
UNIT 2 INSTRUCTIONAL TECHNIQUES AND MATERIALS

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2.0 OBJECTIVES

After going through this Unit, you should be able to:

- explain teacher-centred, student-centred, and group-learning techniques of instruction;
- discuss experiential learning techniques; and
- use any one or a combination of these techniques for effective teaching-learning purposes.

Having set out our objectives, let us now take up, for detailed discussion, the various techniques of instruction.

2.1 INTRODUCTION

In the previous Unit, we have talked about the instructional system, i.e., the teaching-learning system in general and the instructional systems design in particular. In this Unit, we shall be extensively discussing various instructional techniques that are an integral component of any instructional system. An instructional system is designed to achieve one or multiple objectives. These objectives are achieved through a combination of various methods/approaches/techniques which include the use of media. A combination of these techniques and materials employed to achieve a pre-stated objective, is what we call teaching learning strategies.

2.2 LEARNER-CENTRED TECHNIQUES

In this instructional system, the learner plays the pivotal role in the teaching-learning process. Figure 2.1 is a diagrammatic representation of the instructional system underlying the learner-centered approach to teaching-learning.

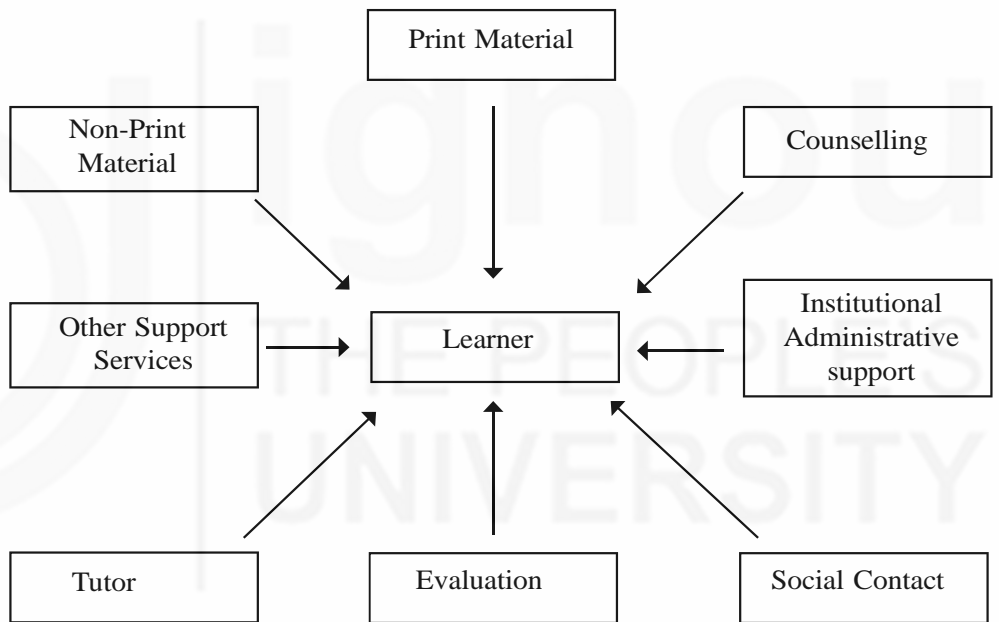


Fig. 2.1: Learner-Centered Instructional System

In a learner-centered system the focus is on the individual learner, and the various system components are geared to help the learner to achieve his/her learning objectives. In this sense, learning becomes a completely individualized affair. However, this individualization varies from one learning situation to another. The situation of a student facing a learner-centered approach in a conventional system is very different from that of a student in a situation, though classroom attendance is not regular, the learner may use individualized learning facilities provided within and outside the institution whenever he/she needs them. These teaching-learning systems operated to meet the needs of those learners who cannot attend regular classes because of various social or academic reasons. The learners in this system receive self-instructional print and non-print materials. Besides, they get tutorial/counselling facilities either at the local study centers or through correspondence, or both. Before we proceed further, please pause here and work out the following exercise:

Check Your Progress 1

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

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

Write in about 10 lines how the role of a teacher in a learner-centered system of teaching-learning is different from that of his/her counterpart in a teacher-centered system.

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Having acquainted ourselves with the learner-centered system in general we shall now discuss the following important specific learner-centered teaching-learning techniques:

- personalised system of instruction;
- flexi-study;
- distance learning;
- programmed learning;
- computer-assisted learning; and
- individual project.

Let us take up each one of these in the given order.

2.2.1 Personalised System of Instruction

In this system, instruction is individualized. Let us take one particular example and discuss it.

F.S. Keller, in the late 1960s, in the United States, developed a personalised system of instruction, called the Keller plan. In this plan, the course materials consist of a number of small chunks of information called units. Each unit has its own learning objectives and the learner is supplied with a study guide that suggests a number of means to achieve the stipulated unit-objectives. The units supplied to the learner are necessarily self-instructional in nature. Besides these, the learner uses the text books and supplementary notes suggested in the study guide. A course unit may contain preset assignments; work on exercises, slides and models that help the learner to proceed smoothly through the course. Course tutors are attached to learners who can contact them whenever necessary and discuss any problem encountered in the units. To complete one unit, an average learner has to put in roughly one week's time; and variations are allowed for different types of learners with a varied pace of learning.

The learner works through the course-units one by one, and depending on his/her convenience he/she sits with the tutor for purposes of clarification. When it is

felt that the learner has achieved the learning objectives of a particular unit, he/she requests a test that examines his/her mastery of the unit. It is important to note that the learner can proceed to the next unit only when he/she is declared qualified at a stipulated level. In the Keller Plan, mastery learning is stressed, so a learner has to achieve eighty to ninety percent marks to pass the test and move on to the next unit.

Besides the self-instructional units, the study guide and the tutor, a learner may also listen to lectures specially meant to introduce the course, etc., and conduct laboratory experiments, if the course requires them. However, essentially the Personalised System of Instruction (PSI) is based on the principles of independent study, individualized learning and self-pacing.

The Keller Plan has been modified many times since its formulation. The modifications are in the areas of test-scheme, peer-group teaching, etc. This system of personalised and independent learning has proved useful in the USA in medical and science subjects at the higher education level.

2.2.2 Flexi-Study

Flexi-study is a local-specific system of learning which is another important and popular student-centered technique of instruction. This combines both correspondence and tutorial support in a local college/institution. A learner takes on the individualized learning materials through correspondence and attends the tutorial/counselling sessions in the local college/institution as and when required depending on his/her convenience. Besides the correspondence and tutorial support, the local institution provides a range of resources, viz., language laboratory, learning resource centers, non-print media, library facilities and other administrative support. The learners sit for examinations when they feel they are ready to do so. This type of individualized study is especially practiced in the United Kingdom in areas of 'Community Adult Education' and 'Further Education'. Open learning programmes are effectively designed and used to meet the special educational and training needs of those who reside in remote areas in the countryside. Because of various socio-academic and political-economic reasons these potential learners are unable to attend formal educational institutions. (Such learners are found in different settings in all countries.) Therefore, the curriculum that goes into the learner-centered educational programmes is designed in such a way as to suit the needs of a particular locality. Usually, either an industrial firm or a local educational institution is given the tasks of curriculum development, administrative provision and the provision for tutorial and other facilities. These tasks are supervised and coordinated by a Central Unit.

