UNIT 10 INSTRUCTIONAL PLANNING

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10.1 INTRODUCTION

In Block 2 you studied about instructional objectives. The teacher delineates these objectives to plan his/her teaching. The process of planning begins with a series of questions like - which parts of the given course content needs to be emphasised more? What teaching methods need to be used to achieve the desired outcomes? How should instructions be planned to achieve the objectives in a specified time? and so forth. Answers to these and other such questions lead the teacher from global and general outlines of the curriculum to the daily activities of the classroom. In the process of planning the teacher arranges the content outline or subject matter under a series of headings/topics and sub-headings/sub-topics. Later on he/she decides the procedure of teaching by selecting appropriate teaching methods and instructional media. The teacher also decides about the requisite evaluation mode to assess the change in the behaviour of the students with respect to their achievement.

In this unit you will study how the teacher follows all these activities.

10.2 OBJECTIVES

After going through this unit, you will be able to:
- identify issues related to instructional planning,
- list the steps involved in instructional planning,
- analyse the content and present it through a flow chart,
- organise various presentation modes to transact the assigned curricular content, and
- delineate the role of teacher while selecting appropriate teaching methods, instructional media and evaluation mode.
10.3 ISSUES RELATED TO INSTRUCTIONAL PLANNING

The teacher plans instruction in order to realise the objectives set by him/her. Various considerations underline the process of planning that he/she uses for this purpose. These are mainly - what is going to be taught and who is going to be taught. The basic purpose behind teaching is to match the subject matter with the abilities of students to enable them to realise the learning outcomes. A large number of teaching strategies are available to the teacher for achieving the desired objectives. The teacher tries to select the most suitable one with respect to the resources available to him. A teacher, therefore, has to consider all these issues while planning his teaching. The main issues that need to be considered are:

- Subject matter for teaching
- Methods to be used during teaching
- Levels of instruction
- Organization of learning
- Student's needs and interests

Let us discuss all these considerations in detail.

10.3.1 Subject Matter for Teaching

Decisions regarding the subject matter for teaching are taken by curriculum planners at different levels. These include Boards of School Education, the school system and various bodies associated with the education system. These agencies merely decide the broad outlines of the curriculum. The operational decisions about which parts of curriculum are to be stressed more and which ones are to be stressed least, are taken by the teacher during the course of teaching. For example, the teacher may like to leave many topics to the students for self study. For some topics, the teacher may like to spend a greater amount of time during teaching so that students understand them well. Science and technology have now become popular with regular broadcasts on television and radio. Some facts and applications are part of everyday knowledge and these are well known to students. This means that the teacher no longer needs to teach them in the class. There are some topics that are difficult to grasp even after a close study of the text by students. It is only the presentation by the experienced teacher that can clarify these concepts and topics and make them intelligible to students. The teacher will, however, have to plan his instruction carefully for this purpose.

10.3.2 Methods to be Used during Teaching

Presentation of content is another issue linked with planning of instruction. A teacher cannot always rely on his favourite method of lecturing supported with blackboard work. The goal before the teacher is to bring about desired changes in students' behaviour. This goal cannot be accomplished by trying out all methods of teaching for all types of contents. The teacher has to select the most appropriate method for teaching a particular subject matter.

The subject matter in each discipline consists of facts, concepts, rules and generalization. Facts are based on observation of events that have either occurred in the past or exist in the present. Facts by themselves have no predictive value. For example, the sun rises in the east is a fact. Concepts are the names given to the categories formed as a result of classifying factual data. All learners, whatever their age, form concepts and give them names in order to make sense of the various stimuli in the world. For example, cat, dog, tiger, etc., are concepts which again come under the broad concept 'animal'. Rules and generalizations are statements that link two or more concepts. They are predictive in nature and contain more than one element. For example, every action has its opposite reaction is a principle in science. The teacher should use different teaching techniques and devices for teaching facts, concepts and generalizations. A teacher knows that facts can be gathered through direct observation of an event. For example, an experiment in a laboratory or retrieval of information from a reliable source can be observed by the students. Therefore, for teaching
facts the teacher should use an instructional procedure that allows learners to make direct observations.

Concept attainment involves attending to those attributes that are absolutely essential to the meaning and disregarding those attributes which are not absolutely essential to the meaning. It also involves learning to discriminate between what belongs to a concept and what does not. Therefore, while planning instruction, the teacher should employ such methods wherein the learner’s attention is drawn to similarities, differences and placing similar objects in the same category.

