BES-123
Learning and Teaching

Indira Gandhi
National Open University
School of Education

Block

3

TEACHING-LEARNING PROCESS

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COURSE: BES-123   LEARNING AND TEACHING

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BLOCK 3: TEACHING - LEARNING PROCESS

Introduction to the Block

In previous two blocks, you have gone through various dimensions of learning and learner. This block will help you to understand the teaching learning process i.e. how learning takes place and what is the role of a teacher in it. Various concepts related to teaching, its planning, organizing and utilizing resources to facilitate learning have been discussed in this block. Various aspects of classroom managements have also been discussed in this block. This block has five units.

Unit 8: Understanding Teaching talks about the nature of teaching. It discusses teaching as a morally laded activity and differentiates teaching with various related terms. Discussion on various teaching styles, teaching models and phases of teaching will help you to organize your teaching-learning in an effective way.

In **Unit 9: Planning Teaching-Learning,** discussion starts with common considerations for instructional planning. Unit elaborates the concepts of annual planning, unit planning and lesson planning. Unit provides a critical view of behaviorist approach and proposed constructivist approach for lesson planning. Discussion on concept map as a planning tool and 5-E model of lesson planning will help you to plan for facilitating constructive learning.

Unit 10: Organizing Teaching-Learning will help you to explore various approaches of instructions. Discussion on traditional teacher centered approach and new learner centered approach will help you to develop your own perspective. Group centered techniques and cooperative learning will facilitate you in organizing teaching-learning constructively.

Discussions in **Unit 11: Teaching-Learning Resources** will help you to explore various types learning resources. You will be able to use classroom, learners and their experiences as a learning resource. Discussion on improvised resource and using ICT as resource will help you to plan your teaching-learning effectively. Criteria for selection and integrating resources in teaching learning will facilitate you in judicial integration of resources in your planning.

Unit 12: Managing Classroom-Teaching Learning will help in understanding the learners need for organizing teaching-learning. Discussion on factors affecting classroom management will help you to indentify the factors which are affecting your classroom. Discussion on pluralistic classroom, managing behavioral problems, time management, etc. will support you a lot in organizing teaching learning experiences to facilitate learners.

UNIT 8   UNDERSTANDING TEACHING

Structure

8.1   INTRODUCTION

Man is a social animal because he learns to live according to social norms. The main difference between a man and animal is that a human being tries to adjust himself/herself according to her/his culture and surroundings which an animal cannot. S/he learns all these from a teacher. The first teacher in his/her life is his/her mother and then the family members and lastly, the society. But the formal teaching is possible in an educational institution only. Here comes the role of a teacher and teaching process. In this unit, we shall try to understand what actually the word 'teaching' means. The dual nature of teaching i.e. science and art will be taken up. Besides, the various techniques, strategies and models of teaching shall be discussed. You must have observed that all learners or classes cannot be

taught in the same manner. Different learners have to be dealt with in different teaching style. We already know that a teacher has to make preparation before taking a class and plan the teaching process to be taken up in the class room. We must understand the different phases of teaching and how they should be dealt with. We shall also try to understand how complex teaching profession is and how it can be simplified. Hopefully at the end of unit, you will have deep understanding of teaching.

8.2   OBJECTIVES

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

understand the concept and nature of teaching;

examine the morality behind teaching profession;

elucidate the interrelationship between teaching, learning, instruction and pedagogy;

critically analyze the different phases and styles of teaching;

discuss various models and maxims of teaching;

reflect upon the condition and consequences of taking teaching as profession; and

understand the role of teachers in the life of learners.

8.3   NATURE OF TEACHING: DUAL NATURE

According to Oxford Dictionary **'Teaching'** means **"impart knowledge or skill, give instruction or lessons, instill and inspire with"**. By analyzing this meaning, we can say that teaching is an activity that facilitates learning. Teacher is a facilitator who tries to satisfy the educational needs of the learners in such a manner that they play important and positive role for the upliftment of society. Thus, a great responsibility lies on the shoulders of teachers— the future of any society. They have to justify their profession. The role of a teacher is full of diversity. The learners look up to them as their ideal, model, guide, mentor, supervisor and much more. The overall personality development i.e. physical, mental, emotional, social, moral, etc. of a learner lies in the teaching of a teacher.

8.3.1   Teaching as Art

Elliot Eisner, in his book *The Educational Imagination* (1985) gives four reasons to consider teaching as an art. They are as follows:

i.   Teaching can be performed with such skill and grace so that both teachers as well as learners experience the whole process aesthetically.

ii.   Teacher's activities are dynamic i.e. they are influenced by various qualities and contingencies and change accordingly. They are not performed in strict routines and regimes.

iii.   Teachers with good aesthetic sense usually incorporate them in their teaching process irrespective of the subject being taught.

iv.   The end of teaching is not pre-decided, it is often created in the process.

Thus the four senses of teaching are- as a source of an aesthetic experience, as dependent on the perception and control of qualities, as a heuristic or adventitious activity and as seeking emergent ends; these prove that teaching can be regarded as an art (pp.175-177).

We can say that teaching can be considered as art because:

Every individual teacher teaches according to her aptitude, ability, personality and knowledge. For example, during teaching of the 'structure of flower', one teacher may explain in traditional method that it consist of four whorls viz: calyx, corolla, androecium and gynoecium and their structure and functions are…. Another teacher may explain in a more aesthetic way to explain it in an interesting manner. The teacher shows a flower of hibiscus to the children. The colour and beauty of the flower will attract learners' attention. One by one, each part can be shown and explained by visual beauty of the flower. Thus the structure can be explained aesthetically.

The kinesics of teacher can be effective in teaching too. The voice, gestures, facial expression, body language and appealing personality of teacher adds beauty to the teaching process.

Artists are who excel in their art; similarly, a teacher highlights her strengths instead of teaching in a traditional manner. The teacher uses her positivity and talents to teach the learners successfully.

There is a flexibility in teaching. There is freedom of expression for both teacher and learners.

The teacher accepts criticism and appreciation both and gives scope for creativity.

It has more of personal touch or we can say humanistic approach is observed.

Here I would like to mention my student life experience regarding our history teacher. Many of us find history boring as a subject. But luckily I got a very brilliant history teacher in high school. Whenever we were not in mood to study in the traditional manner we used to rub 'Hi' from the subject 'History' before she came. As soon as she used to enter the class and see 'story', a smiling face turned towards us and she commented, "Oh, so you want to hear a story". We replied excitedly, "Yes, Miss". Now I realize how easily she taught us about World War, Pearl Harbour, Battle of Panipat, Boston Tea-Party, etc. with the help of story illustration.

8.3.2 Teaching as Science

Many educationists feel that teaching is a 'science'. Its origin can be found in educational thinking in the second half of the 20th century, largely due to the widespread influence of Johann Friedrich Herbart's writings and the ensuing 'Herbartismus' (Lutzker,p.2007). On the basis of this, the teacher training courses were determined from a scientific approach and trained accordingly.

The approach to teach is based on scientific inquiry, logical sequencing of content and systematic dissemination of it. The objectives are set as goal of teaching. The teaching plan revolves round the achievement of these objectives. For this, the activities are logically arranged and taught in traditional systematic manner. Since teachers are accountable for the result of the teaching, they rarely try to deviate from the sequential teaching pattern.

We can say that teaching is science as:

It is systematic, logically planned and executed in the class

Before teaching begins, the objectives are fixed to bring about desired behavioural changes in the learner.

All the tools, techniques and strategies are planned beforehand.

It has an impersonal touch to it.

We cannot forget that after all the content of class level has to be transferred within limited time so approach of teaching is justified.

Humanistic approach may create excitement and interest but good systematic teaching too can do the same.

Recently new pedagogical approaches which are scientific in nature are also equally beneficial as aesthetic approach.

We can say that teaching observes dual role and a teacher must balance both of them so that the main objective of education is fulfilled successfully. Whenever and wherever required, the role of teaching should be interchanged.

Activity 1

Observe few teachers colleagues around you and try to differentiate between teachers who teach keeping humanistic approach and those using scientific approach. Discuss, how you could differentiate between these two approaches?

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Check Your Progress

Note: a) Write your answers in the space given below:

    b) Compare your answers with those given at the end of the Unit.

1.   Which role of teaching (as science/art) do you find appropriate and why?

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8.4 TEACHING AS A MORALLY LADEN ACTIVITY

The development of character has been an explicit aim of education ever since the emergence of common schools and the rise of systems of education (McClellan, 1999). As we have already discussed and are well aware of it that education aims at overall development of a child. Thus the teacher has an important role to play to attain this aim. In other words, it is not wrong to say that teaching is a morally laden profession. There is a struggle going on within the teacher as well as within the society where we usually hear the comments like teaching profession has become a business where only money is reaped and morality is neglected, teachers do not teach properly in class so that they can earn money through private coaching, teachers do not work hard in school as they are paid low salary by the management etc. We cannot overlook or avoid these remarks as they are showing us the mirror of our present youth.