This method of self-study in a locality largely meets the needs of continuing and recurrent education and training. The learner is more free to proceed in the learning continuum and to achieve the individual learning objectives.

2.2.3 Distance Learning

Those of you who have gone through the Post Graduate Diploma programme in Distance Education and/or other courses through the distance mode can reflect on the entire experience and recognise the essentially learner-centred nature of the programme which supports individualized study. In the early stages of correspondence education only print materials were used, but distance education has benefitted from technological growth and now utilises multi-media learning strategies. The use of the multi-media approach enables the system to provide as much support as possible even to isolated distance learners. The self-instructional print and non print materials coupled with two-way communication through assignments, letters and other means like the telephone and synchronous media

communications, help effect individualized learning. Though most of the learning transactions take place at a distance, local study-centre facilities are available to some extent through which extra support is given to the learners. In essence, every attempt is made to remove or reduce the barriers to learning, and to provide possible extra support to the learner who mainly studies through self-instructional print materials. In distance education therefore a learner:

- studies the specially designed self-instructional materials;
- proceeds at his/her own pace;
- may attend the local study centre for tutoring, counselling, library facilities, and audio video programmes;
- submits assignments for evaluation and tutor comments that clarify some of his/her doubts, or for establishing an academic rapport, breaking isolation and providing motivation; and
- takes an examination when/she is confident of having mastered the content.

The courses in distance education are usually modular in nature. A learner obviously than proceeds through different modules. (It is possible that examinations may not be made mandatory for the claiming of a diploma/degree, particularly in the case of self-enrichment programmes where a learner goes through the course without aiming at any kind of certification.) Large scale innovations in the practice of distance learning have been possible with the establishment of open universities in various countries. These innovations have provided opportunities to the socially disadvantaged population to further their access to higher education.

2.2.4 Programmed Learning

The term 'programmed learning' refers to a procedure of self-instruction which uses an instructional sequence in which the content to be learned is presented in a series of small steps, arranged in a logical sequence. The onus of learning, however, is completely on the learner. To facilitate self-learning, programmed instruction materials are designed so as to give various kinds of intellectual, emotional and psycho-motor experiences to the learner in a controlled situation through a variety of devices like booklets, machines, teacher, etc.

Based on his principles of 'operant conditioning', Skinner developed teaching machine to effect learning. The text material that accompanies the teaching machine is known as programmed instruction. And it has become a part of the new instructional technology for learning. It has been one of the most popular and effective innovations for individualized and assured learning, due to the following reasons:

- i) The content is broken into small consumable information chunks making it easily accessible to the learner. Each of these chunks of information is called a 'frame'. The trainer is required to go frame by frame, depending on his/her performance on the objective-type questions tagged onto each of the frames.
- ii) For each of the questions asked feedback is given. (This enables the learner to cross-check and self-evaluate his/her performance.) This information about the result helps the learner to proceed to further learning activity. If his/her answer is correct, the learner is motivated and feels satisfied. If the answer is wrong, he/she is directed to read the text or a part of it again.
- iii) Programming demands the active participation of the learner in the learning activity. Naturally, this helps the learner sustain his/her motivation.

- iv) Programming provides, by and large, an opportunity for individualized learning and self spacing. This principle is based on the fact that every learner is different from the other and has unique capabilities and requirements.
- v) Continuous monitoring of learner-performance/progress is available. Testing is carried out in the light of the weaknesses of both the programmes and the learners.

Having looked into programming in, general, we shall now discuss two important types of programming.

Types of Programmes

The two types of programming are:

- i) Linear programming; and
- ii) Branching programming.

Let us touch upon both of them in the given order.

- i) **Linear programming:** In linear programming, all the learners read and respond to the same frames. The sequence is linear in that there is a single path for all the learners to follow. The learner is bound to proceed from one frame to the other sequentially and to complete the programme.



Fig. 2.2: Linear Programming

As a rule, the content is presented in a logical sequence, proceeding from the simple to the complex. One question, or a set of questions, is put after each frame or after each level of difficulty. The learner responds to each question and proceeds till he/she achieves the pre-specified instructional objectives. The content is so arranged that the learner gets the right amount of practice at each level before he/she encounters the more difficult and abstract content. Obviously, therefore, in linear programming, the selection and repetition of questions, and the criteria of shifting the difficulty level are the important parameters we have to keep in mind while presenting content in a linear sequence.

One of the important characteristics of linear programming is the appropriate use of ‘prompts’ to elicit the correct or required responses from the learner. The ‘prompts’ are supplementary stimuli, hints or assistance that help the learner come up with the correct answer(s). The ‘prompts’, however, do not tell him/her the answer, and are gradually weaned away as the learner progresses to the level where he/she is able to respond correctly without their help. Nevertheless, the supply of ‘prompts’ is increased or ‘restricted according to the requirement of the learner’.

It should now be clear to us that one of the important reasons for using prompts in linear programming is to eliminate the learner’s errors. Despite the prompts provided, if the learner does not answer correctly, the programme is considered to be faulty and the difficulty level is such to be incorrectly selected. In such cases corrective measures are taken.

- ii) **Branching programming:** As the term itself indicates, a branching programme provides more than one path to follow. Like the linear programming, if the learner responds to all the questions correctly, he/she proceeds from one step to another with any interruption. On the other hand, if the learner makes an error or answers wrongly, he/she is directed to follow another path known as the supplementary path which gives him/her remedial instruction.

Let us illustrate it with the help of the following figure:

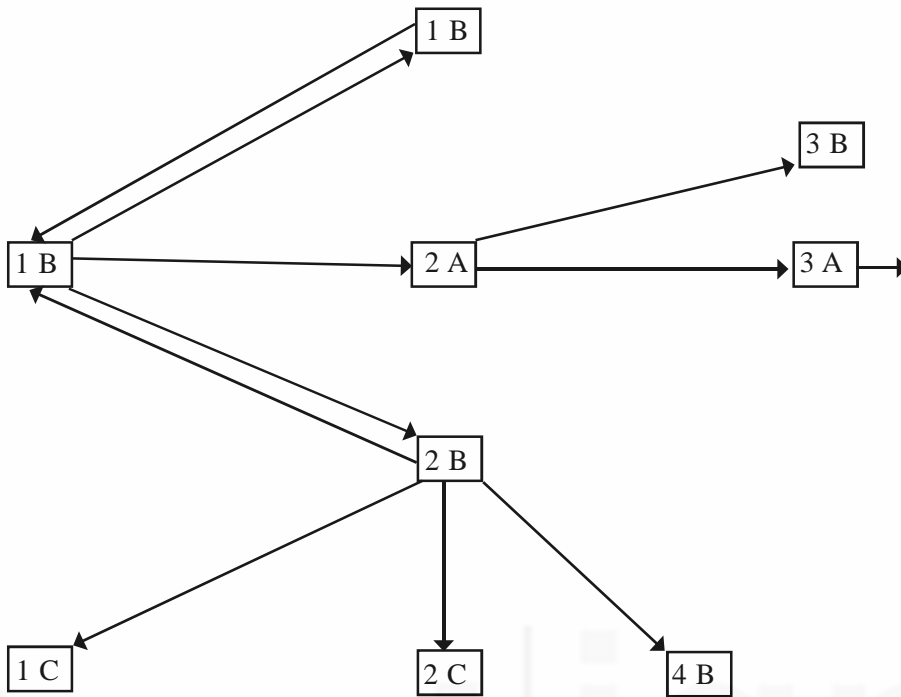


Fig. 2.3: Branching Programming

As Fig. 2.3 indicates, the learner begins with frame 1A. He/she reads the information presented in the frame and answers the multiple-choice questions. The instructions provided in the frame will tell him/her what has to be done next.