Teaching of rules and generalizations requires collection of data, finding a relationship between two or more concepts, etc. Therefore, while planning for teaching of rules and generalizations, the teacher should employ such methods which enable students to use activities required for the purpose. It depends on the teacher to select appropriate teaching methods on the basis of questions such as:

i) Which are the most important facts and of these which ones seem most accurate and relevant?

ii) Which concepts are familiar to the students and which ones need to be explained to enable the students to understand the content?

iii) How do students learn to infer and predict through forming generalizations?

iv) How can the students be equipped to test the reliability of the data they gather?

10.3.3 Levels of Instruction

The content structure facilitates the teacher to achieve different objectives and to create the appropriate learning environment. The objectives of learning and the learning conditions fall on the same continuum. Therefore, instruction has to be viewed on a continuum which ranges from the thoughtless to the “thoughtful” mode. If the objective is simply to pass on information to students, the teaching should be at the memory level; it should enable students to structure and memorise information presented by the teacher. On the other hand, if the objective is problem-solving, the teaching will have to be different; this would require a student to reflect upon the problem. The same content can be taught through different learning conditions and at different levels, by planning instruction in different ways. The levels of instruction can be broadly divided into three levels. These are memory level, understanding level and reflection level. Let us study each of these in brief.

i) Memory level: For passing on information to students the teacher may decide that students should memorise and retain the factual material. This type of learning is called memory level learning. The teacher presents the content in a manner that is meaningful to the students. He may give examples or link the content with earlier experiences of the students. Generally mathematical tables, spellings, Sanskrit grammar, symbols, etc., are taught by arranging instruction at memory level.

ii) Understanding level: If the teacher wants that the students should be able to apply the learnt content in different situations, he/she should help them observe and discover the nature of the problems before solving it. The instruction will be so arranged that students can assimilate the content at mastery level and apply the knowledge so gained in different situations. This level of instruction is called the understanding level. The learner is given an opportunity to practise the learnt content on his own because this type of learning is highly individualised.

iii) Reflective level: Instruction may be arranged at the reflective level wherein a learner is engaged in original, imaginative and critical approach to the subject and does deep thinking. The learner is made to examine facts, classify facts and formulate appropriate generalizations. The instructional process at the reflective level should develop a classroom atmosphere which is more alive and exciting, more critical and penetrating and more open to fresh and original thinking. Such a mode of inquiry leads to productive work. This type of instructional process is called reflective level instructions and it is aimed at developing problem solving and creative thinking ability.
10.3.4 Organising Learning

Another issue related to planning of instruction is how learning is to be organised. Any good and useful system for ordering and presenting content is rooted in the principles of learning psychology. First, the most important factor that influences new learning is what the learner already knows (new learning is built on prior learnings). Secondly, most concepts can be explained at many levels of generality, the highest or most general level being the most easily understood and the lowest or more specialised level being more difficult (any stage of learning and understanding is built on previous, more general levels). Hence according to the first principle, learning begins with the simplest idea and develops in greater specificity. For example, a teacher of civics may start with the village Panchayat before giving a talk on the Lok Sabha. But according to second principle, every concept, be it broader or more specific, has certain sub-concepts, and each of these sub-concepts are inter-related to each other. For example, human body is a broader concept and head, trunk, limbs, skin, etc., are sub-concepts. If a person understands the structure underlying any one of these concepts, he can potentially understand other concepts.

10.3.5 Students’ Needs and Interests

Students are the most important factor in the instructional process. The teacher cannot develop educational objectives and formulate desirable outcomes unless he/she has an intimate understanding of the students’ needs and interests. It need not be emphasised that an instructional system which takes into account the needs and interests of students has far greater chances of achieving objectives. An effective instructional system is always built upon the students’ needs and interests.

The instructional system which overlooks the students’ needs and interests results in a lower level of student learning and performance. That is why the mind of the teacher is always concerned about how best to balance the students’ needs and interests with objectives of curriculum. Obviously there cannot be a standard answer to such a question. Success in achieving a happy balance between students’ needs and interests and curriculum objectives depends upon two factors - (i) the capability of the teacher in using a suitable method for assessing students’ needs and interests, and (ii) his ability to provide such examples and explanations which result in meaningful learning experiences for students. You have already studied about need assessment in Sub-section 3.4.1 of Unit 3.