The environment in the classroom has totally become academic and moral development has taken a backseat. The learners also need teachers who impart

them content knowledge properly and nothing else. The affective domain states that the final achievement is characterization but that level is reached rarely. The classroom teaching should be a value laden activity i.e. they form intrinsic part of education. The teacher has to decide by what methods it can be achieved. Any content that is taught in class should also have some value based on look or explanation. This can be incorporated during teaching, interaction between teacher-learner or peer discussion. It is a real challenge for teachers to keep in consideration the moral aspect during teaching process. It may vary like use of moral language, to judging right and wrong deeds, attendance, regularity and respecting relations in the class. Thus a teacher has a huge responsibility while teaching a class. To achieve these following strategies can be adopted:-

This can be taught during training period of trainee teachers. During lesson planning and its implementation, this fact should be taught by teacher educators.

To attain the above objective, the teacher educators should themselves be equipped with this character.

But before this the curriculum is too designed such that moral and ethical aspect is integrated in it.

Teaching should be made effective so that character development is one of the behavioral outcomes of the learners.

It is the responsibility of teacher educators and teacher training institutions to mould the trainees into effective teachers.

Only teachers can help the learners to develop the bond with their school similar to that they have for their home i.e. a sense of belongingness is to be developed.

We all know that school is miniature representation of our society or community. Through teaching the norms, ethics and expectations of the society can be inculcated in learners.

The feeling of brotherhood, communal unity, and strength and community service can help to drive youth towards positivity and thus reduce vices and delinquency in them.

The learners who acquire the above mentioned values excel academically, too.

Teacher has the moral responsibility of taking into consideration the ability and aptitude of learners and guide them accordingly.

Teacher should try to make the class an environment which motivates learners to fare according to their capability and capacity. The learners in the class must have respect and trust for each other.

Teaching should incorporate such activities which shall strengthen the bonding between all in the classroom and all get equal opportunity of expression.

Teacher must teach that character building is higher than academic achievement. Good morality is a precursor for a successful life.

Teacher should not avoid the inquisitiveness of learners related to sex, attraction, drugs, stress, abuse, suicide, bribery etc.

Teacher should arrange workshops on 'life-skills'.

Learners dislike direct lectures on morality. It is upto teacher to try different interesting ways to convey these messages.

Teaching in a class involves cognitive, affective and psychomotor aspects. In our country we are more bothered about the cognitive gain only. NCERT has taken a good step in designing curriculum where teaching involves moral value dissemination with the content.

The value based exercises must be taken up seriously by the teachers during teaching process.

At last we can say that the moral values cultivated in schools have long lasting effect in our life.

Activity 2

During teaching any lesson of your choice (eg: pollution) ask learners what have they observed about pollution. Have they felt the urge to do anything for their environment? Have they participated in any nature friendly activity, if yes then describe it.

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Check Your Progress

Note: a) Write your answers in the space given below:

b) Compare your answers with those given at the end of the Unit.

2. What moral lessons can a science or arts teacher give during teaching. Explain with the help of any topic.

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8.5 INTERRELATIONSHIP BETWEEN TEACHING, LEARNING, INSTRUCTION AND PEDAGOGY

We have already discussed about teaching concept and its nature in the beginning of this unit (see 8.3). So let us move on to understand the term 'Learning'.

8.5.1 Learning

Before understanding what 'learning' actually means, let us go through some definitions given by eminent educationists.

"Learning is selecting the appropriate response and connecting it with the stimulus"- Thorndike

"Learning is the change in behaviour resulting from behaviour"- Guilford

"Learning is an organization of behaviour"-Garret

"Learning is a process of progressive behaviour adaption"-Skinner

When you go through all the above definitions, one thing is common, that is the phrase 'change in behaviour'. The teacher is the one who can facilitate this in

classroom teaching. The teacher must integrate metacognition in the children. The teaching must begin by testing the previous knowledge of the learners and then accordingly begin the teaching of new content relating it to the prior knowledge. This helps the learner to establish a bond with old and new knowledge and thus a familiarity with content arises. This process brings about the expected behavioral change in the learner. This classroom experience is impossible without effective teaching by the teacher.

According to Dashiell, the process of learning involves following steps:

First step is the rise of need and necessity in the learner. At the second step, motivation is received which takes the learner to third step of setting the objectives. The learner becomes active at the fourth step and shows various actions and reactions. The correct responses are imbibed in the fifth stage and try to utilize that to solve other problems at the sixth stage. This revision helps the learner to master it.

When different types of teaching methods, styles and variations (e.g.: group discussing, activity based learning, individualized instruction, discovery based learning etc.) are incorporated in the teaching process then it becomes pedagogy.

8.5.2   Instruction

According to Gagne's instructional events, they should have following learning events:

Gaining attention	• Giving outline in such a manner to draw/capture the learners attention
Informing learners of objectives	• Before beginning the teaching activity the learners should be made aware of the goals set for the content teaching.
Stimulating recall of prior knowledge	• The learners should be brought to the new content after stimulating learners' previous knowledge so that a familiar bond is established.
Presenting the stimulus	• Stimulus variation in a class room teaching keeps the class attentive and active. It helps the class from not being boring or inert.
Providing learning guidance	• During teaching-learning process the learners should be guided by the teacher to avoid any confusion or doubt.
Eliciting performance	• Teacher must try to make class interactive to stimulate and enhance the class activity of learners.
Providing feedback	• Wherever required during instructional process feedback should be provided so that there is minimum deviation from the path of right understanding
Assessing performance	• Evaluation is necessary to estimate the success of classroom teaching experience.
Enhancing retention and transfer	• The transfer of learning is to be ensured and also the transferred content has to be retained for long.

Figure 8.1: Gagne's 9 Steps of Instructional Process

8.5.3 Pedagogy and Its Relation with Teaching, Learning and Instruction

As already mentioned that pedagogy is 'process of teaching'; we can say that it is the discipline concerned with theory as well as practical aspect of education. It elaborates that how best a teaching can occur in a classroom for complete development of the learners. According to John Dewey "Pedagogy involves the organic relation between curriculum and teaching, and it entails study based, socially just and ethically sound practices resulting from negotiations among the teacher, learners and others."

Herbart said that 'pedagogy' is assumptions by a teacher and a specific set of capabilities with a fixed aim. He stated that there is a correlation between personality development and the final outcomes which will benefit the society and mankind as a whole. He suggested five elements which are as follows:

Preparation,

Presentation,

Association,

Generalization, and

Application in order to develop them as an ideal citizen.

As already stated in this definition Pedagogy involves steps which begin the moment is assigned the work of teaching any subject. It can be represented as follows:-

i. Teacher- personality, content knowledge, communication skill, behaviour, style, conduct and character etc.

ii. Organizing various activities- planning the format of teaching, logical arrangement of content, use of supporting aids etc.

iii. Dissemination of the content- Teaching the content according to the step (ii), using reinforcement and motivation, increasing interaction, giving stimulus variation to maintain interest, creativity.

iv. Evaluation of achievements of learners- through oral or written test, observation or continuous class evaluation to see the positive change in behaviour.

[Note: Piaget, Bruner, Vygotsky etc. are some who worked a lot on the science of pedagogy.]

Let us discuss more about the relationship amongst teaching, learning, instruction and pedagogy.

"*Teaching is the stimulation, guidance, direction and encouragement of learning"*- Burtan.

It is rightly defined in the above sentence that teaching paves the way which directs an individual for learning.

The teaching process takes the learner along with himself in order to stimulate, promote and endorse learning.

Learning occurs on the basis of some principles and laws (laws of readiness exercise and effect etc.); if these are followed in teaching methods, learning becomes more effective.

Pedagogy targets teaching which prepares for future life such as social skills and cultural norms and ethical beliefs.

Instruction is teaching to help procure knowledge and skill which is more well-organized, resourceful, effective and engaging.

Paulo Freire referred to his method of teaching as 'critical pedagogy' in correlation with instruction, the instructor's own philosophical beliefs of instructions are harboured and governed by pupil's background knowledge and experience, situation and environment; as well as learning goals set by the learner and teacher. e.g. : Socrates school of thoughts

Robert Gagne's main focus was instructional theory i.e. how to connect instruction and learning systematically.

Usually teaching and instructions used synonymously as there is very little but important difference between the two. Teaching begins its journey much before it comes into action in the classroom whereas instruction begins only when the teacher enters the classroom.

Learning is a sequential process which begins with teaching, progresses through instructions while obeying the pedagogy and results into behaviour change in the learner.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

3.   What is the relation between teaching and instruction?.

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8.6 CONCEPTS RELATED TO TEACHING

Teaching involves various facets in it. The different aspects attached to it decide its success rate and level. Teaching involves teaching styles, teaching content, teaching methods, techniques, strategies, environment of the classroom etc. The appropriate concoction can make teaching effective and impressive. Let us discuss few of these in detail.

8.6.1 Teaching Styles

Let us begin with an activity.

Activity 3

Observe few teachers when they are teaching in class. Just try to observe their style and mannerism of teaching. List what are positive and impressive points you liked and those you disliked which you would like to avoid in your teaching style.

Figure 8.2: Various Teaching Styles

Source: [https://www.pininterest.com/angel_lady/teaching_style]

As the above figure clarifies, all teachers try different styles of teaching according to the situations and there are factors which affect the teaching styles. All the mentioned factors like personal, professional, knowledge, curriculum, institutional and career-stage factors. Actually, dominance of any one or more of these factors in teaching process decides the style. Thus we can say that there is no such fixed teaching style which will lead to effective and successful teaching.

