UNIT 3 CURRICULUM DESIGNING

Structure

3.0   OBJECTIVES

After completing this Unit, you should be able to:

●   analyse the socio-academic considerations and criteria in purpose-setting in curriculum planning;

●   identify and illustrate the different levels/ways of defining aims/goals/ objectives;

●   state the criteria for selecting and sequencing the content i.e., subject matter; and

●   identify selection-criteria for curriculum experiences/ environments/settings

Let us begin our discussion now.

3.1   INTRODUCTION

In this Unit, we shall take up the major dimensions of curriculum and their corresponding components in order to identify some principles/criteria and other considerations that should guide any curriculum planning. In the process, we shall also examine the procedural steps that may be adopted at different levels, depending on their appropriateness and relevance.

In Unit 1, we have dealt with the issues relating to the four essential curriculum-constituents i.e. objectives, learning experiences, transactions and evaluation. At places, we have also touched upon the selection-criteria for each of these components. This Unit is a logical extension of Unit 1. It is possible, therefore, that on various occasions, you may come across familiar concepts reinforced and/ or looked at from different perspectives to bring out the nuances and intricacies of the topic under consideration.

3.2   IDENTIFYING THE PURPOSE

Throughout Block 1, we have implied that education is a purposefully designed social good. Education, thus, has to fulfil the following two purposes:

- individual development; and

- social progress.

We have also said in Block 1 that curriculum is the overall means for achieving this two-pronged objective. To select and effectively plan the means i.e., curriculum, we need to therefore clearly define our purposes/broad goals and relatively specific objectives. In sub-sections, 3.2.2 and 3.2.3 we shall examine some basic principles, the criteria derived from them and other considerations that should guide the task of defining goals and objectives.

Before we look into these subsections, we shall first clarify what we mean by 'purpose' in curriculum planning.

3.2.1 Defining Purpose Setting

We are familiar with terms like 'purpose', 'goal', 'aim' and 'objective' and we use all of them almost synonymously. In educational literature, depending on the context, they are used either synonymously or to mean different things. However, in general, the term 'purpose' connotes very broad and global statements of educational intentions. The terms 'aim' and 'goal', though broad, are relatively limited in scope and 'objectives' refer to specific intentions of an educational process. However, this term can also occur in stage 1 in relatively broad terms on the one hand, and be later broken down into very specific ones with differing degrees of precision, on the other. (It will be a good idea if you can refer to Unit 2, of this Course in which we have differentiated 'aims' from 'objectives' with regard to course planning in distance education.

Let us elucidate these concepts with illustrations.

Purposes: They are generally global in nature. For example, the purpose of pre-primary education may be to prepare children for formal schooling, and that of school education is to provide students with adequate grounding in various subjects of general interest. It is common knowledge that higher education is meant to facilitate specialization in areas of special interest.

Goals/Aims: We may state goals/aims in the same fashion as 'purposes' but they are, relatively 'flexible', less global and more specific. For example, various committees on education and educational thinkers have specified that the aims of education are to:

- facilitate self-actualisation

- effect cognitive development

- help the students develop communication skills

- prepare the students for specified professions/vocations at certain defined levels;

- provide scope for specialisation in certain fields/branches at specified levels

- encourage liberal education for cultural upliftment, etc.

Goals/aims therefore cannot be considered either contradictory or alternative to

the purposes set out. They, thus, have to be seen as complementary in achieving the total purpose of education.

Objectives: We may broadly define educational objectives as purposes and/or aims. However, they arc often defined in terms of *outcomes* of different kinds, classes, categories, and levels. Bloom and others (1956) analysed such educational objectives and grouped them into the following three broad areas:

- cognitive (relating to knowledge as product and knowing as process);

- affective (where feeling and attitude are central or crucial); and

- psychomotor (consisting in manipulative skills, involving muscular movements).

(At this juncture, perhaps, it is worthwhile referring block-1 of Course MDE-412 for additional information.)

What is implied here is that each of these terms gains specific connotations depending on the context in which it is used. However each of them, either holistically or in fragments, contributes towards setting educational intentions. For our immediate purposes, we can use them interchangeably without getting into any terminological tangles.

Having acquainted ourselves with the term 'purpose', let us now look into various criteria that have to be considered for purpose setting in the educational field. The criteria that used for this purpose can be grouped into the following:

i)   Substantive criteria; and

ii) Procedural criteria.

We shall deal with them in Sub-sections 3.2.2 and 3.2.3 respectively.