Check Your Progress 1
Notes : a) Write your answers in the space given below.
    b) Compare your answers with those given at the end of the unit.
    i) Describe why teachers have to depend on a number of teaching methods.
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    ii) What are the different levels of instruction and which types of instructional activities occur at these levels?
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iii) Explain, in brief, how you would organise learning in your classroom.

10.4 STEPS IN INSTRUCTIONAL PLANNING

Planning of instruction helps the teacher achieve the desired objectives. A scientific and systematic planning of instruction enables the teacher to be fully in command of the system rather than be commanded by it. The teacher has to utilise his/her imagination, creativity and insight while following the steps of planning instruction. The steps involved in instructional planning are discussed in the following sub-sections.

10.4.1 Content Analysis

We know that knowledge does not respect any boundaries. Any topic can be extended beyond its limits. And a teacher has to keep in mind the educational and learning needs of his students. For this purpose he has to delimit the contents to be taught. This can be done if the teacher properly analyses the content to be taught to the students.

Organising the content: Content analysis means breaking the content into its constituent parts. The teacher in this process identifies topics given in the curriculum, breaks these into their constituent parts, arranges all these in a hierarchical sequence, refines and limits the topics.

We know that a syllabus is only an indication of the prescribed content and does not prescribe the order in which topics should be taught. The teacher, therefore, has to reconcile the dictates of the syllabus with the educational and learning needs of the students. For this purpose a teacher has to take up the instructional objectives one by one and analyse the related content accordingly. He/she takes up a topic and lists all the relevant subject material and ensures that it is technically accurate and up-to-date. He/she later on breaks the topic into small constituent sub-topics and their elements, and ensures that the elements included in the sub-topics are a part of the main theme/topic. Through all these tasks, he identifies the topics according to the needs and interests of the students.

Some of the elements and sub-topics may be dropped because they deal with everyday knowledge. Science and technology have now become relatively more popular. Scientific facts and applications which were previously the preserve of the enlightened are now part of everyday knowledge. Such sub-topics need not be taken up for instruction. Similarly, a teacher may not like to take up certain elements or sub-topics because these do not match the mental level and age of the students and are, therefore, inappropriate.

Once the subject matter has been identified, the next step is to refine and mention the limits of the topics that the students are required to learn and to ensure that it is as self-contained as possible. The same content may be taught at various levels but the details and the treatment of the content is determined by the level of teaching a particular class of students. For example, the topic ‘Personality Assessment’ involves projective and non-projective techniques and under each heading there are a large number of techniques. The teacher will have to specify which techniques he/she would like to include, and what particular technique he/she would like to take up with the given class. Again, for each particular technique the teacher will mention the limits of study i.e. characteristics of the techniques, utility for psychoanalysts and so on. All these things help in refining and limiting the content according to the needs and interests of students.
Flow charting the content: After deciding the topics and limiting the scope of the topics, the teacher is required to arrange these into some type of natural sequence. Steps must be taken to ensure that the sequence is completely logical from the point of view of the subject material. Each element should be linked with the next element and these should form a part of the main topic. Another point to be kept in mind while sequencing the topics is that these are based on maxims of learning like ‘known to unknown’, ‘simple to complex’ etc. This is generally based on a teacher's experience, intuition and his/her own learning experiences.

After this, the teacher needs to make or develop a flow chart of the content. This helps in making a global picture of the whole content in the mind of the teacher as well as students. Apart from this it increases the probability that logical sequence is psychologically valid and presents a graphic view of the inter-relationships among various sub-topics and elements.

The construction of a flow chart like that given in Fig. 10.1 helps the teacher give proper focus to the work to be done in the unit. While organisation of the main concepts in the structure of a unit may take many forms, such organisation is essential if learners are to understand how parts of a unit relate to each other and also what the focus of their study is, at any given time.

10.4.2 Selecting Suitable Presentation Mode

Before entering the class the teacher may contemplate questions like - What is the best way to go about teaching each topic? What methods should be used? What teaching strategies are possible and more suitable? Questions like these and many others will arise in the teacher's mind. Answers to such questions are many and depend upon the criteria fixed by the teacher.