Effective teachers use mixture of styles and they are well aware of how and when to choose the most suitable one for teaching.

Daniel K. Schneider thinks that *teaching style* refers to the teaching strategies and methods employed plus use of certain kinds of rhetorics.

On the other hand Galton states that the term 'teaching style' has no agreed definition but the more widely accepted definitions refer to it as "a set of teaching tactics".

Thornton, B. Paul (2013) has suggested three basic teaching style:

' **The directing style:** This style is basically based on instructional based teaching. The teacher guides the learners through whole teaching learning-process going on in the classroom. Usually methodologies used during teaching are lecture, demonstration, lecture-cum-demonstration, AV presentation, reading, writing etc. In this style the teacher ensures that all the learners follow instructions and guidelines properly. This is almost traditional type of teaching.

The discussing style: In this style the learners get a bit more freedom of speech and open environment to discuss their point or question. The teacher-learner interaction is quite obvious in this style. Here the teacher acts as a

facilitator who gives immense opportunity to the learners to think critically, analyze and discuss. The teacher ensures that there is relevance and logic behind discussion. Learners' creativity and thought process is activated and they become more opinionated.

The delegating style: In this style the learners are entrusted upon with their assignments. The learners do their allocated assignments individually and independently. During this process the teacher gives them the authority to decide how to work; which will ensure success in performing their task.

SUGGESTIONS FOR ADOPTING EFFECTIVE TEACHING STYLE

Teaching style must be such that both teacher and learners are clear about the content to be taught and its objectives.

Triple 'C' i.e. Clarity, Conciseness and Comprehensiveness are the essence which should be included in any good teaching style.

Any confusing, dicey or ambiguous contents are not acceptable by learners so they should be avoided.

Confidence in a teacher regarding content knowledge is essential.

Teacher should always be ready for any unexpected situations, too. This enhances his teaching style.

Unbiased and non-partial teachers are always respected. All learners must be given equal opportunities during class activities.

At the end we can say that teaching style is an individualized talent which has to be developed by oneself.

8.6.2   Teaching Models

"School faculties and individual teachers create life in schools by models of teaching, they choose and create."-**Bruce Joyce.**

As discussed above, one needs a good teaching style but with that the teacher must be aware of the teaching models that should be used in classroom. The teaching has to be given a direction and for this a proper draft or format is helpful which we can call as teaching model. As an architect makes a detailed plan of the building to be constructed on a paper similarly a teacher has to be prepared with a design or idea before teaching the learners.

Paul D. Eggen has rightly stated that models are prescriptive teaching strategies designed to accomplish particular instruction goals. A teaching model helps a teacher to reach out to all the learners effectively and successfully.

FEATURES OF A GOOD TEACHING MODEL

It should be interactive in nature.

It should help for better performance of both teacher and learners.

It should have both philosophical and psychological background.

It should complement the content which is to be taught.

It should help in building interesting and motivating environment in the classroom.

It should help in developing creativity and innovative ideas in teacher as well as learners.

It should help in bringing out the expected behavioural changes in the learners.

It must be viable in recognizing the strengths and weaknesses of the learners and assess them by their feedbacks.

FUNDAMENTALS OF TEACHING MODELS

i.   **Focus**: It is the axis of any teaching model i.e. the main objective for whom it is to be used.

ii. **Syntax**: All the dimensions of the model are organized sequentially.

iii. **Principle of Sensation**: The concept of action-reaction is to be maintained to create a bond between teacher and learner.

iv. **Social System:** The bond and interaction between teacher and learners should prepare them for the society by bringing behavioural change according to the norms of society.

v.   **Support System:** The model should be as a supplement to the regular teaching process which enhances the teaching effectiveness and learning experiences.

vi. **Application Perspective:** The use and presentation of the model should be according to the content to be taught.

Types of Teaching Models

There are **four types** of models:

Figure 8.3: Models of Teaching
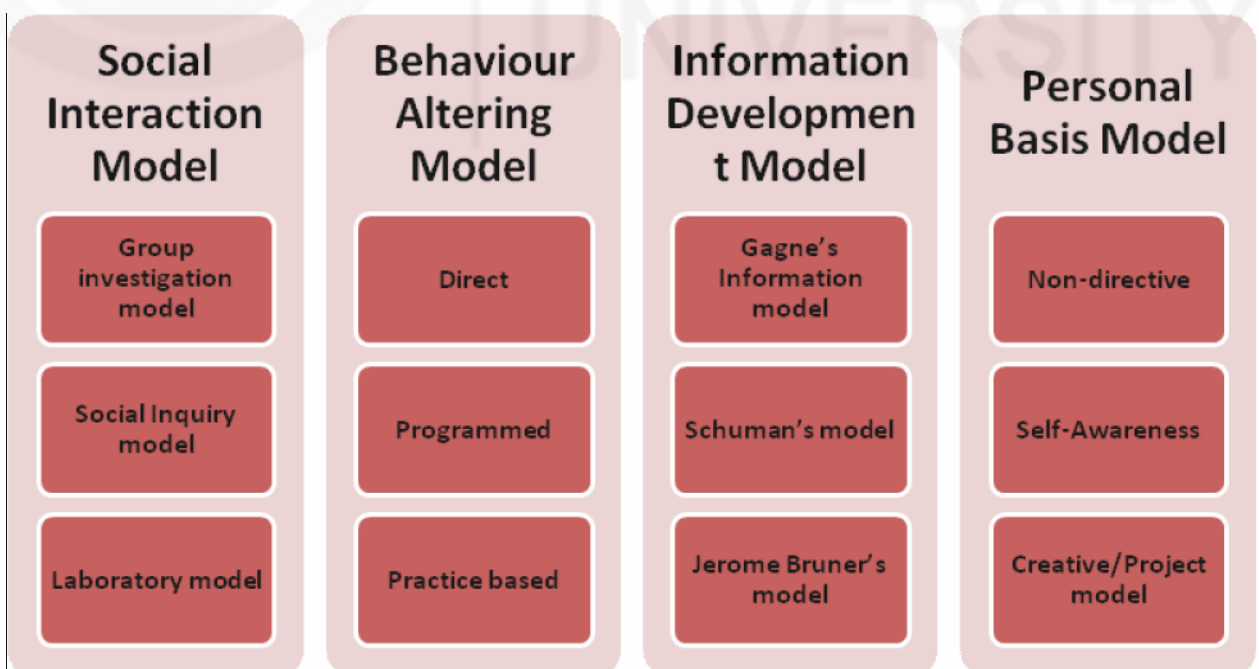
1. **Social Interaction Model**

    – **Group investigation model** is given by John Dewey and Herbart Thelim. It is a source of social interactivity which includes working in a group consisting of both pro- and anti- type of personalities.

    – **Social Inquiry model** is given by Benjamin Cox and Byron. It deals with social and humanity related topics which are researched and proved with the help of data.

    – **Laboratory model** is based on the experiments to be undertaken in science or biology subjects

2. **Behaviour Altering Model**

    – **Direct model**: It is almost like directive style of teaching discussed earlier in this unit. Teacher takes the main position of class and guides the learners through the class.

    – **Programmed:** It is programmed instruction style of teaching i.e. CAI (computer assisted Instruction) where computer and web technology is used for teaching. It was first given by B.F.Skinner.

    – **Practice based:** It involves teaching with the help of suitable methods; aids etc. and then after getting feedback arrange remedial classes to get mastery over the content.

3. **Information Development Model**

    – **Gagne's model** deals with sensory memory. It depends on memorization and practice. There are various aspects like learners' readiness, motivation, perception, transfer of learning and retention

    – **Bruner's model** is based on the fact that all the objects or events in this environment have relations with each other. Our surrounding has so many complexities that it can be understood by classifying them into smaller parts.

    – **Schuman's model** is based on the strategies and assumptions used by scientists. It is basically scientific inquiry model. The problem is solved by both teacher and learners following scientific approach.

4. **Personal Basis Model**

    – **Non-directive model** was given by Carl Rogers. He believed in concept of human relations and thus suggested instructions to be based on this model. This is similar to discussion style of teaching as discussed earlier.

    – **Self-Awareness:** It was given by Fritz Pauls and W. Schutz**.** Here, the development of self is emphasized where the innate strengths and creativity of learner is given freedom to grow. This gives them opportunity to know about themselves and their peers.

    – **Creative model:** It was given by William Gordon which states that projects can be assigned to the learners and they can learn by doing themselves. Teacher is just a supervisor and the learners either go in for field work or prepare a project on any activity. It is quite similar to delegate style of teaching.

8.6.3 Teaching Methods and Approaches

Teaching methods and approaches play an important role during teaching of content. Teacher must be capable enough to decide which method will suit the learners. The teacher is guided to impart education with correct approach of teaching.

"An approach may be explained as a comprehensive way of dealing with a particular problem. It is a general plan of action, on the basis of which, various methods and models are evolved. However a method is an orderly and logical arrangement of ideas based on a particular approach. It is a procedural illustration of systematic and clearly defined steps of accomplishing particular objectives. An approach hence can be called as a precursor on which a method is designed (extract taken from IGNOU, SOE, 2009, p. 31).