3.2.2 Substantive Criteria

We have agreed that education is a purposeful endeavour. As we have seen in 3.2.1, it is concerned with outcomes that are usually expressed at several different levels. The most general level is reflected in statements of specific aims, in statements of objectives. But, whatever the degree of specificity, we need to use these statements to plan, develop, implement, maintain and evaluate our educational programmes. In essence, the total programme/curriculum for any level must adequately reflect the basic philosophy of education adopted by the society—either explicitly or by implication. It must be in tune with such a philosophy and must contribute to its realisation. However, because of the numerous educational-philosophical positions, there are different ways to conceptualise and deliver curricula.

Consider the following educational philosophies:

(We have studied these at length in Unit 2, Block 1)

- **Idealism:** stresses the aim of self-realization, the importance and value of ideas rather than of matter, and the acceptability and pursuit of absolute values.

- **Naturalism:** stands for harmony with nature, i.e., education designed in accordance with nature, especially the natural inclinations and abilities of the learner on the one hand and the features of nature on the other.

- **Pragmatism:** aims at social efficiency, experimentation and discovery.

- **Essentialism:** emphasizes preparation for adult life as the main function of education.

- **Reconstructionism:** stresses the role of education in bringing about significant social changes and therefore in reformation.

- **Existentialism:** accepts man as essentially worthy and good and sees self-actualization as the central purpose of education.

Don't you think all these ideologies sound sensible, good and educationally attractive?

Extreme emphasis on one or even some of these to the exclusion of others would make the curriculum very narrow and lopsided. Most of these have to find a reasonable place in a balanced picture, for they are complementary rather than contradictory.

We have to therefore enlarge and strengthen the underlying unity of these differing approaches. But at the same time, we cannot ignore the uniqueness and distinctive features of each. Essentially, therefore, we require an 'eclectic' approach that permits open-minded and meaningful selection and synthesis of goals in order to define the philosophy of education in any modern society. The broad purposes/goals of education that constitute the means, i.e., the curriculum must represent and adequately synthesize all the ideologies to suit heterogeneous learners. In other words, it must yield a harmonious blend rather than a crude mixture.

3.2.3 Procedural Criteria

Curriculum planning is generally meant as the process of preparing comprehensive curriculum for adoption by an institution or teachers. Curriculum development takes them to the next stage of their expansion, elaboration, preparation of curricular materials for actual implementation and use in particular situations. Procedures form part of the means for accomplishing something. For example, if we take the Indian context, we have to exercise different tasks pertaining to curriculum planning and development at different levels- progressively higher to lower levels and large to smaller areas of jurisdiction as Fig. 3.1 depicts:
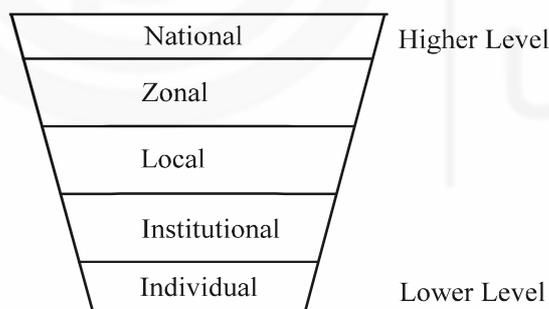
Fig. 3.1: Procedural pattern: An illustration

In India, curriculum planning in this sense is generally done only at one or more of the three higher levels i.e., global, regional, national and local. However, we can find exceptions as in the case of deemed universities, autonomous colleges and some other prestigious institutions functioning with a lot of independence. The other three levels i.e., local, institutional and individual, undertake detailed curriculum development, though in a systematic fashion. Obviously, lack of coordination at any one level tends to make things artificial, arbitrary and prescriptive.

To avoid this kind of strained outcome, the higher and lower levels of curricular planning should move in unison—starting with broader areas, focusing on basic and essential, central and optimum things at the national level; and moving towards progressive expansion, elaboration, local specificity and adaptation, meaningful addition and variations etc., at the lower levels. It would serve to ensure optimum standards; uniformity, and variety, while permitting reasonable freedom and flexibility, local relevance and suitability.

Further, the procedures adopted at the different levels must be such as to ensure to the maximum extent possible that:

- competent and representative teams or committees of educationists, psychologists, curriculum specialists, subject experts, experienced teachers at the relevant level—primary/ secondary/tertiary and representatives of other relevant interests like industries, employees etc. are formed for the purpose, especially at the higher levels;

- approach papers, policy statements and broad outlines are drafted, circulated for critical examination and refined by a team/committee;

- the basic philosophy of education adopted by the nation/society and that relating to the stage/sector concerned are clearly defined;

- the national interests, aspirations and priorities are identified and adequately represented;

- features of the emerging social order and its demands are identified and given due consideration;

- the special purpose and scope of education at the stage/sector concerned are clearly articulated;

- the total pattern is accordingly designed with its major components, linkages, balanced weight, time, planning etc.;

- the capabilities and learning that is possible at the entry point are identified and stated so as to be clearly assumed;

- the broad goals of the total curriculum and its major components are defined first and than broken down into more specific objectives;

- the objectives so selected are suitably classified and ordered or sequenced, indicating linkages between them; and

- the objectives so set forth are judged and accepted as appropriate, adequate and attainable.