Criteria for selecting presentation mode: A large number of criteria determine the presentation mode. These include the nature of instructional objectives, subject matter, background of students, learning strategies adopted by them and style of teaching.

i) Instructional objectives: A teacher has certain instructional objectives in mind which he/she intends to achieve through the teaching-learning process. To achieve these, he/she would certainly like to follow a particular mode of presentation.

ii) Subject matter: The nature and structure of the subject matter that the teacher intends to handle decides the mode of presentation. For example, the structure of the discipline of educational psychology and that of educational philosophy are different. This decides not only the sequence in which the content topics have to be treated, but also the approach that has to be followed in presenting the subject-matter to the students.

iii) Student's background: An important consideration for selecting modes of presentation is its appropriateness to the characteristics of the students. The teacher's own experiences guide him about estimating the abilities of the students and
organising instruction accordingly. Teachers who underestimate the abilities of their students, or those who overestimate students' aptitudes and talk over their heads, follow approaches that do not recognise the students' ability to learn. Therefore, the teacher should ensure that the selected mode of instruction enables the students to process the presented information meaningfully and adequately. Besides, the presentation mode selected by him does not lead to conflicting situations for his students.

iv) Teacher's teaching style: Any instructional method that a teacher adopts in the classrooms must conform to his/her personal style of teaching. For example, large group-instruction, may not appeal to those teachers who prefer to work closely with students. Hence a teacher should analyse his/her own particular style of teaching for planning instruction.

10.4.3 Selection of Media

Researches conducted in the field of education suggest that a variety of media not only motivates the learners but also makes the process of teaching and learning easier and more effective. The media suitable for classroom use are computer, programmed text, interactive video, motion pictures, slide/tapes, TV cassettes, filmstrips, printed texts, training aids, audio-charts, over-head projection slides, etc. Some media like tape-recorder, TV, etc., may be easily available for use in a classroom while other media may be difficult to procure for the teacher. The most important and challenging task before the teacher is to select the media or medium that he/she would like to use in the classroom and use it effectively for supporting the teaching-learning process.

Decision about the media : It is not easy to take decisions about the medium/media to be used in the classroom. It should be stated at the outset that this decision is highly dependent upon thorough knowledge of (i) what is to be taught; (ii) how it is to be taught; (iii) how its effectiveness can be tested; (iv) who the learners are; and (v) how much the teacher knows to operate upon the hardware used with the selected media. If one has appropriate and affirmative answers to all these questions, the process of media selection becomes easier.

10.4.4 Coordinating Media with Teaching Methods

After taking decision about the media, another question that engages the mind of the teacher is "What type of media are to be used and for what type of learning activities?" For example, compact disc (CD) is more effective for verbal information, while live demonstrations are more effective for developing psychomotor skills.

The instruction to be given through the media has to be an integral part of the instructional system. Therefore, the content to be taught through media must be linked with the content taught through other modes of presentation. Otherwise it may confuse the students and they may feel that some unfavourable conditions are being created which may prove to be a handicap.

The instruction given through the selected media has to be integrated with the teaching methods being followed by the teacher. The content being covered through a particular medium has to be so linked with the content being taught through a particular method that both are integrated with each other. Such a process of instruction does not appear artificial in the class and helps avoid confusion on the part of the students. For example, the teacher may be using lecture method in the class to teach some unit or part of the unit and may like to supplement the teaching by using video cassettes to teach another part of the unit. In other words media should be complementary to the major instructional method being used by the teacher.

10.4.5 Detailing the Task

When the teacher has analysed the content to be taught to the students and selected the suitable presentation mode and the appropriate medium/media, he/she delineates the tasks to be performed. He/she takes up each objective and writes down the content to be covered for achieving it, the method or strategy he/she would use to teach the content and the media
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that will be utilised for teaching. Each detail is written out based on the following considerations:

- What does the teacher want the students to do, to demonstrate that they have learnt the topic?
- What questions does he/she expect the students to answer?
- What tasks, procedures and techniques does he/she expect the students to perform and at what level does he/she expect them to execute these?
- What total changes in the students' behaviour does he/she expect and in what form does he/she expect to observe and measure them?
- What role will the teacher perform in order to bring about desired changes in students' behaviour?
- What media will he/she be utilising and at what particular time so that the desired outcomes are achieved?
- What instructional modes will he/she be using to take the best advantage of the existing situation?

In this way the teacher describes, analyses and reviews the relevant instructional system within which the tasks are to be performed. The tasks are the action points that the teacher will take into account while teaching.

Check Your Progress 2

Notes:

a) Write your answer in the space given below.

  b) Compare your answer with the one given at the end of the unit.