There are many methods used by teachers depending on the level of class, curriculum, interest of learners, availability of resources etc. The methods used may be teacher centered or learner centered. When planning a lesson to be taught in the class, a teacher has to analyze many aspects of using approaches for teaching. This planning varies from person to person. Let us take up some important and frequently used methods in detail.

1. **Lecture method**: In this method the teacher plays a major role whereas learners have minor or no role to play. This method is useful for higher class where syllabus is vast. This method is commonly and frequently used in the classroom. But there is tendency of lecture becoming boring many a times. Therefore the teacher must try to plan her lecture with interesting tools like illustrations, experiences, anecdotes etc.

2. **Demonstrative method**: This is a very common method used in science and mathematics teaching. The senses of sight and hearing make the learner more alert. The drawback is that learners are not allowed to handle the equipment used in demonstration. This can be seen in many schools where computer classes are run. The teacher demonstrates by using computer in front of learners but they are not allowed to touch the sets. It is very clear that this hinders in complete transfer of the content to the learner.

3. **Lecture-cum-Demonstration method**: This is just the concoction of both the methods discussed above. The best of both methods can be used by the teachers for better results. This is almost teacher centered. For eg: In science, when different types of lever are to be explained teacher can bring real objects for demonstration like scissors, pliers, tongs etc. By showing these objects, she can give explanation too.

4. **Heuristic/Discovery method**: According to Prof. H.E. Armstrong, "The soul of the learning of science is exploration. The learners should explore the facts and principles themselves." This definition clearly explains that 'heuristic' means finding through experience. To get experience one has to strive for exploration. By this method, the learner reaches the solution and learns from it. This method is very good for higher classes since it is a learner centered approach. The teacher can guide the learners through this journey and also supervise so that the learner does not lose his path. This helps learner to achieve confidence in himself. Besides, he starts thinking at higher level and is motivated by his inquisitiveness. But again the same limitation is faced i.e.

it alone cannot be a beneficial method; it has to be combined with some suitable ones and then teaching should proceed.

5. **Problem solving method**: "Problem solving is a set of events in which Human being wants to achieve some goals"-Gagne

A child cannot solve a problem unless and until he has a sense of familiarity with it. Thus the problem should be such that it motivates and attracts the learner to try to solve it. The problem solver must be aware of the nature of the problem and whether it is practical for him or not. If the objectives are clear, the learner will involve himself wholeheartedly finding the solution. Ausubel states "Problem solving involves concept formation and discovery learning." The steps to be followed in this discovery learning method must be outlined by the teacher. The main steps are:- Problem; Why it is taken up; Hypothesis framing; Data collection; Analysis of data, Interpretation and conclusion.

This method is commonly used in mathematics, physics, chemistry etc. During this method the learning process sometimes gets slowed down. This is because many learners are slow in this process and their problems are taken up by the teachers then.

Activity 4

Ask the learners to place some iron nails outside in the open environment. Tell the learners to bring those nails to show in class. What was the reason that iron nails have become brown whereas the painted iron window was shining as usual?

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6. **Project Method:** They can be of two types. One, when some static or working model is made as in science or social science. Second is the investigatory project where some research or survey is done and then a report is made based on the findings. This method also comes under experimental method or laboratory method. This method was given by Kilpatrick- "A project is a wholehearted purposeful activity proceeding in a social environment". This method is helpful in bringing out the creative and investigating aspect of the child. It requires lot of logical thinking. But again the same limitation occurs that in itself it is not a perfect method of teaching.

7. **Inductive and Deductive method:**

   Inductive method is moving from specific to general and deductive method is from general to specific. Specific facts or examples are given and the learner reaches generalization and vice versa for deductive approach.

   Let us understand this with the help of an example:-

   "Electricity consumption is increasing day by day. The electricity cost has increased. The petrol and diesel prices are rising. The coal deposits are depleting. Forests are reducing day by day."- all these statements can be generalized into one sentence and that is "Natural Energy Resources are decreasing with increasing population." –Inductive

Another example-

"Save Natural energy resources". Population is increasing and so is the consumption of natural resources. Forests should be protected and massive plantation should be done. Mining should be controlled. Country should now move towards generating electricity by nuclear energy instead of coal. People should move through public transport or opt for car-pooling, electricity at home should not be wasted unnecessarily.-Deductive

8. **Analytic & Synthetic method**

Analysis means taking a big or complicated problem or concept and trying to understand by breaking into smaller units to understand better. In this method, we move from unknown to known or from conclusion to hypothesis.

Let us understand with the help of an example-

"Stomach is an organ made up of group of different kinds of tissues". Now the analysis of the various tissues is done i.e. the different kinds of tissues like epithelium, squamous, columnar, connective, blood tissues etc. are analyzed.

"During the reign of Akbar people of all religion progressed a lot and lived with love and brotherhood". Now the rules and regulation under his rule, various developments like buildings, economy, culture, equality etc. are analyzed to prove the above statement.

Synthetic is just opposite of analytic method. It proceeds from known to unknown or from hypothesis to conclusion. It is as if you are given two hands, two legs, one head, one trunk and asked to join together to form a human body. But a human body will be made by joining together depends on your knowledge about the structure of human hand, leg, head etc.

We can say that analysis insists on discovery and synthesis depends on memory.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

4. According to you which combination of teaching methods you find the most appropriate one to teach lower secondary learners.

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8.7 PHASES OF TEACHING

All of you must have observed that teaching is a process which occurs in different stages. Philip Jackson divided teaching operation into three phases and they are-Pre-active, Interactive and post-active phase. Let us discuss them individually so that we can understand what role they play to make a teaching process complete.

8.7.1. Pre-active Phase

We can say that it is the preparation before actual teaching begins. Before entering the classroom teacher must be well prepared with her tools/ equipments. Teacher must be ready with her planning and how to implement them in the teaching process. This phase includes full proof preparation and scheduling before commencing any action in class.

Steps at this stage:

Fix the aims and objectives- Before beginning actual teaching the instructor must be aware of the goals to be achieved at the end of the process. The aims are fixed keeping in mind the level (interest, capability, aptitude, psychology, background etc.) of learners, content, and expectations (of teacher, learner & society) etc.

Sequential arrangement of content- After fixing the goals, we move to the next level of analyzing the content target we have to analyze deeply. As we know the level of learners, the analysis of the content should be done accordingly. During this process it should be fragmented into small, simple pieces which learner can understand. But these fragments must be organized sequentially and they must have cohesion between them. This will guide the teacher to proceed logically in the classroom.

Since the aims are clear and matter is organized, the teacher must prepare strategies to accompany the teaching and make it more interesting and creative. Efforts should be made to make learning experience of learner as effective as possible. These strategies may include the teaching style, model of teaching, method and techniques for transfer of learning. The teacher has to decide which method should be used through which any particular content should be taught effectively.

8.7.2   Interactive Phase

According to Jackson, "In the interactive stage, the teacher provides pupils verbal stimulation of various kinds, makes explanation, asks questions, listens to learner's response, provide guidance etc. At this stage the teacher is now in the classroom with proper equipment. Now actual teaching-learning process is introduced. Interactive process occurs between teacher and learners wherein teacher presents new content by linking it with previous knowledge of learners. Also the learners try to absorb the experiences of classroom teaching. Cross questioning may occur many a times in this process and repetition of some content may be requested by the learners. Teacher's activity at this level is based on the objectives set and planning done before coming to the class. The main activities performed at this phase are-

First of all the teacher must have a quick glance and overview of the class.

An attempt should be made to establish a connection with the learners so that they feel a sense of familiarity.

A quick review of the level of class, their interest, aptitude and ability should be done by asking questions based on the previous knowledge.

After judging them, teacher must utilize proper method and techniques to present the content before the learners.

Communication process must be two way process so that it is an interactive class. It will help the teacher understand whether learners are getting the points as the teacher has presented.

The presentation as discussed is two way communication therefore when good response from the learner comes teacher must give reinforcement generously. This will motivate the whole class to put in more effort to analyze and respond.

Besides this teaching must be accompanied by stimulus variation, audio-visual aids, activities etc.