It should be obvious here that only after such comprehensive and thorough purpose setting should we proceed to:

- identify specific courses and components therein;

- select and order their broad and specific objectives;

- develop content outlines which include analysing, sequencing and structuring the content;

- identify the best and alternative ways of educational transaction or treatment;

- suggest special projects, activities, and indicate appropriate resources/aids to be used.

By following certain norms of the kind described, we shall be able to meaningfully define the broad objectives of different courses/units. It should be mentioned here that the conventional educational systems, by and large, seem to have either ignored it or at best, taken it for granted. Even when occasional attempts are made to systematically provide for setting out purposes invariably they prove to be futile at the stage of implementation. Various reasons can be attributed to it. One main reason perhaps is the sense of self-complacency on the part of the educationists—that they have been dealing with education for years together. On the contrary, in the distance education context, we cannot take such risks because the system by its very nature is learner-centred. Our discussion on 'systems approach' in course MDE-413 should help us substantiate the claim.

3.3 SETTING EDUCATIONAL OBJECTIVES

As we have studied in Sub-section 3.2.1 goals can be written at several levels of generality. At one extreme, they can be written in such broad phrases that they are similar to aims and reflect a philosophical base. At the other extreme, they can be written rather specifically to indicate a concern about a particular achievement.

Within the context of educational aims and goals, it is necessary to formulate objectives that will indicate in more specific terms the outcomes of the curriculum or project being considered. Gronlund (1970) states that a meaningful objective is one that communicates effectively to the reader the instructional intent or behaviour as well as the specific learning outcomes of an educational transaction.

3.3.1 Formulating Objectives; Guidelines:

Since objectives indicate expected outcomes, we need to give careful thought to the creation of curriculum objectives.

We should, therefore, consider the following points when formulating objectives.

i) **Matching:** Objectives should relate to the goals/aims from which they are derived. At times, it is possible that we prepare a well-defined set of objectives of students' 'understanding' of certain scientific facts, which may not have any correlation to the goals set. For example, an objective to the goal that students be able to apply the knowledge gained in practical situations.

ii) **Worth:** It relates to whether attaining an objective will have value for the students at present and in the future. Indeed certain subject knowledge needs to be eliminated, modified or updated because our knowledge base is constantly changing.

iii) **Clarity:** Statements of objectives will lose their importance if they do not enable the students to understand and see clearly the intended outcomes. However, how appropriately an objective is worded also depends on its level and scope.

iv) **Appropriateness:** To determine appropriateness we should first consider the students and their needs. If we fail to do so, some objectives will demand of students' behaviour that they have already attained or are incapable of performing. Similarly, some objectives will not cater to the students' interests or be more suitable for students in a particular subject than for students interested in general orientation.

v) **Logical grouping:** Statements of objectives should not lack organisational coherence. At times, objectives that address a general understanding of self—such as understanding the particular effects of lack of exercise on the body—are grouped with those that are more specific. This will result in a mismatch between the objectives set and demands made. Therefore, we need to group the objectives set forth and the demands made and to group objectives according to some common idea or classify them in terms of learning domains—cognitive, affective and psychomotor.

vi) **Revision:** Revision of objectives is necessary because of periodical changes in student in profile, society, realm of knowledge, and instructional strategies. We need to therefore periodically analyse the worthiness/validity of the objectives.

We have pointed out that when making curricular decisions, especially when generating objectives, we should consider all the three domains of learning (Table 3.1).

The categories of three domains are arranged in a hierarchy in which the levels increase in complexity, from the simple to the more advanced. Each level progressively pertains to students' abilities to analyse an issue, to apply and comprehend information. For a student to express a value preference, he or she must be able to respond to situations and must be willing to receive information. That is, he/she needs to be skilled at the level of perceptual abilities, and must have mastered the relevant fundamental and reflex movements. The hierarchy in categories of the domains of learning shall guide us to formulate objectives, depending on the level of the students' abilities.