State the criteria for the selection of suitable presentation mode.

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10.5 TEACHER AS PLANNER

It is the teacher who finally transacts the curriculum in the classroom, and decides the kind of knowledge and skills that are to be imparted. The teacher, therefore, is the planner of instruction and operates in direct contact with the students. He/she emphasises certain parts of the curriculum and leaves certain other parts for self-study by students. During the process of transaction of curriculum the teacher decides the teaching method, instructional design, media to be utilised and also the evaluation mode to be used.

10.5.1 Emphasising Particular Parts of Curriculum

The teacher as a planner specifies relative weightage for different content items within a course, in terms of allocation of instructional time. Depending upon the objectives set by him, he decides which topics need more emphasis and which topics the least. For instance in the course on educational psychology at the B.Ed. level, the teacher may aim at developing basic knowledge and understanding of related concepts and ideas. At the post-graduate level he/she may have objectives to develop the capabilities of application and analysis. Therefore at the B.Ed level the teacher will give emphasis on certain topics and at the post-graduate level stress will be given on some other topics.
10.5.2 Choice of Teaching Method

Teaching methods are means by which the classroom teacher interprets and implements the curriculum to enhance certain kinds of learning. For example, lecturing can convey information and debate can encourage the sharing of ideas or concepts. The teacher selects a particular method on the basis of variables that he/she uses to direct learning, like selection of materials, grouping patterns, grading, classroom organisation, teacher and student behaviour and so forth. Depending upon the variables a teacher allows variations in daily learning exercises as well as opportunities to present something special for learners. That is why teachers who are able to master a number of teaching methods are better prepared to handle students with diverse needs, interests and aspirations. Although a large number of teaching methods are available to teachers, only a few of these are commonly used in classrooms.

On the basis of the learning environment being provided, the teaching methods can be classified as structured, interactive, self-directed and computer-assisted. The control of learning environment is accomplished by providing a high degree of structuring in the classroom. If the teacher believes that human talent is best developed by allowing the natural capacities of individual students to flourish, he/she may opt for the use of other teaching methods e.g. self-directed or interactional methods.

Most conventional methods are of a structured variety. Among the most common of these methods are lecturing, didactic questioning, assigned textbook reading, drill and review, and learning activity packets. These methods are helpful in shaping raw human talent into definite assets and abilities. These methods are best suited if the objectives are to disseminate information, share information that are not available elsewhere, tailor information for a particular group, arouse interest in the subject and give directions where clarity is the problem.

Interactive teaching methods involve students in designing and implementing classroom learning. The teacher cannot completely control the outcome of such learning methods. Instead of checking learning mastery, the teacher engages students in discussion with questions that require highly-defined responses. The teacher listens to a student’s speech (or thought) and then extends these thoughts with the help of the student’s own experiences. These methods include high-level questions, teacher’s demonstrations, panel discussions, debates, large and small-group discussions, team of peer learning, field trips, etc. These interactive methods offer a variety to the otherwise controlled, structured and predictable patterns of teaching. These methods introduce an element of unpredictability into the learning process and provide additional stimuli to learning. Freedom, trust and assessing increasing responsibility on the part of students are the inherent/implicit goals of such deviations in these methods. For example, discussion, project and symposium are relatively unstructured instructional techniques which promote freedom, trust and responsibility among students.

Another major pattern of teaching and learning is self-directed instruction which seeks to turn over the learning act to the students with a minimum of teacher direction and control. The teacher using self-directed learning techniques believes that the students must learn ‘how to learn’ so that their experiences in schools will have value later on in life. These methods include — project approach, independent study, computer-based instructions, etc.

All these teaching methods have their specialised as well as specific functions. They reflect the teacher’s assumptions about his/her teaching role, the learners and the act of learning. With the advent of technology many new methods have entered the sphere of teaching. These include ‘tele-lecture’ and electronics-based teaching methodologies. Unlike the traditional methods that take the teacher and the classroom as an isolated entity, the new methods enable the teacher to have access to other teachers and materials.