8.7.3   Post-Active Phase

This phase can be termed as winding up of the teaching process or in other words it is the beginning of new, better and modified teaching process of the same content. It begins as soon as the teaching process comes to an end. This phase is an acid test for a teacher because evaluation begins to check how far the teacher has been successful in achieving the objectives and bringing out the desired behavioural changes in the learners. Also, teacher is able to decide what technique, tool and strategy are beneficial in the classroom teaching. Let us recap with the help of a figure.
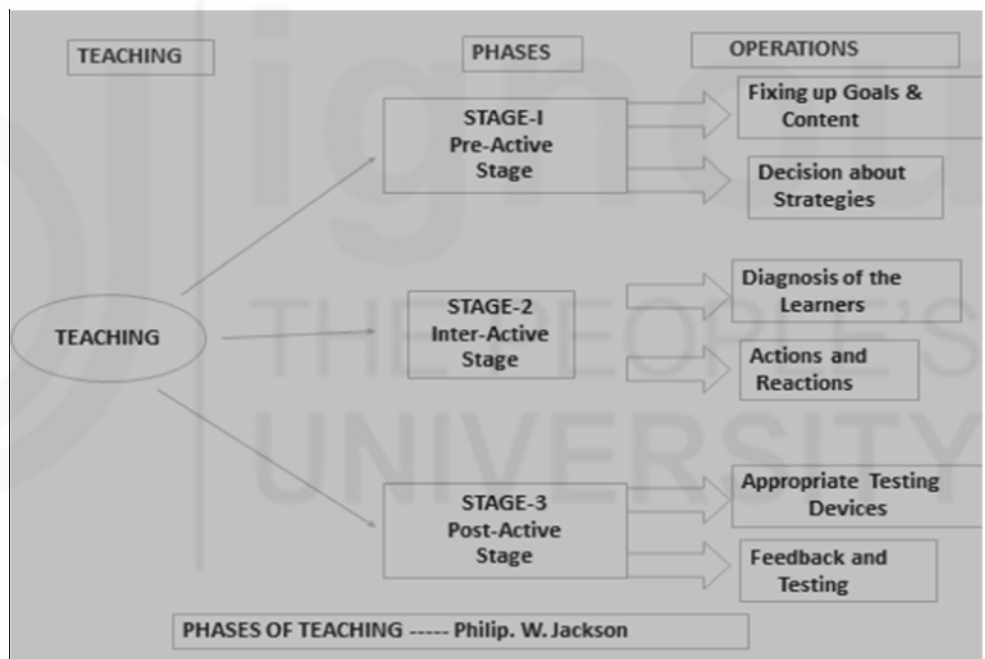
PHASES OF TEACHING ----- Philip. W. Jackson

Check Your Progress

Note: a) Write your answers in the space given below:
    b) Compare your answers with those given at the end of the Unit.

5.   Discuss role of a teacher in interactive phase of teaching.

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8.8   MAXIMS OF TEACHING

Maxims are nothing but simple guidelines or principles which help the teachers to take decisions and act accordingly during the teaching process. According to definition given by Richard, "Teacher's maxims appear to reflect cultural factors, belief systems, experience, training and the understanding of which maxims teachers give priority and how they influence teachers' practices is an important goal in teacher development". Let us see what features these maxims must have:

They motivate the teacher

Help teachers take decisions during teaching

Make teaching interesting, creative and purposeful

Make teaching a simplified affair

Make teaching organized and effective

Content of Maxims of Teaching

In a classroom, teacher can decide the activities which will help the learners to grasp the content. Therefore the maxims of teaching must have the following content. It should be from

a)   **Simple to complex**: It is the psychology of a child that he wants the content in simplified form. Therefore the teacher must move from simple facts and then take learners towards a little more difficult state.

b)   **Known to unknown**: When the teaching starts from previous knowledge to new content to be taught, the learner does not find difficulty in moving from known to unknown.

c)   **Concrete to abstract:** This is based on the principles of psychology. When a learner percepts anything or event in its real and physical form he connects to it easily. Then he can be driven towards more immaterial and intangible facts or events.

d)   **Direct to indirect**: Whatever is to be taught cannot be put straightaway before the learner? It should be connected to the facts already known to him.

e.g. If topic 'Acid' is to be taught then learners should asked about sourness, sour fruits, cause for sourness, citric acid and then we can teach them about mineral acids.

e)   **Particular to general**: Specific facts are presented before the learners and these are joined in organized manner to reach a generalized statement.

f)   **Analysis to synthesis**: It is based on the principles of associative psychology. Whenever we come across new theory, we try to analyze it and then assimilate it into one. For eg- In biology we learn about cell and then tissues and organs later. In the end, we study about the whole body composed of different organs.

g)   **Empirical to rational**: The first-hand knowledge given to the learners is real and pragmatic which he gets from his own experiences and then it moves on to more balanced and sensible content.

h)   **Psychological to logical**: It is considered during the pre-active phase of teaching where the content is arranged in such a manner where the priority

is the learner's psychology (like interest, ability etc.) and then real teaching comes in logical manner from simple to more complex.

i) **Whole to part**: As insight theory states that any object or incident should be viewed as a whole and then it is considered in parts. A teacher when presents a content or topic to the learners as a whole then it is broken into small units and then dealt with them

j) **Indefinite to definite**: The content to be taught in the class may be definite for teachers but may not be so for the learners. Therefore the teaching style should be such that the learners are able to get direct knowledge which is possible only when they are familiarized with it.

8.8.1 Levels of Teaching

Whenever a teaching happens in classroom, a proper ranking must be to the levels of teaching. By this the cognitive, psychomotor as well affective development may take place. Bloom has given taxonomy describing the levels according to the cognitive development. The teaching level is necessary to increase the level of thinking and learning.

According to Hokanson and Hooper, there are five levels of teaching. Each level is based on the previous type of activity.

Level-I: **Reception-** At this level the learner is there to receive information. The teacher has to give answers and responses. Many of the teachers tend to do all the activities in this level only but this does not lead to good result. This level is just a settling level for learners both physically and mentally. We can say there is one way communication from teacher to learners.

Level-II: Application- Now interaction between the teacher and learner begins. It may be in the form of question, inquiry, discussion etc. At this level, the class becomes more interesting and creative. The level of thinking and analyzing the concepts increases.

Level-III: Extension-As the word implies the learned content is taken a step further and the gained knowledge is used in new situation.

Level-IV: Creation- Now the level of knowledge has reached a higher level and learner is able to solve a problem in his own way. He is able to face more complex problems and tries to find multiple ways to find solution. The teacher helps the learners to guide and supervise them.

Level-V: Challenge- Now learner is ready to challenge his own limits. He dares to take exploratory attitude towards challenges.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

6.   Discuss role of maxims of teaching citing examples from your classroom teaching experiences.

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8.9   TEACHING AS A COMPLEX ACTIVITY

As already discussed teaching has dual nature i.e. as an art and as science. The nature of 'teaching' as an art means creative, natural and intuitive. The science of teaching means using research, inquiry and exploration methods to teach. Thus, teaching becomes a complex activity which requires distinct skills and abilities.

Teaching is a challenging job which involves numerous dimensions like:

Being intelligent with good IQ

Knowledgeable enough to satisfy learners' quest

Logical preparation and presentation with clear objectives and goals

Rational and sensibilities to be shown and developed in learners

Strength, both physical and mental, able to face stress and criticism

Expressive with ideas and thoughts without fear and apprehensions

Fervent and ardent i.e. enthusiastic and zealous towards his work

Warmth and empathy in order to bond with class

Sensitive towards learners who face problem

Simultaneously upgrading and updating oneself with new discoveries

Orienting oneself by continuous short term courses or workshops

Evaluating oneself and learners

Be updated with curriculum and content

Using innovative strategies in and out of class settings

Other miscellaneous work other than class teaching

Working directly or indirectly for the society etc. and much more; the teacher has to perform accordingly which is very tough.

All the activities have to be performed keeping in mind the level of school (govt., private, public, convent, rural, urban etc) and children (their interest, ability, attitude, background etc). Usually the teachers who undergo teacher training are somewhat prepared for the real teaching job. During teaching they are trained in many of the aspects discussed above but sometimes the real life situation takes a toll on the new teacher. The teacher has to face many challenges during the job period. Some learn gradually and some succumb and leave the job. Thus trained teacher must be made aware and oriented accordingly to face the practicality of the teaching job. It is better that trained teachers pass out confident enough to face the teaching job full with complexities. The future of many learners is in the hands of a teacher therefore keeping in view the individual difference among learners has to be tackled. Also the teacher has to strive for the holistic development of learners. Not only this, learners as well as teachers performance is evaluated which specifies their progress. Thus we can see that teaching is a multi-faceted activity. After evaluation step the feedback has to be collected so that the teaching can be modified into better activity. The weak learners should be tackled in such

a manner that they do not feel inferior. Teacher in herself is a learner who adapts daily to the new situation. With so many roles to play teaching is surely a complex activity.

Activity 5

Make a list of any teacher he / she performs during teaching in and out of the classroom. Compare your list with others to see if you find some other activities which you have missed.

Check Your Progress

Note: a) Write your answers in the space given below:
    b) Compare your answers with those given at the end of the Unit.

7.   Teacher has a multifaceted role to play. Justify this statement with the help of an example.

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8.10   TEACHING AS A PROFESSION

Let us go back to Vedic period when "*Guru*" and his teachings were deeply revered. The pure and unselfish bonding between *Guru-shishya* was prevalent at that time. His position was considered above the God because he showed the path to reach the divine power.

> " *Guru Gobind Dau Khade, Kake Lagon Paun;*
> *Balihari Guru Apne, Gobind Deo Bataye."*

But today the conditions have changed a lot. It is now the last opted profession. Those who go in for teacher training courses do so to get a government job. There are very few people who really want to do teaching with nobility. Besides, there has been mushrooming of coaching institutes around us. The teachers lure or force learners to join their coaching institutes as the salary packages in private institutions are less. They all are responsible for changing this noble profession into a money raising business. The various creative and innovative ways to teach learnt during training classes are rarely followed when actual teaching occurs. They don't want to take the pains or waste time and energy on these activities instead just try to wind up the course allotted. This is the reason respect for a teacher is at its minimum and empathy for learners is no more there. This is just cheating the small children who look up to their teachers as their role models or ideals.