Table 3.1: Domain-wide categorisation of objectives

Categories in cognitive domain (Bloom 1956)	Categories in affective domain (Karthwohl 1964)	Categories in psychomotor domain (Harrow 1972)
Knowledge: Specific facts, terminology, etc. and universals, principles, generalizations, etc.	**Receiving:** Sensitivity to the existence of stimuli (e.g. awareness, selected attention, etc.)	**Reflex movements:** Segmented and inter segmented reflexes involving spiral segments
Comprehension: Translation, interpretation, extrapolation of information, etc.	**Responding:** Active attention to stimuli (e.g. acquiescence, feelings and satisfaction)	**Fundamental movements:** Behaviour related to walking, running, jumping, pushing, pulling and manipulating
Application: Transfer of information in particular situations	**Valuing:** Beliefs and attitudes of worth (e.g. acceptance, preference, commitments etc.)	**Perceptual abilities:** Endurance, flexibility, strength, ability, reaction-response time, and dexterity
Analysis: Breaking of a whole into parts and distinguishing elements, relationships and organizational principles, etc.	**Organization:** Internalisation of values, beliefs involving conceptualization of values and organization of a value system	**Skilled movements:** Concerning with games, sports, dances and arts
Synthesis: Putting parts together into a new form **Evaluation:** Making judgements in terms of internal/external evidences	**Characterization:** Reflecting a generalised set of values, a philosophy of life.	**Non-discursive communication:** Expressive, movements through postures, gestures, facial expressions and creative movements.

Let us stop here for a minute and work out this exercise:

Check Your Progress 1

Notes: a) *Space is given below for your answer.*
        b) *A sample objective for each of the categories in each of the domains is given at the end of the Unit. Compare your answer with it.*

Formulate one objective each from any one of the categories given under the three domains of learning in Table 3.1.

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3.3.2 Approaches to Curriculum Objectives

Generally we design objectives to communicate to the involved parties-students, teachers, etc. the intents of particular actions or the objectives behind them. There are a few approaches to the formulation of curriculum objectives. Obviously, the approaches basically are the manifestations of different educational thinking/philosophy. Here, we shall see a few important approaches to curriculum objectives:

i) **Behavioural-rational approach:** It has its roots in the behaviourist learning theory and in the concept of 'operationalism' in sciences under which people relate a tangible or observable condition or disposition of a human being to a particular learning activity. For example, you may wish to indicate that a person appreciated a poem; however no one has ever seen an 'appreciation'. What you need to do is to indicate those tangible or observable ways of behaviour that comprise and/or indicate 'appreciation'.

   A word of caution

   We should accept that behavioural objectives can easily denote logical and rational thought, but they cannot easily describe creative and intuitive learning or internalised value systems. Some curriculum specialists feel that behavioural objectives do not seem to focus on higher order tasks and skills. Some, however, are concerned that the focus on precise objectives is likely to cause educators to ignore the 'hidden curriculum' (Please refer to Unit 1, Block 1).

ii) **Intellectual-academic approach:** It identifies three fundamental factors - learner, society and organised subject matter, which we should attend to. It advocates that these three factors should be viewed as a whole, and not in isolation from one another. When we look at them as separate entities the inevitable happens—a mismatch between needs and what is available to fulfil those needs. Obviously, any formulation of objectives should have as its basis, the following three sources of the curriculum:

i)   studies of the learner;

ii)   studies of contemporary life and its needs; and

iii) suggestions from subject experts.

iii) **Systems-managerial approach:** It follows two major stages—problem identification and problem resolution. Under each of the stages, a few activities are grouped as is shown in Fig. 3.2.
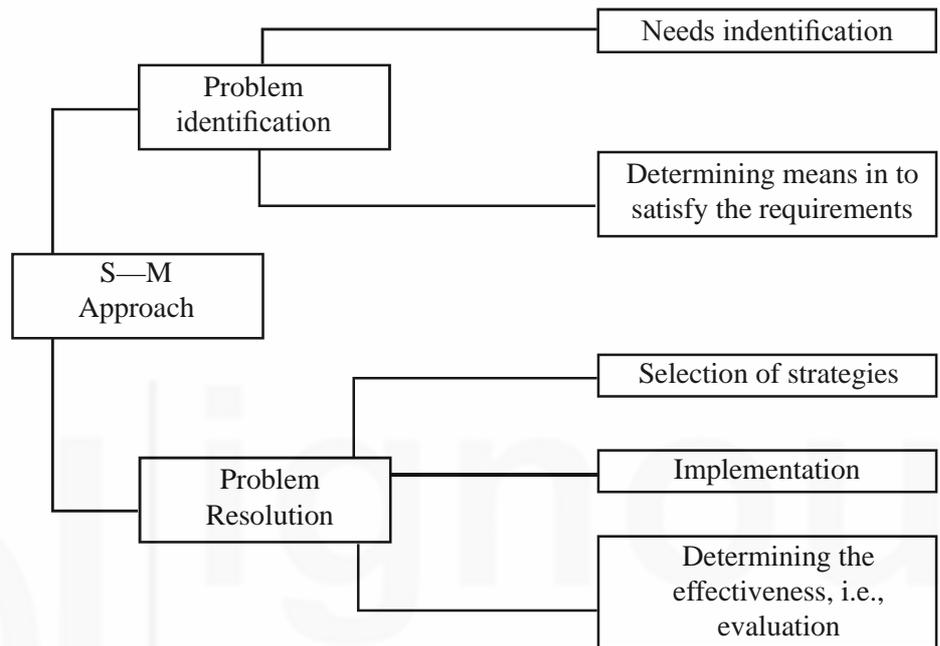