10.5.3 Choice of Interactional Pattern

Classroom is a communicative environment in which instructional goals are achieved through interaction between the teacher and the students. The teacher stimulates the minds
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of students and guides them to think in novel ways, in a creative manner. The students on the other hand respond to teachers' presentation. These responses of students further initiate teacher's action in the classroom. In this way a sort of socio-cognitive interaction between the teacher and students goes on in the classroom. The interactional process helps students learn by promoting their thinking. The teacher plans the interactional process in such a way that maximum learning takes place through it. The interaction may be teacher-directed wherein the teacher directs all the activities or it may be teacher-initiated wherein the teacher simply initiates the thinking of the students. However, classroom interaction is vested within other contexts — the school, the family, the community, etc., that influence classroom experiences.

Classroom teaching involves different kinds of instruction. There may be spontaneous interchanges between individual students and the teacher, among students themselves, and 'service like events' when students get the teacher's attention and help. There are moments when the focus on 'content knowledge' is not paramount and the teacher lets himself/herself become a person in the eyes of the students by sharing a joke and having a laugh with them. There are classrooms when interaction takes place in the game format e.g. 'the old spelling bee', 'odd-man-out', etc. Sometimes there are discussions and discoveries that border on the hazy boundary line between order and chaos, in which the students and the teacher depart from their formal roles in the excitement of the event. And, of course, there are classrooms where the interaction centers on matters of control, challenges to the teachers' authority, acts of defiance and lapses of rules involve different patterns of communication. All these interactions are important and put the students in a situation that allows them to reconstruct reality in an authentic manner.

10.5.4 Choice of Instructional Media

Choosing instructional media is an important part of the teacher's planning process. After assessing the students in terms of their prior knowledge, experience, level of sophistication, etc., the instructional activities and media are selected. The oldest form of media in most classrooms is the chalkboard. With the advent of electronic revolution many new media like computer, TV etc., have been introduced in schools. These media can be grouped as non-projected media, projected media, visuals media, audio media and electronic media. The instructional material and media help the teacher unleash the power of learning and tailor the same to individual needs and styles of learning.

The non-projected media allow the teacher to stimulate students and to process information and ideas through a medium other than speech. These include the chalkboard, textbooks, display boards, flipcharts, graphs, charts, newspapers, cartoons and drawings, models, posters, etc. The projected visuals present a universal perception to students and free the teacher from being the direct delivery medium. These include overhead projector, movie projector, slides and filmstrips, opaque projections, television, etc.

Another type of media are audio-media where listening is utilised for supporting the teaching-learning process. These media have their own advantages viz. the act of listening is more controlled than that of listening and seeing together. Therefore, the teacher can set an image or cause students to concentrate more closely through this medium. These include phonograph, radio, audio tape, etc. The modern media are electronic media which include computer, video-disc, coaxial cable, tele-conference, electronic bulletin board, etc. However, it is yet to be seen how well the teachers in an Indian classroom will be able to use these different media.

Some media are a direct extension of the teacher's concerns and planning; these may be termed 'teacher-controlled media'. There are other media that cannot be directly monitored and controlled by the teacher like TV, etc. This distinction cannot be overlooked and the teacher needs to learn which media can direct students learning and which can assist students in examining information in new and personal ways.
10.5.5 Choice of Evaluation Mode

In order to realise the objectives of instruction and the quality of learning experiences the teacher uses various tests. Tests are increasingly used by teachers to individualise instruction, to place students in appropriate grades/classes and to monitor student progress. In addition to teachers testing in the classroom, testing mandates imposed by the agencies outside the school also influence teaching and learning. Various modes of testing can be grouped as norm-referenced tests, criterion-referenced tests and informal evaluation measures.

The norm-referenced tests (NRT) differentiate individuals or schools along a continuum. These are designed to rank students in the order of achievement from high to low. Those who prepare norm-referenced tests aim at placing 50 percent of the students in the middle and the remaining 50 percent above as well as below (the middle). Similar to the norm-referenced tests, teacher-made tests are used by the teacher for placement, diagnosis, assessment of learning progress and end-of-course achievement. These informal tests provide information that is highly valued by teachers in making routine classroom decision. In constructing their own tests, teachers can match what is tested with what is taught, design the test format, determine how to administer and score a test and control the timings of the test.

Criterion-referenced tests (CRT) are designed to find out whether the students can perform a particular task or a specified domain of tasks (e.g. drawing maps — physical, political or their interpretation). The framers of criterion-referenced tests select items that match the content and the performance called for the task. Criterion-referenced tests are a more sensitive measure of the effects of classroom learning. In other words, the items students answer correctly on the criterion-referenced test, reflect what they have been taught in the classroom.