Teaching like any other profession must be given the same respect. Engineers, Doctors, Architects, Officers etc get good salary package which private teachers do not get. The salary and working conditions in school need revamping. This

profession will get its due when all of us work for its upliftment as a profession. Teaching is in need of its well-deserved position in society. Teachers should be given role to take part in professional decisions, diagnosing related needs, planning instructional programmes and evaluation policies.

The school organizations should adopt professional relationships and recruit teachers on the basis of eligibility criteria and refrain from employing inexperienced teachers to save money. Because inexperienced teacher causes more dents than no teacher. Therefore, a standard has to be maintained. On the other hand, teachers should also show professionalism and work with sincerity and dedication.

Activity 6

Just think without biasness why you are pursuing this course. Have any goals or aims in your life that can be fulfilled by this profession? Introspect and write it in the space given below.

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Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

8.   What are your expectations with teaching profession and what efforts will you put in to make a difference in the school you work.

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8.11   ROLE OF TEACHER IN PROVIDING DYNAMIC CURRICULAR EXPERIENCES

We all are well aware of the many faceted role of a teacher. "Brown Douglas (2007) mentions that teachers can play many roles in the course of teaching and this might facilitate the learning. Their ability to carry these out effectively will depend on a large extend on the rapport they establish with their learners and on their own level of knowledge and skills,"

A good teacher is aware of the dynamics of a classroom. The teacher has to maintain a conducive environment in the classroom and provide them with experiences through her experiences. The role of teachers is changing very fast. Now they have become more of facilitators providing knowledge of content and the curricular experiences. For this the teacher has to play the role of a creator

also as he has to develop the learners on the experiences of his own. This cooperative curriculum based experience in the classroom develops reflective level of thought process, operative skills and recent developments in the field of education.

In today's education scenario interdisciplinary approach has become common. So a teacher can use her knowledge in different fields to give knowledge to the learners. In this way, good concepts and experiences of different disciplines can be incorporated during teaching. The only thing to be kept in mind is that these experiences are only limited to curriculum and no irrelevant and complex things are discussed. Today a teacher's role has become challenging when so many technological advances has taken place. In the age of Globalization teacher is not only the resource but various search engines of internet are there. And for this the teacher has to instill in them a sense of responsibility when using this source of information.

Ways of providing dynamic curricular experiences

Learners must be made aware that curriculum covering is not at all theory driven but there are other aspects attached to it.

It involves healthy communication and interaction within and outside the classroom.

Whatever the curricular developments are there, the positive behavioural outcome should be the ultimate goal.

The teaching style, method, strategies, approaches etc. should be modified according to the curriculum changes.

Curriculum development should be according to the human development

The instructor of the class has to plan and engineer his role according to the curriculum with respect to the learners

The teacher has to be clear of the objectives related to curriculum instruction and the learners also have the right to know about these objectives.

Curriculum should not limit either a teacher or the learner. They should get opportunities to explore avenues related to the content.

We must understand that curriculum is developed with psychological, philosophical, and social context but these have dynamic nature so does the curriculum. Here teacher has to be updated with these modifications.

The curriculum is not to be tackled superficially but rationally.

At the end of curriculum transaction it is the child only who matters. It is upto him what he 'wants' to receive; but the teacher can help and guide him through this process which is in harmony with society, environment and himself. There should be minimum scope of conflict.

Activities and aids to be used should be used flexibly and interdisciplinary approach has to be used.

Integrated curriculum is the new concept which helps teacher to perform effectively.

We must not forget that the technological advancement has changed the role of teachers drastically.

Curriculum gives a defined path to teachers and learners for smooth teaching learning process.

A successful curriculum is one which engages both the teacher and learner to enhance the performance of both as well as institution so that a society benefits from it. Also the dynamics of curriculum must be known to the teachers as well as to the learners.

8.12   LET US SUM UP

In the unit, we tried to understand the dual nature of teaching where it shows both aesthetic and scientific approach. There are certain responsibilities, duties and rights of a teacher towards his/her profession that have been taken up. The teaching must inculcate the values and prepare an overall developed individual who can adjust in the society. Teaching has a wide spectrum all around it. All these were discussed with respect to different teaching styles, methods, approaches, phases and maxims. How teaching should be taken up at different levels was also detailed. At the end the dignity of teaching profession and need and ways to uplift were also critically seen.

8.13   UNIT END EXERCISES

1.   Discuss the dual nature of 'Teaching'

2.   What is the relationship between 'Pedagogy and Instruction'.

3.   What is the difference between (a) inductive and deductive approach (b) Analytic and synthetic approach of teaching

4.   What is the importance of Post-active phase of teaching?

5.   Describe maxims of teaching.

6.   What difference do you find between teaching and other professions?

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8.15   ANSWERS TO CHECK YOUR PROGRESS

1   Answer based on your understanding.

2   Explain based on your classroom experience.

3   Teaching is the stimulation, guidance, direction and encouragement of learning. Teaching begins its journey much before it comes into action in the classroom whereas instruction begins only when the teacher enters the classroom. We can say that instruction is a part of teaching process in the classroom.

4.   Answer based on your observation & understanding.

5.   The interactive stage is where the teacher provides pupils verbal stimulation of various kinds makes explanation, asks questions, listens to learner's response, provide guidance etc.

6.   Answer based on your classroom experiences.

7.   Justify as per your understanding.

8.   (i)   They make teaching simplified

      (ii) They make class more creative and interesting

UNIT 9   PLANNING TEACHING-LEARNING

Structure

9.1   INTRODUCTION

Teaching and learning are purposeful activities. Teaching is directed towards certain desired learning in learners to unlock their potentials. Proper Planning for teaching-learning is essential to ensure that all learners engage in a meaningful learning. Planning is a vital component of the teaching learning process which provides a complete structure and context for both teacher and learners to accomplish the educational goals. Planning can be organized in several ways on a variety of levels and can occur at annual/ year levels, at unit levels and lesson or topic levels.

In this unit you will be familiarized with the various aspect of planning for teaching and learning. It discusses various considerations for instructional planning in classroom. Annual planning, Unit planning and Lesson Planning will be elaborated in detail. You will also know about the concept mapping as a technique for content and pedagogical planning and Constructivist Lesson Planning.

9.2 OBJECTIVES

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

* state the meaning of instructional planning;

* state the various considerations for instructional planning in classroom;

* define an annual plan, unit plan and lesson plan;

* differentiate among an annual plan, a unit plan and a lesson plan;

* prepare an annual plan, a unit plan and a lesson plan in your subject of study;

* explain concept mapping as a technique for content & pedagogical planning; and

* develop your lesson plans based on constructivist practices.

9.3 CONSIDERATIONS FOR INSTRUCTIONAL PLANNING IN CLASSROOM

Instructional planning aims to organize instructional activities effectively. It incorporates the process of using appropriate curricula, instructional strategies, and resources during the planning process to address the diverse needs of learners. While considering the instructional planning, it is important to recognize that learners in schools form enormously diverse groups. Formally and informally both teacher and taught constantly interact with the school environment during structured or unstructured time. Instructional planning depends upon several factors. Some considerations for instructional planning are as follows:

9.3.1 School Environment

A school environment is a broad term that incorporates several facets of schooling. It sets the platform for external factors that affect the whole teaching learning process. A positive school environment must have appropriate physical facilities, well equipped and managed classrooms, good peer support, and adequate health facilities provided by school which must be regulated through effective policies and practices of discipline. Meaningful school environments have significant influence on teacher as well learner outcomes. A positive school environment influences the attendance and engagement of learners in school. In general, curricular and co-curricular success of learners is related to attendance and engagement of learners in various school activities. Fair and rational school discipline policies and behavior management practices also encourage learners to attend the school and achieve success. Hawkins, Catalano, Kosterman, Abbott, & Hill (1999) reported that when learners find their school environment to be supportive and caring, they are less likely to become involved in abuse, violence, and other problematic behaviors. Poor school environment is strongly linked to poor achievement, low attendance and low learner disengagement. Caring and supportive school environments contribute to learners' academic attitudes, motivation, engagement, and goal setting. It is the prime responsibility of the school to set positive and supportive environment.

Schaps (2005) mentioned that the school environment is shaped by many factors:

- The school's espoused goals and values

- The principal's leadership style

- The faculty's teaching and discipline methods

- The policies regarding grading and tracking

- The inclusion or exclusion of learners and parents in the planning and

decision-making processes.

9.3.2 Physical Environment

Physical environment of school refers to the material and tangible conditions of the school. It includes Natural environment (air, noise, water, green space, etc.), Built environment (building, infrastructures, roads, transport systems, etc.) and Socio-economic and Cultural environment (the social and economic characteristics of the societies and communities in which the school is placed).

WHO (2003) defines, **The physical school environment encompasses the school building and all its contents including physical structures, infrastructure, furniture, and the use and presence of chemicals and biological agents; the site on which a school is located; and the surrounding environment including the air, water, and materials with which children may come into contact, as well as nearby land uses, roadways and other hazards.**

The physical environment of school is a key factor in the overall health and safety of learners and staff. It must be designed and maintained to be free of health and safety hazards and promote learning. School policies must be practiced to ensure food protection, sanitation, safe water supply, healthy air quality, good lighting, safe playgrounds, violence prevention, and emergency response, among other issues that relate to the physical environment of schools. The Education Commission (1964-66) had mentioned that large classes would do 'serious damage to the quality of teaching'. It further reported that 'in crowded classrooms, all talks of creative teaching ceases to have any significance'. Learners' achievement can be affected either positively or negatively by the school environment. Earthman (2004) *rates temperature, heating and air quality as the most important individual elements for learner achievement*. Good physical elements in the classrooms improve comfort, well-being and achievement. Schools must offer a physical environment to promote and provide opportunities for physical activity like recreation and sports as it is necessary for optimal health and functional capacity. It also counteracts disabilities and diseases common to ageing.