Let us elaborate on this. If the learner's answers are correct, he/she will proceed on to the next frame i.e., 2A in the figure given. Supposing the answers are incorrect, the remedial frames (i.e., 1B or 2B in the figure), have to be studied again. Depending on the instructions in frame 1B or 2B the learner will return to frame 1A, and begin afresh.

The learner will carry out this kind of activity from frame to frame until the predetermined objectives are met. It is essential here that we see the difference between 'linear' and 'branching' programming. From Figs. 2.2 and 2.3, we can easily deduce that branching programming presents much more information at each step. This is so because its frames are longer and each of them will comprise three or four paragraphs of moderate length. Besides, what is important is that the branching model allows errors in order to use them as building-blocks in the process of learning.

Let us clarify this.

In 'branching' programming, the learners are expected to answer, at the end of each frame, multiple-choice questions. In other words, they choose from among the given alternatives. The process of answering the given alternatives is, in effect, one of selection. On selecting the correct response, the learners are presented with additional information. If they have not got the correct answer they are directed to go to the remedial material which explains why they are wrong. In a linear programme, on the contrary, the students supply the answer i.e., they supply a missing phrase, word, etc. The 'branching programme', therefore, has an edge over the 'linear' one, particularly in the context of remedial instruction, since it allows for individual differences, and does not force the weaker learner's pace nor does it oblige the bright learner to slow down his/her pace.

A word of caution

What we have studied in sub-section 2.2.4 should not have given rise to a fallacy that 'branching' is a research-based improvement over the 'linear' programme. In fact, they are based on two different lines of thought. The former is based on the art of teaching and the latter on the science of learning. The conclusion is that we should not be misled into thinking that the 'branching' programme is better than the 'linear' one. They should be accepted as two different approaches to the production of materials. In short, we need to combine the best of both.

2.2.5 Computer-assisted Learning

The developments in information technology have already affected the field of education both inside and outside the classroom. The computer, as an important information device, has not only extended the role of the teacher but has also individualized learning and increased learner freedom.

The computer can store, process and retrieve information as and when required. In the process of learning, a computer performs all these functions, and thereby helps an individual to be an independent learner. In computer-assisted learning (CAL), the computer helps a learner by indicating whether or not a response, given by him/her while interacting with it, is correct. If the answer is correct, the learner proceeds to the next step; if it is incorrect he/she is advised to redo the exercise. Besides this, it can make learning more individualized by taking into account the needs, characteristics, skills, aptitudes, and pace of an individual learner. Instead of one-way communication in teacher-centered techniques, CAL provides two-way communication, and in the absence of a teacher simulates lively interaction between the learner and the learning package. Such interaction mainly consists of monitoring of and providing feedback for individualized learning.

There can be many forms of CAL. However, here we shall discuss the following three important situations in which a computer can help a learner to learn:

- i) A computer is installed outside the classroom, while a single terminal electronic typewriter is placed inside the classroom that has direct access to the computer. The teacher encourages students to develop their own computer programmes through the typewriter. Those students who are above average might be asked to interact with the peers and help them develop their own programmes.
- ii) A full package, consisting of a course, or a course unit, is presented to the learner through the computer. It keeps every record of the learner and guides him/her by providing various exercises and drills, besides some remedial programmes for the slow learners. In each of these cases, a teacher can get any required information about the progress and performance of a learner from the computer.
- iii) A computer is used to provide simulated learning situation to the learners. (You will see more about simulation in section 2.4.1 of this unit). Parts of the learning materials which are beyond the immediate understanding of the learners (for example complicated, futuristic projections) can be submitted with the aid of a computer. This provides a greater measure of clarity and motivation to the learner.

Unlike classroom learning, a learner gets sufficient freedom to interact with the computer and learn on his/her own. He/she can proceed at his/her own pace, and at every step feedback is provided by the computer through interactive terminals that motivate the learners to interact and to learn more from the computer.

In other words, the 'passivity' in lecture situations which we are familiar is

eliminated, since a learner remains active throughout the learning process. The learner is never discouraged, because the computer never gets irritated.

Another development is what has come to be known as computer managed learning (CML) in which the computer manages the learning activities of a learner. The computer records the profile of the learner, including the level of attainment and pace of learning. On the basis of these learner characteristics, suitable learning models are suggested to individual learners.

The learner's progress is monitored from time to time by the computer, and it decides upon and suggests modifications in the design of learning for individual learners if and when these are needed.

The success or effectiveness of the use of the computer primarily depends upon the type and quality of the learning package fed into it. A good learning package, besides providing a higher level of learning, should also sustain the motivation and interest of the learners. Ideally, CAL should be integrated with the entire course, and its role should be made explicit to the learners at the beginning. This would certainly help avoid any possible confusion in the use of the computer among the learners.

The feasibility of CAL and CML etc. has to take into consideration the socio-economic requirements (like need for expensive hardware) etc for small groups of learners. However, the point to be emphasised here is that the computer is being used for individualized learning.

2.2.6 Individual Project

Let us begin by explaining what we mean by a project.

A project is a unit of activity in a course, the theoretical perspectives of which have already been taught or learnt in or outside the classroom. It usually aims at a particular level of understanding. The learner may either initiate a project or choose from pre-listed projects and carry out the investigation that commonly results in a thesis/dissertation/model/report/programme, etc. The teacher plays an advisory role in the project work, usually helping the learners proceed at their own pace. However, unlike in the case of an exercise, the teacher has only a limited control over the outcome of the project work.

In the case of an individual project, the learner is allowed the freedom to choose a topic/unit of activity to work on, and this freedom of choice ensures learner-commitment to the project. Besides, decision-making is the responsibility of the learner right from the beginning.

The steps an individual project work would include are:

- perception of a problem;
- consulting relevant literature and defining the problem;
- preparation of a design to investigate the problem;
- selection, collection and retrieval of data relevant to the problem;
- data analysis and finding solutions;
- testing the finding/solutions at each stage of data analysis;
- incorporating the feedback collected from testing; and
- reaching the final results and communicating them appropriately to the others concerned.

Before we proceed further, we should pause here and sum up what we have presented so far in this section. For this, you should work out the following exercise.

Check Your Progress 2

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

List the five important learner-centered instructional techniques.

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Let us now take up yet another type of teaching-learning techniques.