Apart from norm-referenced tests, teacher made tests and criterion-referenced tests, there are other modes of evaluation that teachers use informally. The teacher’s observation of students’ interaction and behaviour in the classroom assesses students’ progress, information level, interests, attitudes, etc. Another way commonly used is analysis of students’ work samples e.g. their writings, paintings, drawings and other projects. Self-reporting is also used in classrooms where students discuss or write their problems, progress, etc.

The teacher as planner selects the most suitable mode of evaluation according to his/her objective to bring about necessary changes in the instructional procedure. He/she may utilise scores in a numeric form which range from zero to hundred or may use grades to qualitatively evaluate how students perform certain tasks. All these modes help the teacher to make decisions regarding placement, diagnosis and plan further learning environment.

You will study more about evaluation in Course ES-333.

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<td>Notes:</td>
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<td>a) Write your answers in the space given below.</td>
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<td>b) Compare your answers with those given at the end of the unit.</td>
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<td>i) What criteria should be considered while emphasising certain parts of curriculum?</td>
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You will study more about evaluation in Course ES-333.
ii) What could be the broad classification of teaching methods?

iii) Differentiate between norm-referenced tests and criterion-referenced tests.

10.6 LET US SUM UP

In this unit, we studied that instructional planning is a crucial stage in the instructional system. Planning helps the teacher in organising teaching-learning environment effectively. However, various issues underlie the process of planning instruction. These include subject matter, level of instruction, students' needs and interests. Keeping in view these issues, the teacher takes up the task of planning instruction. The foremost step in instructional planning is content analysis. Through content analysis the teacher limits the breadth and range of the content to be covered, sequences the content input and decides which content parts need to be emphasised.

Once the content structure has been designed, the teacher takes up the task of selecting suitable presentation modes. He/she takes into view certain criteria for identifying presentation strategies that also include media for presentation. The teacher tries to co-ordinate media with teaching methods in order to systematically organise instructional sequences. On the basis of available media and teaching methods the task of teaching is systematically detailed.

Towards the end, we described the role of a teacher in selecting appropriate teaching methods, type of interaction, media and the evaluation mode.

10.7 UNIT-END EXERCISE

Select a topic that you would like to teach to students of a particular secondary class from the prescribed school curriculum. List objectives for instruction and prepare a table depicting before each objective - (i) the content part to be covered, (ii) methods to be emphasised, (iii) media to be utilised and (iv) evaluation mode to be followed.

10.8 ANSWERS TO CHECK YOUR PROGRESS

1. i) Teaching of a particular content involves teaching of facts, concepts, rules and generalizations. Teaching of all these components in a content requires the use of different methods of teaching. This is because all these components differ from
each other in their nature. For example, facts are there that have either occurred in
the past or exist in the present, whereas concepts are the names given to the
categories formed as a result of classification of factual data. A teacher while

teaching facts may follow an instructional procedure that involves direct observa-
tion but may like to shift to methods where the attention of learners is drawn to
similarities and differences and placing similar objects in the same category.

ii) There are three major levels of learning. These are memory level learning,
understanding level learning and reflection level learning. Memory level learning
involves teaching of content in a manner that is useful for learning and retaining
the content in a meaningful manner. Understanding level learning comprises
instruction which helps students assimilate the content at mastery level and applies
the knowledge so gained in different situations. In reflection level learning, the
learner is engaged in original, imaginative and a critical approach to the subject and
does deep thinking.

iii) There are two major principles of organising learning in a classroom. According
to first principle, new learning are built upon prior learnings. The second principle
emphasises that every concept, be it broader or more specific, has certain sub-
concepts, and each of these sub-concepts is interrelated to each other.

2. The main criteria for selecting a presentation mode are instructional objectives, subject
matter, background of students, and their learning style and teacher’s teaching style.

3. i) The criteria to be considered while emphasising certain parts of curriculum are
grade level of students, their level of understanding and the objectives already
decided.

ii) Teaching methods are broadly classified into structured teaching methods,
interactive teaching methods, self-directed and computer-assisted learning methods.

iii) The norm-referenced tests are designed to rank students in order of achievement
from high to low. On the contrary, criterion-referenced tests are designed to find
out whether students can perform a particular task or a specified domain of tasks.

10.9 SUGGESTED READINGS

Publishers.

McNell, John D. & Wiles, John. (1990), The Essentials of Teaching: Decisions, Plans,
Methods, New York, Macmillan.

Brace Jovanovict.