Fig. 3.2: Stages in systems-managerial approach

iv) **Humanistic-aesthetic approach:** According to this approach, objectives should be formulated in such a way as to enable the students to gain an openness to experience, to view living as a process, and to trust his/her own experience. It, therefore, does not require objectives to be written down explicitly and precisely. In other words, objectives are evolved from the experiences of students.

v) **Reconceptualist approach:** It has an affinity towards the humanistic-aesthetic approach. However, it is much more critical of education and views the educational arena from an existential and exponential framework. Obviously, therefore, the objectives under this approach will be open-ended in nature.

Note:

All of these approaches have shortcomings. The behavioural-rational approach might be viewed as too structured and trivial, the systems-managerial can be viewed as technocratic, the intellectual-academic approach can be viewed as 'middle of the road', the objectives of the humanistic approach could be branded as 'vague' and the re-conceptualists' approach could also be criticised as not furnishing enough specific guidance about how to form objectives. In formulating objectives, therefore, mostly we will be guided by an eclectic approach instead of deciding on any one of these approaches. However, the intention here is to acquaint you with a few approaches to objective-formulation, so that your reactions to curricular issues pertaining to 'objectives' are balanced and well informed.
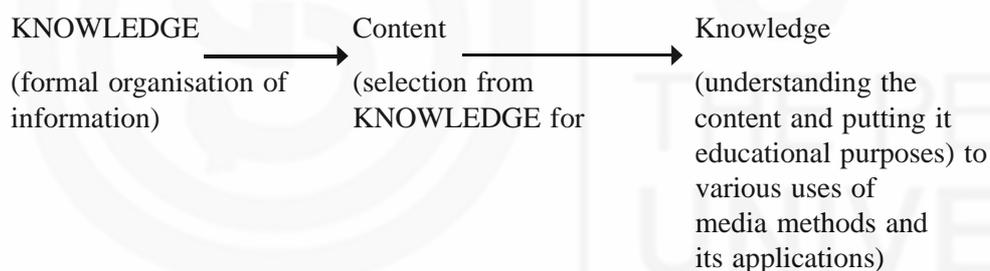
3.4 SELECTING AND STRUCTURING THE CONTENT

As we have seen in Unit 4, Block 1, content, like objectives, forms an essential and major dimension of curriculum. The implication is that like objectives, content has to be meaningfully selected, suitably sequenced and properly structured. We have emphasised in Section 3.3 that an adequate definition of instructional objectives will have an essential content-dimension. In essence, the two are interdependent and have to go together.

In Unit 4, Block 1, we have clarified. What we mean by 'content'. Let us further elaborate on this. Generally it refers to 'subject matter content', the information or 'knowledge' it implies and promotes a whole gamut of learning:

● facts, observations, data, perceptions, discernments, sensibilities, designs and solutions reflecting man's comprehension of the environment

● constructs like ideas, concepts, generalisations, principles, plans, solutions, etc.,

● skills, processes, values, etc.

It should be clear here that by content we imply learning experience besides subject matter.

Consider the following for further clarification:

KNOWLEDGE	Content	Knowledge
(formal organisation of information)	(selection from KNOWLEDGE for	(understanding the content and putting it educational purposes) to various uses of media methods and its applications)

For example, functionally, the content in language courses must be the 'language content' rather than the 'textual or subject matter content'. The former consists of words, phrases, idioms and other expressions, sentence patterns and structural items, semantics and syntax, grammatical relationships and principles, forms of communication, apart from 'sounds' including pronunciation, accent, intonation, etc. They have to be comprehended, and used in expression and things of aesthetic value have to be appreciated. The content of non-language subjects can be analysed in terms of factual information, concepts and principles, other generalisations and interpretations, phenomena and problems, theories, etc. The content of a discipline as a whole and that in any course or unit therein can be systematically analysed to identify these structures. While these would constitute the essence of content in the discipline/course, we can further attempt a detailed analysis in terms of specific categories of content. But it is not enough if content is analysed merely in this fashion. The level of mastery or the form of dealing with each bit of content has to be specified. It will ensure and define the specific capabilities to be obtained, and learnings to be attempted.