2.3 GROUP LEARNING TECHNIQUES

While the individualized learning techniques facilitate learning in an academically isolated and independent individual, under the group learning techniques, care is taken to stimulate group discussions and other activities within a group to achieve the stipulated educational objectives. Group learning techniques are more suitable than individualized learning techniques for achieving objectives concerned with the development of interpersonal skills, problem-solving skills, oral communication skills, critical thinking skills, etc. Group interaction and development of group based skills are very vital in group learning, and therefore external factors like group size, seating arrangements, the layout of the room, etc., influence the effectiveness of such techniques a great deal. Each group may consist of (at the most) 10 learners for effective group interaction.

We can organise group interaction in varied ways. We have presented two such models of organisation below:

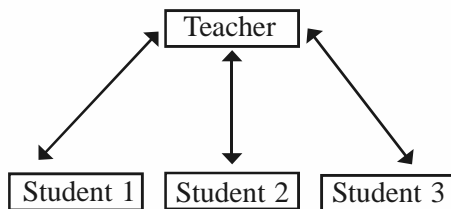


Fig. 2.4: Group Discussion: Situation 1

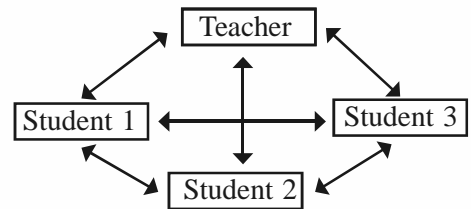


Fig. 2.5: Group Discussion: Situation 2

You may notice that ‘group dynamics’ in the two situations (Figs. 2.4 and 2.5) of group learning are different from each other. Fig. 2.4 represents a group learning situation where the discussion and group interaction are controlled by the teacher. In this situation, dialogue is effected between the teacher and the students. There does not exist any interaction between the students, and therefore the pattern of communication seems to be very limited. The group learning

situation depicted in Fig. 2.5 represents a different kind of communication pattern in which all the students in the small group interact not only with the teacher, but also with one another and the group as a whole controls the discussion and group interaction. While in the former situation (i.e. Fig. 2.4) the teacher has to be active throughout the discussion/group interaction, in the latter situation (i.e. Figure 2.5) the degree of teacher-participation after initiating the discussion will be relatively less. However, in both situations, the teacher plans and structures learning experiences in order to effect learning in a group.

If the teacher predetermines the organization of the group and the pattern of discussion, the group learning situation is called a structured situation. In certain group learning situations the group activities may not be structured and pre-planned, and so the students are free to adopt any pattern of group discussion or interaction. Though in the former situation it is possible to predict the learning outcomes, in the latter situation it becomes very difficult to do so.

We shall discuss the following group learning techniques in this section:

- i) tutorial;
- ii) seminar;
- iii) controlled discussion; and
- iv) group project.

Let us take up each one of them in the given order.

2.3.1 Tutorial

A tutorial is an extended classroom, and so far as the group size is concerned it may be called a classroom in miniature. Tutorials provide students with a chance to express their individual learning difficulties and help the teachers to pay attention to each learner individually. The teacher selects the topic and puts it forth for discussion in the group. Besides, the whole organization of the learning situation is predetermined by the teacher. Though the teacher controls the group interaction and discussion, much depends upon the students behave and interact with the teacher.

Look at Fig. 3 once again. You may notice that the situation is typical of a small teacher-controlled tutorial group where the interaction takes place only between the teacher and the students. The factual contents of a subject are generally discussed in a tutorial. However, the techniques adopted in tutorials may range from simple essay writing to solve a problem. The students write an essay, do a project or undertake problem solving activities, and the teacher acts as a group leader/consultant. If the teacher becomes more dominant, and the content organization get more structured, the learning experience may result in replicating formal classroom learning in the form of a mini-class, which should not happen since it has limited effectiveness.

2.3.2 Seminar

To cite an example, let us look at Fig. 2.5, Situation 2. The situation presented there represents a seminar where general group discussion forms the major technique of group learning. Group discussion allows frequent and multiple ways of interaction among the students in the group, and learning is controlled by the group rather than the teacher. The techniques used in the seminar may differ from subject to subject and from one level of education to another.

In a seminar, occasionally one of the students of the group presents a written essay or a talk. The contents of the presentation are discussed by the group within the frame of their predetermined learning transactions.

The teacher keeps his/her dominance at a low key and allows more discussion and interaction among the members of the group. The student who presents the essay or the talk is encouraged to be more analytical and to evaluate the theme rather than be governed by the considerations of content coverage or correctness. However, discussion among all the students in the group is as important as the presentation of the topic by one student. In some situations, rather than being on the topic the stress will be on the ability to critically and analytically discuss the issues in the group.

In practice, there are many variations of the type of seminar discussed here. You may think of a situation where one small group of students sits around a table in a room and discuss a pre-determined topic or issue while another small group simply observes the group discussion. After the discussion is over, the group in the outer circle joins the group around the table to discuss and assess the discussion already carried out. This procedure contributes to the development of non-verbal communications skills and leadership behaviour among the members of the group. This is called the “fishbowl” technique, and is usually used for identifying various aspects of group dynamics.

2.3.3 Group Discussion

In a controlled discussion the students are free to ask questions and contribute to the discussion through comments. Such discussions are used in the case of large groups, say, for instance, in exposition-based teaching sessions. After the session, a controlled discussion is carried out to provide feedback to the students. In a classroom situation, the teacher asks pre-planned questions of students to lead the entire group towards the pre-determined goal of learning by stages. In this situation the teacher has full control over the course of the students’ discussions. This technique is usually used to reinforce the content of a course already taught through the formal classroom lecture.

2.3.4 Group Project

In sub-section 2.2.6 we have written about the nature of, and processes involved, in conducting individual project work. In a group project, a small group is assigned the task of selecting a problem and conducting a study on it. Every learner in the group interacts with the other, discusses the problem and contributes to its study in whatever way one can. While carrying out a group project work, skills for group work, group involvement and interaction, individual assertion within the group, group communication, and personal development within the group are given emphasis.

Group project work involves the following three stages:

- i) recognition of a task/unit of activity problem;
- ii) definition of the problem and formulation of work design; and
- iii) solution to the problem.

While solving the problem, the procedures followed are similar to those noted in sub-section 2.2.6, except that instead of an individual learner the whole group is involved in the investigation. Therefore, decision-making is the responsibility of the entire group and it needs group involvement, cooperation and commitment to succeed. Group project work may involve individual presentations and individually allotted tasks within the group, participation in group discussions, and the chairing of such sessions by each participant through a system of rotation. Since the outcome involves group-responsibility, every learner in the group “has” to be committed to this collective responsibility.

The supervisor, in this case the teacher in charge of a group, guides the group project work, provides consultancy, and helps the individual members in the group to effectively participate in the group activities including group discussions. Group project work develops the skills of argumentation, assertion, written and oral presentation/communication, organization, tolerance, cooperation and empathy. Further, the interaction in a group teaches the learner the basic principles behind adjustment in a societal framework. In other words, group project work at the level of higher education develops adult socialization.

Before we proceed further, let us work on the exercise given as follows:

Check Your Progress 3

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

Define any two group learning situations in about 10 lines. Give an example of each situation.

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Now we shall touch upon the last of the learning techniques: we intend to study in this Unit.