9.3.3 Psychological Environment

A psychological environment based on the interaction of teacher and taught is created beyond the physical environment. A positive psychological environment responds positively to "All" learners irrespective of diversity among learners. It ensures inclusiveness by welcoming all children regardless of their gender, socio-economic status, ability, and language and recognizing the value in all people. A Positive Psychological environment enhances achievement. According to Graetz (2006), *Environment that elicits positive emotional responses may lead not*

only to enhance learning but also a powerful, emotional attachment to that space. It may become a place where learners love to learn, a place they seek out when they wish to learn, and a place they remember fondly when they reflect on their learning experiences. It satisfies learners' basic psychological needs for safety, belonging, autonomy, and competence. Watson (2003) as quoted by Schaps, (2005) mentioned that when *these basic needs are fulfilled, learners are more likely to become engaged in and committed to the school and, therefore, inclined to behave in accordance with its expressed goals and values*. It helps learners to develop their empathy for others, their social skills and social understanding, and their understanding of the values of the community. Thus, learners are in need of a supportive school environment. When schools fail to meet learners' needs for belonging, competence, autonomy and safety, learners are likely to become less motivated, more alienated, and poor performers. If learners' basic psychological needs are satisfied by creating positive school environment, they are more likely to become engaged in school, behave and act in accordance with school goals and values, develop social skills and understanding and contribute positively to school and the community.

9.3.4 Learner

A classroom has a diverse group of learners. Diverse learners include learners from socially, economically, culturally, and linguistically diverse families, communities and learners of different abilities. It is a challenge for teachers to cater to the needs of all in an inclusive classroom. In an inclusive classroom, both teacher and learner work together, and it is required that the learner is active rather than just being a passive listener. Together they create a safe and supported environment and are encouraged to express their views and concerns. It is the responsibility of teachers to make sure that all of them comprehend the concepts. All the learners must be actively engaged in what they learn to make teaching-learning interesting. Learners must be encouraged to take an active interest in learning. The focus must be on the learners experiencing the harmonious environment which would prove helpful in developing higher order thinking skills, effective communication skills and collaborative skills. Learners must be encouraged for self-direction because self-directed learners not only encourage each other, but also work with their teacher to achieve academic and behavioural goals. Teachers should employ a variety of strategies to promote responsible decision-making ability among learners and make them self-reliant learners.

9.3.5 Content

In instructional planning, content plays a significant role as it refers to the information provided through the medium. In learner centered classroom, the way in which the information is presented is considered important. Content must be explicitly viewed from the multiple perspectives keeping in mind the diversity in group. It must be presented in a manner that reduces learners' experiences of marginalization. It should cater to individuals' experiences, values, and perspectives. It must include multiple perspectives of topic rather than focusing only on a single perspective.

Activity 1

Visit any nearby school and prepare a report on school environment.

Check Your Progress

Note: a) Write your answers in the space given below:
      b) Compare your answers with those given at the end of the Unit.

1. Why there is a need to view every child as a learner??

   ....

2. Define Physical School Environments

   ....

3. What do you understand by diverse learner?

   ....

9.4 PLANNING FOR TEACHING

An effective teacher's teaching begins before his/her entering into the classroom and teaching. Effective teaching is a planned activity. Teacher plans the content of instruction, selects teaching materials, designs the learning activities, plans the pacing and allocation of instruction time etc. Planning should be a cyclic process, incorporating decision of learning outcomes, strategies for teaching and evaluation. This includes planning on a whole -*school, subject, year and class level*. Planning must provide opportunities to all learners to perform their best.

A teacher is most important unit of teaching-learning process. Researches reveal that the teacher is the single most important factor affecting learner achievement (Marzano et al., 2003).

In his book, Wong (2009) has stated qualities of an effective teacher. According to him, there are several characteristics of an effective teacher, as:

(i) an effective teacher has positive expectations for learner's success; and lesson plan reflects such expectations,

(ii) an effective teacher knows how to design lessons for learner's mastery; which is reflected in lesson plan, and

(iii) an effective teacher is also an extremely good classroom manager; which is possible via good time management during class time and that is possible only by effective implementation of a good lesson plan.

Teacher planning is an important variable contributing to learner's achievement. Planning is a strategy which a teacher applies in a teaching-learning process. It is a systematic process of deciding what and how learners should learn. Teacher decides about the form and content of instruction, such as how much to present, question and discuss; how much material to cover in the allotted time; and how in–depth to make their instruction (Borich, 2007).

Clark (1983) defines planning **as "a basic psychological process in which a person visualizes the future, inventories means and ends, and constructs a framework to guide his or her future action"**. Good planning can provide a teacher with a progressive, structured, and well organized format that can be

used to guide learners toward the accomplishment of specified goals or objectives. A good plan could be considered a blueprint for learning.

Planning for teaching and learning affects not only teachers' instruction but classroom management as well. In a well managed classroom

(i) learners are deeply engaged with their work; which would be possible if their roles are described and they have a goal as provided in a good lesson plan;

(ii) learners know what is expected; which would be possible via routinely implemented good lesson plans;

(iii) there is little wasted time, confusion; which would be possible via effective implementation of a good lesson plan; and

(iv) the climate of such a classroom would be work-oriented, but relaxed and pleasant; which would be possible via good time management due to effective implementation of a good lesson plan (Wong, 2009).

Every planning of classroom can be classify in three major plans i.e. (i) annual plan (ii) unit plan and (iii) lesson plan. The details of these planning have given below.

9.4.1 Annual Planning

Annual Lesson Plan or Yearly Plan provides an overview of the course in curriculum. It indicates the units to be taught and the time to be devoted. Annual plans contain the units to be taught along with the subtopics and serve as a guideline when preparing the daily lesson plans and the weekly lesson plans that consist of the daily lesson plans. Annual plans also include major curricular and co-curricular activities to be performed, without going into their details, especially if they are to be performed when transiting from one unit to another.

All activities which teacher is going to apply in the whole year as; field trips, experiments, demonstrations are also part of annual plan. Annual Plan should be ready by the beginning of the academic year. Time to be devoted to the learners must be allocated in the plan also. Teachers should also know that what classes they will teach for how many hours and on which days in the beginning of the academic year.

While preparation of the annual lesson plan some important things to be considered by teacher which are as follows:

➢ The annual plan should be ready by the very beginning of academic year.

➢ In the annual plans, units should be categorized under specific subject matters, and how much time is needed for each subject matter should also be determined.

➢ The annual plan should be categorized into unit plans and daily lesson plans.

➢ When the teachers are going to teach the lesson, the subject matter mentioned in the annual plan should get attention.

➢ In the prescribed period, it should be determined that in which grades, in which months and how many hours are to be spent for each lesson, weekly.

➢ The annual lesson plan should include the number of scheduled classes' periods, key learning goals of learners which are supposed to be achieved at the end of the school, major activities and events supporting teaching and learning in the academic year.

9.4.2 Unit Planning

Unit plan is proper selection of learning activities which present the absolute picture of particular unit. It is a systematic arrangement of subject matter.

Unit plan is similar to lesson plan. Its format is almost same as a lesson plan, but covers an entire unit of work, which may span into several days or weeks. Even the unit plan also may include specific objectives and timelines as lesson plan, but the difference is lesson plans are more fluid as they adapt to various needs of learners and their learning style. Dictionary of Education defines unit planning as, "an organization of various activities, experiences and types of learning around a central problem or purpose developed cooperatively by a group of pupils under a teacher leadership involving planning, execution of plans and evaluation of results". A unit plan has five sections, namely, introduction, objectives, contents, hints for teachers and evaluation.

Format for a Unit Plan

Subject/Course:	Unit:		Class:
• Previous Knowledge/Entry behaviour of Learners			
• Major objectives of the Unit			
• Overview of the theme of the unit:			
1	2	3	4
Sub-Units Teaching topics No. of Periods	Major Teaching points under each topic	Specific objectives of each teaching point	Methods/media/ approach adopted by teachers' and pupils' activities Learning Resources
• References for Pupils			
• References for Teachers			
• Evaluation/Assignment			

Source: School of Education, MES-102: Instruction in Higher Education, Block-1, Instruction in a Systematic Perspective, New Delhi: IGNOU.

For a good unit plan there are some criteria. If any unit plan is fulfilling these criteria it means that plan is meeting with the needs of learners. These criteria have been given below;

➢ Fit with yearly and term goal.

➢ Should be organized and in sequence.

➢ All round development of learners' personality.

➢ Needs, capabilities, interest, aptitude and involvement of the learners should be considered.

➢ Provide a new learning experience; systematic but should be flexible also.

➢ Prepared on the sound psychological knowledge of the learners.

➢ Maintain the attention of the learners till the end.