Having thus detailed what we mean by content, we should also acquaint ourselves with criteria for content-selection.

3.4.1 Criteria for Selection of Content

It is obvious from our discussion of 'content' that selection of content for inclusion or emphasis at any stage or in any course has to be based on many considerations. At the macro level, it should be commensurate with the basic socio-political philosophy of the nation and the philosophy of education accepted by the particular society it is within. At the micro level, it should suit the specific objectives set for meeting the needs of students. In the main, content should be selected in such a way that it should establish its social relevance.

Let us consider some of the criteria which need to be used for purposes of content-selection:

i) **Self-sufficiency:** The content selected should aim at helping the learners to attain self-sufficiency in the most economical manner—economy of teaching efforts and educational resources, economy of learning efforts and economy of the generalisability of the subject matter. Self-sufficiency of content helps students actualize their potential and crystallize their identities most efficiently and economically.

ii) **Significance:** It pertains to how significant the content is in terms of its contribution to the basic ideas, concepts etc., in particular learning abilities etc. In other words, it can be measured in terms of:

- what 'knowledge' i.e. KNOWLEDGE or 'content' or knowledge needs to be transmitted to students;

- how it contributes to the experience of the students, which they might see as meaningful; and

- how it responds to particular socio-academic and politico-economic issues.

iv) **Validity:** It is essential to weigh whether or not the content selected is authentic and meets the demands of the goals and objectives set. However, 'validity' mostly depends on the philosophy of education to which we adhere. Nevertheless, the content we select should be valid to the extent that it agrees with the goals and objectives of the curriculum.

iv) **Interest:** When we apply this criterion, students' interest/aptitude becomes the deciding factor for selecting content. (There is a implication here. It is possible that students' interests are transitory and at times accidental). The criterion of students' interests should be weighed and adjusted to allow for students' maturity, prior knowledge/experiences etc.

v) **Utility:** Its concern is with the usefulness of the content. Again, how a person defines usefulness is influenced by his/her philosophical view. For example, whether the content is useful or otherwise can be interpreted in terms of:

- how the content learned will enable students to use that knowledge in job situations and other activities,

- how the content enables the individual to gain an accurate perception of his/her self-identity and to attain meaning in his/her life; and

- its direct application to ongoing life and to social and political issues.

vi) **Learning outcomes:** This criterion relates to the optimal placement and appropriate organisation and sequencing of content. Further, it addresses itself to the issues of appropriateness for the intended target group. While selecting content we should ensure that it is not out of the range of students' experiences, intellectual abilities, physical abilities, development and stages and cultural orientation.

vii) **Feasibility:** Although there exists an entire world of possible contents to choose from for our purposes, there are certain limitations too. The limitations may be in terms of time resources, nature of political climate, cost-involved etc. So when we select a particular content-input, we should also have in mind both the resources available amid possible constraints.

Thus you will observe that identifying appropriate content is only a part of the task. Appropriately organising the content identified is what completes the task.

3.4.2 Organisation of Content

In section 3.4, we have used the term 'knowledge' twice. The one in capital letters denotes all knowledge that has been organised by scholars for the advancement of understanding of particular disciples/fields of study. For purposes of curriculum development or course preparation, we draw only a relevant quantum of knowledge borne by it. How we may decide on the relevance is what we have seen in 3.4.1. Having decided on the quantum of knowledge input, we should be able to present it in a logical fashion and a sequential order to facilitate easy consumption on the part of the learner for whom the content is intended.

Usually, two organizers are put to use in organizing content for curriculum. They are:

i) **Logical organizers:** For example, in Economics, the concepts of supply and demand are major conceptual organizers. Without these concepts, the rest of the concepts like capital and labour or the market etc. cannot be grouped. However, we cannot decide here how an individual might actually learn Economics.

ii) **Psychological organizers:** It helps develop an insight into how an individual might actually learn. Most educational thinkers assume that content should be organized by going from the students' immediate environment to a more distant one. In other words, content should be organized in such a way as to make students move from what is tangible to what is abstract. This psychological factor is a key principle in content organisation.

What is implied all through is that selection and organisation of content primarily depends on the target group. Unless we are sure of the prior knowledge background experiences of the prospective learner we cannot identify the scope and relevance of the content. Further, knowledge about the target groups helps us decide on and organize the presentation of the content-input.

Check Your Progress 2

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

Suppose that you are assigned the task of selecting content for a particular level of students. List the criteria you would put to use in order to make the content relevant to the students.