2.4 EXPERIENTIAL LEARNING TECHNIQUES

Before we proceed further, we should know what experiential learning is. Let us begin with an explanation of the concept of experiential learning. It can be defined as learning that occurs outside the classroom. This learning occurs when changes in the judgments, feelings or skills of an individual result from living through one or more events taking place in society/community one lives in.

You should be clear that this is not confined to such events as field trips and work experience. It may result from attending a lecture. However, in that case what is experiential is that which results from living through the event, and not simply from the content of the lecture. It should be clear to us that learning depends on an individual's experience gathered from living in the society and the surrounding environment. It is, otherwise, bringing knowledge from society to classroom rather than from classroom to society. You should also remember that experiential learning is not confined to heuristic learning which depends reasoning and past experience. It may take place in both structured and simulated situations. Broadly, we can categorise experiential learning as follows:

- i) **Non-sponsored experiential learning:** This is also called 'learning through life experience' and 'prior learning'. It includes any type of creditable learning-through work, travel or volunteer service-which a learner has acquired independently of an educational institution.

- ii) **Sponsored experiential learning:** This type of learning includes institutional sponsored programmes that are designed to give learners more direct experience in integrating and applying knowledge - especially learning at a distance, learning through activities or work programmes etc. These learning activities are incorporated into the curriculum. Learner-centered instruction, programmed instruction, case studies are some examples of sponsored experiential learning.

In both types of experiential learning, we should be clear that the learning or competency acquired must be relevant to the objectives of the learner and the institution.

What does experiential learning imply?

It implies that learning is highly individualistic and the conditions under which knowledge or competency is acquired vary widely. The potential range of learning experience should obviously be a wide one. By its nature, experiential learning is often not subject to the close supervision of the teacher. This should not, however, deter us from dealing with it extensively. Distance education, by its very nature, is something akin to learning through experience.

Let us pursue this line of thought a bit further.

‘Distance education’ mostly caters to the needs of adult learners. Most of them have professional and intellectual maturity along with high levels of observation skills and creative thinking, all of which characteristically help them learn through their experiences. Experiential learning is therefore very congenial for adult learners who select their courses on their own. It particularly benefits these learners at two stages:

- i) When a learner takes up any learning activity to be performed outside the four walls of a classroom, he/she involves himself/herself in interpersonal interaction, whether in real life settings or in simulated environments. These interactions are important because they are the beginning of the learning activity. Because of a high degree of involvement and motivation, whatever is learned here is seldom lost.
- ii) When the successful accomplishment of a learning activity gives intrinsic motivation/reward, it is useful at a later stage for having the effect of reinforcement.

Check Your Progress 4

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

Write in about 10 lines what is meant by ‘experiential learning’.

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Having looked at experiential learning in general and its particular relevance to distance education situations, we shall now discuss the following experiential learning techniques in some detail:

- i) discovery learning;
- ii) learner-controlled instruction;
- iii) programmed instruction;
- iv) simulation;
- v) role play; and
- vi) case study.

We shall take up each one of them in the given order.

2.4.1 Discovery Learning

The expression 'discovery learning' refers to those situations in which the learner achieves the instructional objectives with little or no guidance from the teacher. A simulation, in which the teacher assists the students in the recall and/or the application of relevant principles, is called 'guided discovery method'. We should be clear here that the teacher guides the students and does not simply provide the solution to them. And, an unguided discovery learning situation is one in which the teacher gives the learner neither the guidance nor the solution to a problem. By implication, the learners themselves arrive at the various possibilities independently, by applying their skills, and then find out the solution.

The effectiveness of discovery learning as a method lies in the fact that it requires the individual learner to find out the solution to a problem. A problem-solver is often described as one who interacts with the environment in testing hypotheses and developing generalizations. The application of the discovery technique as a method of learning leads to individual capabilities of various kinds. It should, therefore, be obvious that discovery learning:

- increases intellectual capability (The way a learner acquires knowledge helps him/her solve any kind of problem in a teaching/learning situation);
- increases learners' intrinsic motivation (The learner carries out the learning activities independently);
- increases the learner's skills of observation, investigation, problem solving and independent learning (The learner's competency of inquiry, is thus, sharpened tremendously); and
- increases the retention of learning among learners (Because discovery learning involves active participation on the part of the learner it helps him/her develop capacity of his/her storage system of information).

However, the discovery learning techniques has its own limitations. The main limitations of this method are as follows:

- i) It demands a high level of intellectual maturity in the learner in terms of ability to inquire, analyse, apply concepts and to generalise.
- ii) It is difficult to learn (or even to teach) creative and critical thinking which is the basis of discovery learning.
- iii) It is considered to be of limited value in the context of education. With a few exceptions, the use of the discovery method often leads to wastage of time and resources (Ausubel, 1963). But, if it is meticulously handled, it proves to be an effective academic exercise.

2.4.2 Learner-Centred Instruction

Learner centred instruction is based on the humanistic philosophy that the learner is one of the best sources of information about him/herself and so the learning sequences suggested by individual learners are most effective (and systematic) for optimum learning. This seems to have been a reaction to the approach followed in programmed instruction. From our discussion of programmed instruction in 2.2.4, we can easily surmise that the sequence of presenting content in programmed instruction is developed by the programmer him/herself. Of course, the learning sequences are supposed to cater to the needs of individual learners, but the learners cannot ask any questions they wish or discuss the problems they encounter. This has led to the newer concept of learner controlled instruction. In this approach, each learner develops his/her own learning sequence and leads the learning by asking questions. The learner thus actively participates in the learning process and satisfies his/her needs at every stage in the process.

Let us now briefly discuss the following main assumptions which the learner-centered instruction operates on:

- i) **Self-directed:** The learners have the capacity to identify their needs and to think over them and in order to meet them act accordingly. Because the learner provides the structure of his/her learning process, his/her motivation will remain sustained.
- ii) **Warm academic climate:** The learner is not under any pressure and retains his/her self-esteem. This in turn, motivates him/her and influences purposeful learning.
- iii) **Learning how to learn:** The learners know that they are on their own and so what is important is to tell them how to learn rather than how to be taught. They learn on their own by applying their previous knowledge and experience to current problems. By implication, this approach demands minimum help from teachers/tutors.
- iv) **Self-evaluation:** The learners identify the objectives of learning or the problem-areas, which is helpful in guiding their learning. At the end of the learning activity they will be able to know whether they have achieved the objectives. Thus learner-centered instruction provides an opportunity to the learner for self evaluation.

Having looked into the principles of learner-centered instruction, we should also speculate on the possible limitations of the approach.

The limitations might be:

- i) Developing a sequence of learning in this approach is a difficult task, as it entails a comprehensive understanding of the instructional technology and learning characteristics of adult learners.
- ii) Preparing learner-centered instruction is a time consuming exercise. At times, the important learning points might get left out and are unlearned.

However, if we analyse the concept of learner-controlled instruction, we will find that this method leads us towards open and discovery learning. All the characteristics of open learning are reflected in learner-controlled instruction.

2.4.3 Simulation Technique

Here, you are making an attempt to expose simulation technique popularly used in face-to-face education. It has applications in distance education in the form of simulated communication in SIMs, and in tutoring and counselling.

