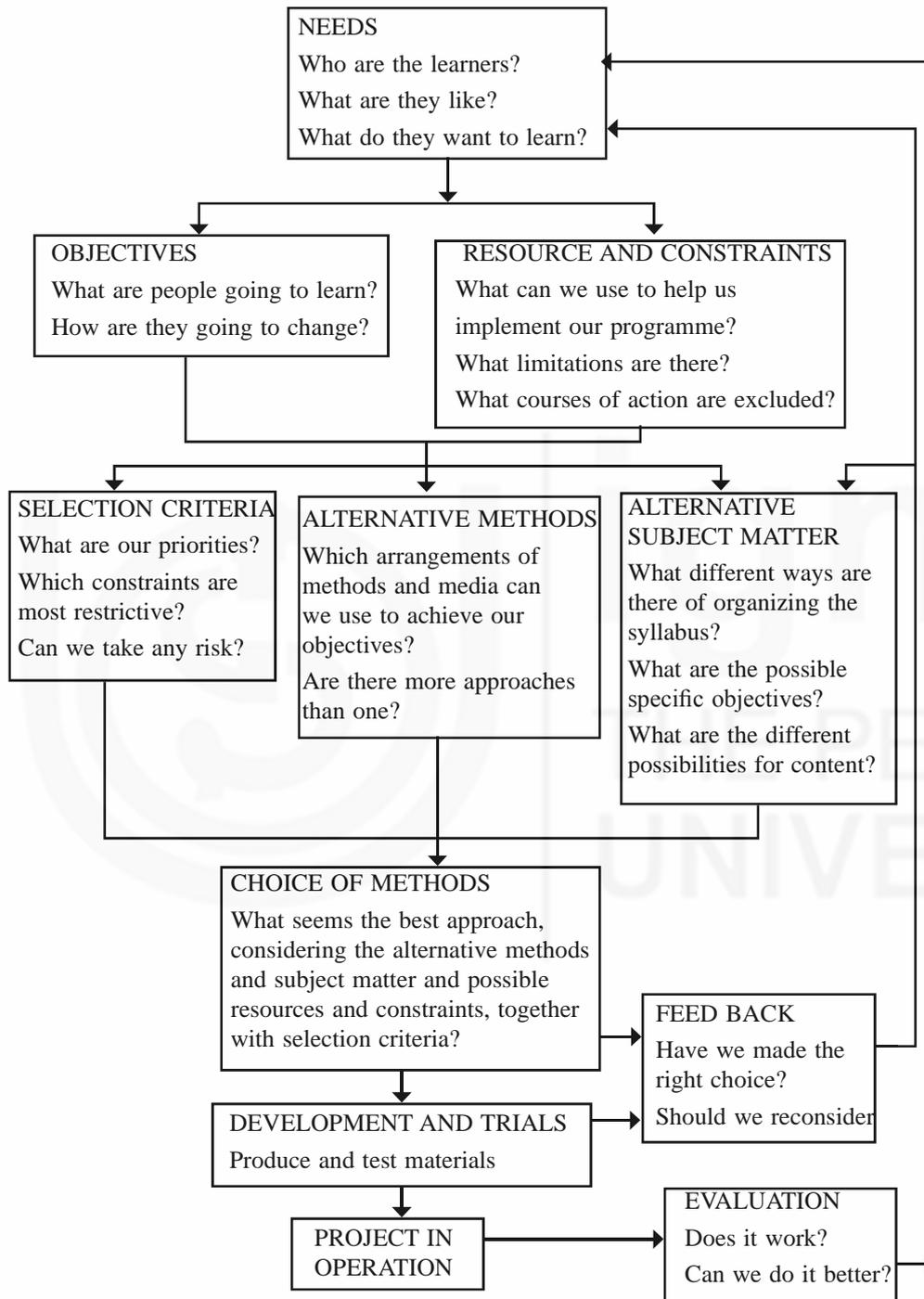


Fig. 1.1: Curriculum Development: System Approach

Having briefly talked about the role of evaluation in curriculum development, we shall look into the paradigms of evaluation.

A major area of debate in educational evaluation is concerned with the relative merits of the following two distinctly contrasting approaches:

- i) 'scientific' approach; and
- ii) 'illuminative' approach.

Let us elaborate on each of them in the given order.

- i) **Scientific approach:** This approach sets out to measure the extent to which a given instructional system has achieved certain specific goals in relation to the students' prior knowledge; to this extent, this approach measures 'output', 'input' and often treats the differences statistically. Other factors in the system, such as the learning environment, teaching personnel, course content and structure and teaching methods normally receive only incidental attention if they are considered at all. This general 'system approach' has been used when measuring the relative efficiency of different methods of teaching towards a common end, and also to measure the effectiveness of self-instructional programmes in achieving stated objectives. It has led to the use of systematic objectives - oriented evaluation procedures.
- ii) **Illuminative approach:** By comparison, this approach is more concerned with studying the on-going process of education. In general, the techniques used are far more subjective, and often involve personal value judgments of the results. The arguments in favour of this type of approach are that the variables involved in educational processes cannot be readily identified or controlled, and that 'inputs' and 'outputs' can be varied, complex, difficult to specify with certainty, and often virtually impossible to measure. In this approach, the evaluation process is generally not rigidly structured or constrained, and usually gives the evaluator enough scope to take up specific areas of interest as and when they become apparent.