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Having talked about 'content' we should also discuss the learning activities that go with it because they do co-exist. For example, the subject-centred curriculum gives priority to content. Yet it stresses importance of its delivery. Similarly, in spite of its focus on the centrality of ten students and their experiences, learner-centred design has to consider content-input too. The simple logic is that if students are thinking, they are usually thinking about some content. If they are engaged in some experiences, such as reading a unit, they are obviously combining both the experience and the content.

3.5   DECIDING CURRICULUM EXPERIENCES

Let us start this section with a clarification.

The term denotes the learning activities that we design in order to orient the students to the content and ultimately help them to attain the set objectives. In essence, it refers to the teaching/learning process and the methods followed and activities planned to facilitate this process. There is a multitude of both kinds of teaching methods like inquiry strategies, lectures and discussions, problem solving techniques, demonstration, etc., and educational activities like viewing films, conducting experiments, undertaking field trips etc. However, the methods and media that we adopt depend also on the nature of content selected. (We shall talk about a few teaching/learning methodologies in Block 3.) For our immediate purposes, we shall look into the criteria used for selecting 'experiences'.

3.5.1 Selecting Experiences: A Checklist

Depending on the characteristics of the target groups, the nature of the objectives set and the content selected, learning experiences have to be decided. However, there are a few common questions which need to be asked before we decide on the learning experiences. We shall list them here.

i)   Will the 'experience' do what we wish it to do in the light of the overall aims and specific objectives of the curriculum?

ii)   Does it have any application value? For example, whether or not the student will be able to apply the information gained in practical situations.

iii)   Is it feasible in terms of time, staff expertise, resources, etc.?

iv)   What is its optimal capacity in terms of students' learning the content?

v)   Is it capable of allowing students to develop their thinking skills and rational powers?

vi)   Can it stimulate in students greater understanding of their own existence as individuals and as members of groups?

vii)   Will it foster in students openness to new experiences and a tolerance of diversity?

viii) How capable is it of facilitating learning, and motivating students to continue their education'?

ix)   Will it at certain stages, help students identify and articulate their needs?

x)   Does it provide for the total development of students in cognitive, affective and psychomotor domains?

The list may not be exhaustive. However, questions with the implications of the type presented here should help us select appropriate 'experiences' for the teaching/learning purposes.

Besides, we should be able to create proper environment—physical and psycho-social which is conducive to learning.

3.5.2 Criteria for Environment

Educational environment should address social needs, as well as the development of inner awareness, appreciation and empathy for others. It should also stimulate purposeful student activity in order to facilitate learning.

At least the following four criteria should be kept in mind in designing educational environments (Castaldi, 1977):

i) **Adequacy:** In a face-to-face teaching/learning situation, it refers to classroom space i.e., whether or not the space is sufficient enough to accommodate the students for whom the space is intended. It also refers to other physical conditions like proper ventilation, sufficient light, accurate infrastructure etc.

ii) **Suitability:** It is closely related to 'adequacy'. When dealing with the criterion of adequacy in a classroom set-up, we should also consider the relationships between spaces within the campus-how 'spaces' created, for example, for group discussion relate to spaces designed or for the group viewing of educational media, etc.

iii) **Efficiency:** It involves ensuring those characteristics of educational space that are likely to improve its instructional effectiveness. For example, supposing the students are to listen to audio cassettes, we should decide where the equipment is to be kept as the process should not be disturbed by unnecessary noise, and/or by students engaged in other activities etc.

iv) **Economy:** It essentially relates to actual savings, in terms of capital outlay that can be, achieved by the initial architectural design or by a modification of an existing environment for a particular aspect of the curriculum. It also relates to the economy of students' and teachers' efforts. In a classroom set up, for example, some times students spend a major part of their day just waiting for the teacher to teach them. Sometimes, teachers/students spend too much time going from one part of the institution to another to engage in different education activities. It can be avoided, if we properly plan the requirement/environment for the activity.

You would have noticed at many places we have referred to classroom situations for citing an example or two. Does it mean that the criteria may not hold good as far as the distance teaching system is concerned?

As you are aware, most of the time during the teaching/learning process, the student is away from the teacher in the distance education system. By implication, he/she has to decide on the place for his/her studies. In other words, the onus of planning the conducive environment is now on the distance learner. In the context of distance education too, however, there is an element of face-to-face student tutor interaction which takes place in a counselling session at appointed centres for studies. That is, the criteria talked about here can have some relevance to this situation too.

Besides the physical environment, we should also pay attention to the psycho-social environment. It has greater implications for all the three domains of learning and therefore establishes a substantial link with the content-selection process.