By simulation, is meant the replication of reality in order to make it easily accessible to the learner. In teaching-learning situations, simulation techniques are used in order to make reality easily accessible to the learner. Thus, in simulated situations, learners deal with simulated problems through action. That is to say, some learners, having identified the delineated problems play roles so as to simulate the situation, while others just observe the action. The essence of simulation is the involvement of participants (learners) and observers in a specially created situation.

The simulation technique, thus, provides a live sample of human behaviour which serves as a vehicle for learners to:

- i) explore their feelings;
- ii) gain insight into their attitudes, values and perceptions;
- iii) develop their problem solving skills; and
- iv) explore the quality of the subject matter being discussed/analysed.

These four possibilities indicate that simulation advocates an experience based learning situation. The enactment elicits genuine and typical emotional responses and behaviours from the learners, whereby learning becomes more effective and meaningful.

To make the process of learning through simulation effective, we should follow the stages given below:

- i) **Warming up:** This stage involves the identification of the problem or the skill to be acquired, an explanation of the issues related to it and the explanation of role play.
- ii) **Setting the stage:** At this stage, the group should be motivated for active participation by explaining the significance of role play, etc.
- iii) **Preparing the observers:** This stage involves decisions about which observation tasks (like the kind of information/data) are to be recorded; the way the recorded data is to be presented, etc.
- iv) **Role play:** Once the stage is set, actual role play is conducted at this point.
- v) **Assessing the event:** At this stage, the observers will review the event with the help of the predetermined procedure for evaluation. Naturally, the strong and weak points in the exercise will be discussed with a view to making the learners acquire the desired skills.
- vi) **Re-enactment:** On the basis of the observation and the assessment of the event a repeat version of role play, if needed, is arranged.
- vii) **Review:** This stage involves reviewing the progress of the learners, highlighting the improvements, relating the simulated situation to real-life experience and the principles of acquiring the required skills.

The learners play roles in turns and in the process; the desired learning objectives are achieved.

There can be many ways of simulating a real-life situation, and they are based on models. Models can be at least of two types-static and dynamic. A trainer describing the situation of the problems of a personnel manager in an industry with the help of charts and slides is an example of static model of simulation. On the other hand, in a dynamic model of simulation, the real-life simulation/problem is dramatized or presented in a lively way so that both the players and the participants learn about the real problem and its solutions.

The technique of simulation games is generally used in defence academies, management institutes or training programmes. Nevertheless, it need not be restricted to any one particular discipline. For example, this technique can be used for teaching/ learning English as a foreign language.

Consider the following steps through which students learn English.

The teacher tells the students of a group that they are to visit Chennai where a majority of the people, including the business community understands English besides their mother tongue. So all the students should try their best to learn it to interact with them. With the help of students, the teacher arranges for the construction of temporary shops, offices, etc. around a small area within the premises of the institution.

A few students are assigned the task of acting as shopkeepers and professionals, cloth merchants, grocers, stationers, tourist officers, bank managers, postmasters, railway ticket sellers, etc. They are provided with handouts in English containing information on bus routes, historical places, shops and commodities available, a railway station, post office, bank, etc.

The other students are asked to collect information from these 'shop keepers' and 'professionals', etc. to prepare a proposal in English containing all the information necessary to undertake a journey to Chennai by the students of the entire school. The group, including the teacher, discusses them in English and each plan/proposal is rated by all. The best plan is selected.

Each one prepares and presents an individual proposal.

Through this kind of technique students should be taught written and spoken English and, perhaps, incidentally helped to acquire new vocabulary in the process.

Similarly, learners can learn business games, risk-taking behaviours and allied skills; each learner gets a chance both to act in the game and to evaluate it. The learners are entirely free to act in their individual way but within the specified rules of the game.

This gives the learner the opportunity of experiencing the situation in an individual style. This individualized experience demands expertise in designing the theoretical framework of the game to be practiced in a real situation.

It should by now be obvious that simulation technique:

- provide greater opportunity to learners for active participation in the learning activities, make learning more interesting and permanent; and
- Promote the application of insights gained in a learning situation to real situations and thus help the learner acquire the skill of decision making. This clearly reduces the dominance of the teacher.

However, we should keep in mind that:

- we cannot use simulation techniques for all disciplines or in all situations; and
- advance planning and preparation is imperative to derive optimum benefits from simulation.

2.4.4 Role Play

The system of distance education demands a built-in mechanism of continuing training and system development. The technique of 'role play' is an effective tool to impart training objectives.

Suppose, in a training programme on industrial management, three participants play the role of the managing director, the labor officer and the worker and thereby realize the skills and problems involved in those tasks in real life situations. In essence, dramatization is the usual method of role playing. While rehearsing or dramatizing the role, the teacher or the trainer should make it clear that the learner or the trainee does not have to concentrate on acting. The learner should however concentrate on how accurately he/she thinks through the mind of the person or model whose role is being played. Therefore, the main purpose of role playing is the development of social skills or the ability to develop interpersonal relationships and to understand interpersonal problems.

A role play session may adopt the following steps:

- selection of an appropriate problem/situation and identification of the roles to be played;
- selection of the learners/trainers for the identified roles;
- briefing the learners about the tasks to be undertaken by each member;
- preparation for presentation by the learners;
- role-playing;
- peer group comment; and
- comment and feedback by the teacher/trainer.

Besides the peers and the teacher/trainer, the role players themselves may be asked to put forward their feelings while playing the role and to comment on their own roles. This provides the scope for self-evaluation. Having talked about various techniques we shall now take up two bipolar strategies which are prevalent in the educational world.

2.4.5 Case Study Technique

Before we take up the topic under consideration let us explain what we mean by 'case study'. 'Case study' is a way of organising and analyzing data for the purpose of studying a social unit. The social unit may be an individual or an institution or a community. In other words, this is a research technique that attempts to examine contemporary phenomena in a real-life situation.

Minnis (1985) tells us of two types of case studies frequently used in distance education. They are:

- i) **Within-case design:** In this case study, we undertake in-depth study on a single situation with the purpose of examining the relationship of multiple variables within the bounded system.
- ii) **Cross-case design:** In this type of case study, we synthesise the findings of a number of cases for the purpose of developing a more generalised explanation of the situation/phenomenon. This also provides the basis for confirming the findings provided by the studies conducted under the within-case design.

Procedure followed for preparing case studies:

There are various procedures in the study of a case. Because we analyse and explore complex events, we should follow a systematic method of studying a case. In general, the case study technique can be divided into the following steps:

- i) **Statement of the problem:** A brief description of the nature and status of the problem to be studied should be given in the beginning of the study. This

may include, besides introducing the problem, details about the selection of cases, types of cases, number of cases, analysis of cases, etc.

- ii) **Collection of data:** Various techniques like interviews, questionnaires, psychological tests, experiments, etc., are used to collect data for the study.
- iii) **Analysis of data:** The data collected from various sources is analyzed to see the relationship between the factors that influence the case.
- iv) **Conclusion:** On the basis of the analysis of events and determinant factors, conclusions are derived. We need to take extra care for the conclusion to be objective.

Though very useful, the use of the case study technique is often limited to research studies. Why? As you must have guessed, this technique requires a lot of time from the researcher/user. Its application is, therefore, limited to certain areas of research.