Clearly, there must be a middle path between what, on the one hand, purports to be a purely objective approach, and largely subjective approach that is embodied in illuminative evaluation on the other. Where the correct balance lies, however, depends to a large extent on what is being evaluated and for what purpose.

Now let us list the techniques commonly in use for the purpose of evaluation.

Evaluation techniques

In view of the variety of information that one may be seeking during an evaluation programme, it is normally advisable to use a battery of evaluation techniques. Some of the possible information sources are listed below:

- i) results from student assessment;
- ii) student questionnaires and interviews;
- iii) observation of the instructional operation in progress;
- iv) feedback from teaching staff directly involved with the instructional operation and also with the system as a whole; and
- v) feedback from people who have an indirect link with the instructional system.

Each of these sources of feedback generally has an important part to play, regardless of whether the evaluation is of a course or unit of teaching that is still in the process of development (formative evaluation) or of a fully developed instructional system that is already in use (summative evaluation).

A word of caution

Many may insist that the four essentials of curriculum as propounded by Tyler (1949) in the form of four basic questions constitute a stepwise curriculum recipe. Many synoptic curriculum texts over the past four decades use Tyler

Rationale as a mechanistic formula for designing curriculum. However, Tyler himself emphasized that his categories of purposes, learning experiences, organization and evaluation are intended to be analytic topics, not necessarily prescriptive directives.

The process is basically cyclic (Wheeler, 1967) in nature with the following stages:

- i) the formulation of a clear set of objectives for the curriculum,
- ii) the selection of appropriate instructional methods for achieving these objectives within the context of the curriculum,
- iii) the implementation of the curriculum, and
- iv) the assessment and evaluation of students and the curriculum respectively.

However we should admit that it is possible to provide examples of overlap within all the three curriculum paradigms. For example, although Tyler is credited with the rationale for an empirical-analytic mode of study that serves technical interests, it is quite clear that much of Tyler's own consultation on curriculum and evaluation was practical in character. He was concerned with the process of enabling teachers, learners and curriculum developers to articulate sources of meaning and direction in their lives from their subjective experiences.

1.4 LET US SUM UP

In this Unit we have begun with a definition of the term 'paradigm'. Then we looked into three paradigms of curriculum. They are:

- i) paradigm of practical curriculum inquiry;
- ii) paradigm of critical praxis; and
- iii) paradigm of perennial analytic categories.

Of the three, we gave more emphasis to the last one, as it has been the dominant paradigm over the years. Tyler, who has authored the 'paradigm of perennial analytic categories', identified the following four elements which give shape to a curriculum:

- i) objectives;
- ii) learning experiences (materials);
- iii) implementation (methods); and
- iv) evaluation.

We said that these have been and still are considered components of curriculum. Then we extensively discussed each one of them in the given order. Towards the end, we have cautioned that Tyler's advocacy should not be taken as a curriculum recipe. It should be looked at as a practitioner's guide.

1.5 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

The basic assumptions of a paradigm of curriculum are

- i) the source of problem should be found in the field of activities and not in the hypotheses of researchers;

- ii) learning should be situational and not generalistic; and
- iii) instructional methods should suit the state of affairs.

Check Your Progress 2

- i) Yes
- ii) No
- iii) No

Check Your Progress 3

The given statement cannot be considered a behavioural objective because it does not convey any pre-specified observable, terminal behaviour. The statement of objective, therefore, should be modified as under:

The students will demonstrate knowledge of the rules of punctuation marks by stating them and correctly inserting them in sentences where they are omitted.

Check Your Progress 4

- i) Content as subject matter - knowledge to be disseminated from teachers to learners.
- ii) Content as learning experiences gives emphasis to what students should do to respond to the contemporary needs of the society as contrasted to what they are presented with and expected to know.
- iii) Content as learning experiences lays stress on the interaction between the learner and external conditions in the environment surrounding him/her.

Check Your Progress 5

Approaches to define Scope	Criteria for determining sequence
i) Separate subjects	i) Textual presentation
ii) Broad fields	ii) Educator preference
iii) Projects	iii) Structure of the disciplines
iv) Core	iv) Learner interest
v) Integration	v) Learning hierarchies
	vi) Developmental appropriateness

Check Your Progress 6

In sub-section 1.3.3 we have talked about:

- i) The issues pertaining to the 'scope' and 'sequence' of curriculum offerings by discussing the five approaches to defining 'scope' and the six criteria for determining 'sequence';
- ii) environmental organization by focusing on environmental features internal to specific teaching/learning situations.
- iii) the four main arrangements for instructional transactions such as large group instruction, small group instruction, individualized instruction and team teaching; and
- iv) distance teaching as the emerging arrangement for the instructional transaction.