As we have said, content is selected in accordance with the educational objectives formulated, which in turn are influenced by the needs of the target group. In the main, content should be pitched at the right level so as to satisfy the educational demands of the students. Once it is carried out, motivation and sustenance of it will not pose problems. Besides, the activities selected for purposes of

dissemination of knowledge should be appealing and motivating to the students. In a classroom, we can create conducive academic climate, if imparting of information takes place not from the top down, but as an activity of experience-sharing. It is more so, in the case of distance education mainly because of the fact that a majority of the distance students are adults, who bring with them rich experiences. (At this juncture, you should go through the discussion on the characteristics of adult learners in Block 1 of Unit 3).

When we refer to learning experiences, we also imply teaching efforts/strategies. There are quite a number of instructional strategies available—right from lecturing in a classroom situation to techniques that promote self-learning. Considering the significance of the issue, we have devoted a whole Unit to discussing teaching/learning strategies, i.e., Unit 2 of Block 3. Obviously therefore we will not be discussing them in this section. However we have presented some teaching/learning models in Table 3.2 for purposes of immediate reference.

Table 2: Teaching-learning models and the corresponding thrust areas

Model	Thrust
Inductive teaching	to develop inductive processes and ademic reasoning skills
Concept attainment	to develop inductive reasoning/ analysing and strengthening the process itself
Inquiry training/	to train in investigation/research
Scientific enquiry	relating to disciplines
Advance organiser	to raise efficiency of 'reception learning' and active information processing
Jurisprudential	to develop social awareness as a way of processing information and a way of looking at social issues
Group investigation	to develop democratic social/interpersonal skills and group processes in learning and inquiry
Social inquiry	to promote social problem-solving through academic enquiry and logical reasoning
Laboratory method	to develop interpersonal and group skills, personal awareness and flexibility
Non-directive teaching	to develop self-direction, and self- instruction
Classroom meeting	to develop self-understanding and socio-academic responsibility
Awareness training	to increase self and interpersonal awareness
Syntactics	to develop creativity and problem solving skills
Operant conditioning	to master well-analysed, selected sequenced, structured content/ behaviours, through active response and controlled feedback (or reinforcement)-programmed learning

3.6   LET US SUM UP

In this Unit, we have studied that curriculum planning at any level has to cover the major dimensions of global aims, specific objectives, materials, methods and evaluation.

In this regard we said that

- purpose-setting for any level has to be based on the philosophy of education adopted by a given society, the socio-cultural demands within it, the economic and man-power requirements, national concerns, aspirants and priorities, nature of the learner and the learning processes, etc.

- specific objectives have then to be formulated and sequenced in order that needs are met.

- content selection has to be based on relevance, importance, utility, availability of prerequisites and we delineated some criteria for this purpose.

- physical and psycho-social environment has to be created for effecting powerful learning transactions

3.7   ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

The examples for categories in the three domains of learning are given below:

i)   Cognitive domain:

   a)   Knowledge: The student will name the highest mountain range in the world.

   b)   Comprehension: Given a drawing of geometric forms, the student will be able to give various geometric concepts in verbal terms.

   c)   Application: The student will be able to predict the effect of throwing cold water on a hot glass-pane.

   d)   Analysis: When reading a document, the student will be able distinguish facts from speculation.

   e)   Synthesis: Given a situation, the student will be able to suggest ways of testing the validity of a question.

   f)   Evaluation: The student will weigh the pros and cans of a particular argument?

ii)   Affective domain:

   a)   Receiving: Having been exposed to the various cultures of the West the student will be able to develop an awareness of Western habits.

   b)   Responding: The student displays an interest in the topic of discussion by actively participating in a project-study.

   c)   Valuing: The student will develop a viewpoint on advantages and disadvantages of nuclear physics.

   d)   Organization: The student forms judgements about his/her responsibilities for conserving energy.

e) Characterization: The student develops norms for his/her character based on ethical principles.

iii) Psychomotor domain:

a) Reflex movements: After engaging in a spot-exercise the student will be able to contract a muscle.

b) Fundamental movements: The student will climb a rope and jump a hurdle

c) Perceptual abilities: The student will form categories in his/her mind by shaping a group of building blocks.

d) Physical abilities: The, student will do at least fifty push-ups after having been in training for a week

e) Skilled movement: The student can correctly perform a series of somersaults while diving in to the swimming pool.

f) Non discursive communication: The student will be able to create his/her own movement sequence and perform it to recorded music.

Check Your Progress 2

The criteria which need to be used to make the content relevant, are:

i) Self-sufficiency

ii) significance

iii) Validity

iv) Interest

v) Utility

vi) Learnability

vii) Feasibility