In distance education, case studies are important mechanisms to obtain feedback from various functionaries and learners to strengthen the teaching-learning system. Case studies can be effective instruments for developing higher order learners' learning competencies.

Check Your Progress 5

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

List five ways/situations in which experiential learning can take place.

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2.5 TEACHER-CENTRED TECHNIQUES

We are aware that teacher-centered techniques are largely applied in the conventional face-to-face classroom set-ups where the major part of the instructional transaction is carried out by the teacher who usually acts as a friend, philosopher and guide to impart knowledge, develop attitudes and skills face-to-face. The institution, along with the teacher, decides upon the organization and presentation of a course. Besides, they decide on the duration of a class-period (lecture/demonstration), the place of lecture, etc. Naturally, then, a classroom set-up has to be strictly adhered to. As you are aware, the usual method followed within these rigidities is the lecture that hardly takes into account the personal difficulties and individual learning styles of students. Besides being teacher-centered, this technique is mainly geared towards achieving the objectives of the concerned institution.

In Fig. 2.6, we represent graphically the teacher-centered approach to learning.

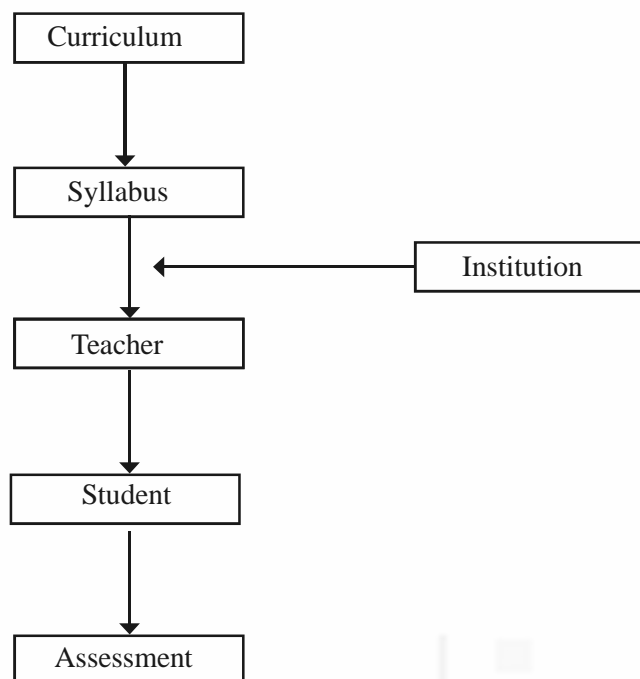


Fig. 2.6: Teacher-centered Approach: A Representation

What do you notice in Fig. 2.6?

Fig. 2.6 indicates that the teacher plays the role of an intermediary in transacting the curriculum in the classroom for the students. While doing so a teacher makes very crucial decisions regarding the interpretation of the syllabus, content coverage, and the level at which the contents are to be presented in the classroom. Further, the teacher has to decide on the method of teaching, and on the structuring, sequencing and presentation of materials, according to the assumed level of the audience. Most often this kind of planning has to be either sacrificed or compromised because the teacher has to complete a prescribed portion of the entire curricular programme or syllabus within the stipulated time. And this is a major handicap in the classroom teaching-learning transaction.

Obviously, the teacher's decisions are dictated by the demands of the syllabus. The learning activities of a student, on the other hand, depend on the decisions of both the institution and the teachers. The learner is thus expected to adjust his/her style of learning to the educational decisions of the teachers and the organisational constraints of the institution. Further, the student has no say in the evaluation of educational achievements through the term-end or continuous examinations that are set by the teacher or the institution, or by both of them.

In the teacher-centered approach the following two methods are used quite often:

- i) lecture method; and
- ii) demonstration method.

We shall now look into them in the given order.

2.5.1 Lecture Method

As a teacher-centered method, it generally involves one-way communication wherein a supposedly learned person explains the subject's complexities to a supposedly motivated audience. This method has been, and remains, so extensively used in conventional educational situations that its educational effectiveness has become very difficult to determine. Besides, as the learners

are quite used to this method of teaching and learning, any deviation from this method creates confusion and insecurity in them. One reason for its popularity in this conventional set up, perhaps, is that it can be used for quite a large number of students at a low cost. However, we should remember here that we are talking about its effectiveness.

A lecture could be made effective if it is structured/organized in the following way:

- i) **Introduction:** The lecturer/teacher introduces the topic to the class by relating it to the previous knowledge of the learner. In order to kindle the curiosity of the learners and to sustain their motivation, he/she asks a few questions on the familiar topics relevant to the one being taken up. Depending on the class-requirement, the teacher can use charts, models, etc.
- ii) **Presentation:** The teacher presents the subject matter acting as a medium between the syllabus and the students. He/she needs the following skills to present the subject matter effectively.
 - Dividing the subject matter into small manageable chunks of information and arranging them in a logical sequence. Depending on the class/topic requirements the teacher can use audio-visual media like the blackboard, maps, globe, charts, etc., accordingly in order to make the subject matter easily accessible to the students.
 - Motivating the learners and sustaining their motivation with the help of the audio-visual media, body language (posture, gestures), humour, etc.
- iii) **Closing up:** Towards the end of the lecture, the teacher summarizes the whole lecture to help the students retain the contents. After providing a study guide to the learners and telling them how to go about their learning activities with reference to the particular topic taken up, the teacher may brief the students about the ensuing lecture.

Do you think that for effective lecturing, it is sufficient for a teacher to follow the above three procedures sequentially? Besides depending on a structured lecture, the teacher should try to initiate student-student and student-teacher interaction. One possible way of doing this is through asking open-ended questions. Making statements of objectives in order to convey to the students what they should be able to achieve after a particular lecture is listened to, and additional resource materials like distributing relevant handouts that cover the major points of the lecture, etc. can also accompany a lecture. A well structured lecture can even be recorded on a cassette and played in the classroom. To ensure interaction among students the teacher can provide question sessions during a lecture. These possibilities notwithstanding, a lecture is a one-way communication process and a teacher-centered method in which there is very limited scope for individualized learning. Hence, teachers must be professionals in their theory and practice so as to develop future professionals in the society.

2.5.2 Demonstration Method

A common example of the demonstration method is the sessions conducted in a laboratory.

Demonstration is a method used mainly to develop the psychomotor and manipulation skills of the students. Unlike most of the lecture sessions it is possible that the students get chances to actually participate in the practical sessions. This method is used more often in the teaching of sciences, however, instances of the use of this method in teaching of literature and language can be found in, say, the dramatization of a play. It is essential; therefore, that the teacher does not only treat the elements of the theme at the theoretical level,

but also designs practical work. It is always helpful to stipulate the objectives of such demonstrations in advance for informing both the students and the teacher-demonstrator of the expected outcomes. As the students solely depend upon the teacher who demonstrates the practical aspects of the subject-elements, the teacher demonstrator has to handle the sessions carefully so as to provide adequate individual attention to each student.

Though the demonstrations/practical laboratory activities may be well planned, they often fail to achieve educational objectives beyond the psychomotor domain. And so it is essential to evolve means by which we can make the practical sessions more individualized and student-centered.

What is obvious here is that the teacher plays a dominant role in the teaching-learning process. In direct contrast, learner-centered techniques place the onus of learning on the learner. The teacher, therefore, instead of dominating the process of learning, facilitates it and academically supports the learners.

2.6 INSTRUCTIONAL MATERIALS

A systems approach to instruction attempts to focus on the maximization of efficiency of the methods by which knowledge and skills can be passed on. Educational technology is a rather diverse field which seeks to study and apply various techniques, systems, tools and media in education and training. In the preparation of learning materials the needs of the learners have to be analyzed and the most effective means of delivering learning to satisfy those needs have to be organised.

For distance learners the development of self-instructional materials has to be planned in such a way that the choice between alternative media through which the teaching-learning processes will take place can be clearly highlighted. Though print dominates the learning process in distance education, other communication media can be judiciously mixed to ensure learning effectiveness. Printed self-instructional materials, with built-in mechanisms of reviewing, recalling, testing, application through activities, visual inputs like graphs and charts etc., can substantially take care of learning inputs in distance education

There is, of course, the possibility of using various audio-visual media (both hardware and software) in academic lectures and talks, practicals, demonstrations, etc. In other words, besides direct teaching, a teacher can undertake indirect teaching via certain intermediate medium or audiovisual media. These media may be used either to increase the effectiveness of face-to-face teaching or to act as a major part of the instructional strategy itself. However, the media are selected to fit in the instructional strategy chosen.

Media can broadly be classified as follows: the non-projected visual aids, and projected audio and visual aids. The first category consists of chalk boards, white boards, wall charts, models, flip charts, handouts, etc. which do not need the use of an optical or electronic projector. The effective use of these tools depends largely on the skills of the teacher.

Wall charts consisting of maps, photographs, diagrams, graphs, cartoons, etc. are especially helpful to motivate the students, to initiate a discussion, or to substitute for information storage memory. Flip charts are used during a lecture to reveal key points as and when these are required. Models are especially useful to present the various dimensions of an object or an event, but these can be used only with a small group of learners because of the fact that these are indistinguishable to a large audience sitting far away from the teacher's desk. Handouts may contain printed diagrams, tables, notes, etc. that can be supplied to students to concentrate more on what was said during the lecture.

Filmstrips, projectors, slides and slide projectors, overhead projectors, etc. that might have either front or back projection, belong to the second category. The audio-visual aids are prepared and very often integrated with the lecture. To make them effective, a lecturer/teacher needs to learn how to prepare and handle them. For the learners, it is a chance to get relief from the straightforward lecture, and interaction with other media motivates them as well as increases the effectiveness of learning. The functions of audio aids like tape recorders and record players are similar ones.

In learner-centred systems, self-instructional materials play the main role in providing mediated teaching to the learner, while the teacher only manages and supports the learning process. Varieties of hardware and software like textual materials, audio-visual self-instructional materials, computer-based self-instructional materials, etc. are used to individualise learning. Let us very briefly discuss these media and their role in individualized instruction/learning.

Textual materials: These include books, structured notes and textual programmed materials. Books may not generally be self-instructional in their design, but with the help of a study guide a learner may be advised how he/she should go about learning. In the case of subject areas, textbooks may form an integral part of such learning, provided they are appropriate in so far as their level and treatment of the subject matter are concerned.

Audio-visual self-instructional materials: These consist of audio-visual learning programmes, language laboratories, and broadcast media.

In a multi-media instructional programme, such as you find in distance learning, besides print, non-print self-instructional electronic media are put to use. The multi-media non-print package may include slides, audio and video cassettes, filmstrips, practical kit, etc. These materials aim at achieving the cognitive objective of mastery of a knowledge base, the psychomotor objective of skill acquirement, and the affective objective of attitudinal change. In essence, we can assume, and to a certain extent ensure, a high degree of student-involvement in the teaching/learning activity.

In language laboratories, learners use audio programmes along with a magnetic tape through which each learner can listen to pre-recorded programmes, record his/her responses and listen to them when desired. The teacher can monitor the activities of only one learner at a time and respond to either one or to a group of learners at a time.

Though originally used for language teaching, these laboratories are now being used for other subjects too.

Broadcast media like television and radio can be used to achieve the objectives of wider geographical coverage and of meeting certain cognitive and affective objectives that self-instructional distance teaching material may not be sufficient to meet. Developments in information technology such as video texts can be fruitfully used for individualized learning where the learning sequence is designed as per individual needs and the learner can proceed at his/her own pace by interacting with the information presented on the screen through a key board.

Computer-based self-instructional materials: Computer-assisted learning and interactive video can be cited as examples of this type of material. As far as computer assisted learning is concerned, two modes (namely, the tutorial and the laboratory) of individualized learning are important. In the tutorial mode, the computer plays the role of an instructional device. Programmed materials are used to react to the responses of the learner. And in the laboratory mode, the computer can be used to simulate a laboratory situation, to set problem-solving exercises, and to model experiments. Computer-assisted learning is a highly

stimulating and interactive learning device so far as individualized learning is concerned.

Interactive video combines computer and video recorder to provide interactive teaching-learning in individualized learning situations. The computer provides the programme, and the video recorder provides, sound and visual displays. The combination and procedure result in rich self-learning materials to meet individual learning needs. A later development in this area includes the combination of the videodisk with the micro computer to provide better access and individualization for the learner.

2.7 LET US SUM UP

In this Unit, we have discussed various teaching-learning techniques.

We have classified them into:

- teacher-centred techniques;
- learner-centred techniques;
- group learning techniques; and
- experiential learning techniques.

We have taken up each of these learning techniques and extensively discussed them with substantial examples. Towards the end of the unit we have focused on the role of educational technology in the field of instructional material development.

2.8 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

The role of a teacher in teacher-centered technique is that of a domineering intermediary who translates the syllabus for the students. By implication, he/she takes crucial decisions regarding the interpretation of the syllabus, course-coverage, the methodology to be adopted, etc. On the contrary, in learner-centred techniques, the teacher places the onus of learning on the learner. He/she, in academically guiding the learners.

Check Your Progress 2

The five important learner-centred techniques are;

- i) personalised system of instruction;
- ii) flexi-study;
- iii) distance learning;
- iii) computer-assisted learning;
- iv) individual projects.

Check Your Progress 3

It can be categorized into teacher-controlled and learner-centred group learning situations.

In a teacher-controlled situation, the academic dialogue occurs between the teacher and the students. There is, therefore, little interaction among students. An example of this situation could be tutorial session.

In a learner-centred situation, there is student-student and student-teacher interaction. The pattern of discussion is obviously decided by the students. An example for this situation could be a seminar.

Check Your Progress 4

Learning that takes place from living through an experience, event, etc. is defined as experiential learning. Obviously, it is different from the kind of learning that occurs in a classroom. However, it is possible for experiential learning activities to be incorporated into the curriculum. For example, case studies, project work etc., provide the learner with a direct experience in assimilating, integrating and applying knowledge. This kind of learning is called 'sponsored experiential learning'.

Experiential learning, thus, assumes that learning is highly individualistic.

Check Your Progress 5

The five ways in which experiential learning can take place are:

- i) Discovery learning;
- ii) Learner controlled instruction;
- iii) Programmed instruction;
- iv) Simulation;
- v) Role play; and
- vi) Case study.