➢ Related to physical, social and emotional environment of the learners.

9.4.3 Lesson Planning

A teacher should be a good planner and thinker. A lesson plan is a teachers' detailed description of the course of instruction, or 'learning trajectory' for a lesson. Teacher develops a plan to guide the class. It is related to strategy of teacher that how s/he is going to deal her/his learners. A lesson plan is the teacher's guide for running a particular lesson, and it includes the goal, how the goal will be achieved and a way of measuring how well the goal has been achieved.

Lesson plan is a written account of what a teacher would like to have during a certain lesson or class period. It contains the concept or objective, the time period in which teacher has to deliver the chapter, teaching-learning method/ procedure, techniques and the instructional materials. A good lesson plan includes the timeline of classes such as when does it begin and how long it takes to cover a subject; instructional materials and pedagogical methods to be used to achieve the learning objectives; how to connect the previously taught content with the current one, practical examples from daily life, etc. It should also be noted that lesson plans may be revised based on the needs that arise.

Teacher should adopt several strategies before writing the lesson-plans. Before writing, teacher should be aware of the learning styles and level of learners. Teacher should try to answer these questions as; what do I want all learners to know and be able to do at the end of this lesson, what will I do to cause this learning to happen, what will learners do to facilitate this learning, how will I assess to find out if this learning happens and what will I do for those who show through assessment that the learning did not take place? Answers of these questions help teacher in writing-up an effective lesson plan.

As per answers, teacher should prepare her/his lesson plan. According to Richards (1998), a lesson plan should address the following:

➢ Concepts to be taught and objectives to be achieved.

➢ Time blocks, e.g., approximate time expected to be devoted to the lecture.

➢ Procedures to be used for instructional design.

➢ Materials needed both for the learner and the teacher.

➢ Independent practices or learner time on task.

➢ Evaluation, applications, and learner understanding, e.g. main questions to be asked by the teacher to check learner understanding.

The model recommended by Tyler, (1949) for effective planning should have;

1.   Specific objectives

2.   Selection of learning activities

3.   Organization of learning activities

4.   Specific evaluation procedures

For a good lesson plan McCutcheon (1980) says; a successful lesson plan provides for each class to have a focus; each minute of the class and role of learners are planned; lecture is designed to engage class making the learners active participants; important points are repeated multiple times within a period and throughout the semester; and how new class material relates to earlier material are pointed out building a foundation for learners' learning.

Format for a Lesson/Topic Plan

Subject: **Target Group:**
Topic:
1. Entry behaviour
2. General objectives of the Topic
3. Methods and Media
4. Introduction
5. Presentation

Teaching points in sequence	Specific objectives in behavioural terms	Learning Experience		Partial Evaluation
		Teacher's Activities	Pupil's Activities	

6. Recapitulation/revision/evaluation
7. Home assignment
8. Blackboard work plan

Source: *School of Education, MES-102: Instruction in Higher Education, Block-1, Instruction in a Systemetic Perspective, New Delhi: IGNOU.*

A teacher should keep these several important things in his mind before preparation of any lesson plan.

a)   Each learner is different from other learners so her/his educational needs are also different. Because of this difference their interests, needs, and skills also differ from each other. So teacher should not expect the same learning performances and behaviour patterns from every learner.

b)   Instructional materials to be mentioned in the lesson plan must consist of reasonable items.

c)   Teacher should recognize the parents and neighbourhood of the school and take advantage of such factors when preparing the lesson plan.

d) Teacher should act as he/she is the leader of the class; however should listen to the learners as well.

e) Teacher should encourage the learners to work individually; but should not overload the learners with too much homework.

f) Lesson plan should also include a backup plan explaining how the parts of the lesson plan, which cannot be realized, can be made up for.

g) Lesson plan must be prepared based on the intellectual level of learners.

h) Lesson plan must be flexible enough and not too strict.

i) Lesson plan should not be too short or too long.

j) Lesson plan should serve as guidelines for the teachers.

k) Title of the course and units, allocated time for each activity, instructional methods, and instructional materials need to be mentioned in the daily lesson plans.

l) Lesson plans serve as proofs that the teacher had implemented the activities mentioned within the daily lesson plan.

m) The plan for a field trip or for an experiment may be included in the daily lesson plan or attached as a supplemental document.

9.5 BEHAVIOURIST LESSON PLANNING

Behaviourism focuses on how any external stimulus/environment directs/effects/changes the behaviour of an individual. A behaviouristic perspective sees all behaviours of an individual as a stimulus-response relationship, including learning and classroom engagement. Conditioning is a key word of behaviouristic approach. This term for learning is based on what the individual does in response to a specific object, event, or stimulus. Pavlov, Skinner, Watson, Thorndike are pioneer psychologists of behaviourism. According to their theories, in behaviourism, learning of an individual is directed by some external stimulus and feedback. These are given below;

- Identify the desired behaviours: Explain exactly what is expected, what you want to see.

- Identify the consequences, both negative and positive. This enables the learner to know what to expect from you.

- Establish the rules, the consequences, and the rewards for each behaviour

For the development of behaviouristic lesson plan, usually we follow eight steps. These steps are as follows;

1. **First step is Purpose or Objective**. Purpose/objective is related to particular chapter that learners are going to learn, why they are going to learn that particular chapter and which type of behavioural changes (cognitive, affective and psychomotor) are going to occur after the lesson. In simple language it can be called as learning outcomes.

2. **Anticipatory Set (Focus):** The next step is related to how successfully a teacher is going to acquire the attention of learners for the lesson. It is a

short activity or prompt that focuses the attention of learners before the lesson begins. In a simple language we call it introduction. A teacher may ask some questions related to lesson, can give some examples, can tell a story, or can write some problems on the blackboard.

3. **Input:** The third step is input. In input teacher imparts vocabulary, skills, models, theories, concepts what learners should know in order to be successfully placed in the sequence of the lesson.

4. **Modelling:** At this level teacher shows a graphic form or demonstrates to his learners. It is related to the examples used by the teacher throughout the lesson and that behaviour what a teacher wishes learners to imitate.

5. **Guided Practice:** Here teacher leads his learners through the steps essential to perform/get the skill by hearing, looking and doing. Here learners do some activities. These activities may be individual or group; some class work or field work.

6. **Checking for Understanding:** At this level teacher tries to check the understanding of concepts, learners have acquired during the transaction of lesson. It is sequence of the lesson. Here teacher uses variety of questions to evaluate their level of acquisition.

7. **Independent Practice:** In seventh step learners practice on their own. Here learners work on own such as presentations, homework, etc. Teacher uses this to verify progress or justify remediation or enrichment.

8. **Closure:** It is related to review of the lesson. Here teacher asks some assessment questions and tells what they are going to learn next.

9.5.1 Criticism of Behaviourist Lesson Planning

Behavioural theories do not account for free will and internal influences such as moods, thoughts, and feelings.

➢ Behaviourism doesn't take into account important internal processes that take place in the mind.

➢ Language acquisition was one type of learning. Skinners learning theory cannot account for.

➢ There are many instances of learning that occurs without the use of reinforcements or punishments.

➢ People and animals are able to adapt their behaviour when new information is introduced, even if a previous behaviour pattern has been established through reinforcement.

➢ Behaviourists focus on the target, desirable behaviour that is the product. They fail to explain how humans learn, the process through which the learning takes place.

➢ For a behaviourist what occurs between the stimulus and the response is of little importance. The very meaning of the learning process is banned from any scientific analysis in the behaviouristic approach.

➢ It is not appropriate for higher classes.

➢ It is appropriate for small classes, not for large classes.

Activity 2

Select a topic of your own choice and prepare a lesson plan according to behaviourist and compare it with traditional lesson plan.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

Mark these statements as true or false.

4. A lesson plan does not necessarily reflect positive
   expectations for learner success.   True/False

5. The behaviourist approach takes the nurture side
   of the nature-nurture debate.   True/False

6. Selection of learning activities is not the part
   of planning.   True/False

7. Closure is related to review of the lesson.   True/False

8. The behaviourist approach is deterministic.   True/False

9.6 ALTERNATIVE APPROACH TO PLANNING

9.6.1 Concept Mapping as a Technique Strategy for Planning

Concept maps are spatial or graphical displays that represent relationship between concepts and sub concepts. In concept map labeled nodes represent concepts and lines or arcs represent relationship between pairs of concepts.

According Novak and Canas (2008), "**Concept maps are graphical tools for organizing and representing knowledge. They include concepts, usually enclosed in circles or boxes of some type, and relationships between concepts indicated by a connecting line linking two concepts. Words on the line referred to as linking words or linking phrases, specify the relationship between the two concepts**."

Further, they clarifies *concept as a perceived regularity in events or objects, or records of events or objects, designated by a label* and *Propositions are statements about some object or event in the universe, either naturally occurring or constructed. Propositions contain two or more concepts connected using linking words or phrases to form a meaningful statement.* **(Novak and Canas, 2008)**

Concept maps identify the way individual think, and see relationships between topics. It is representations of cognitive structures depicting the hierarchies and the interconnections of concepts involved in a discipline or a sub discipline.

It helps the learners to

- understand the connections between the ideas they already posses,

- connect new ideas to their previous knowledge and

- organize ideas in logical order.
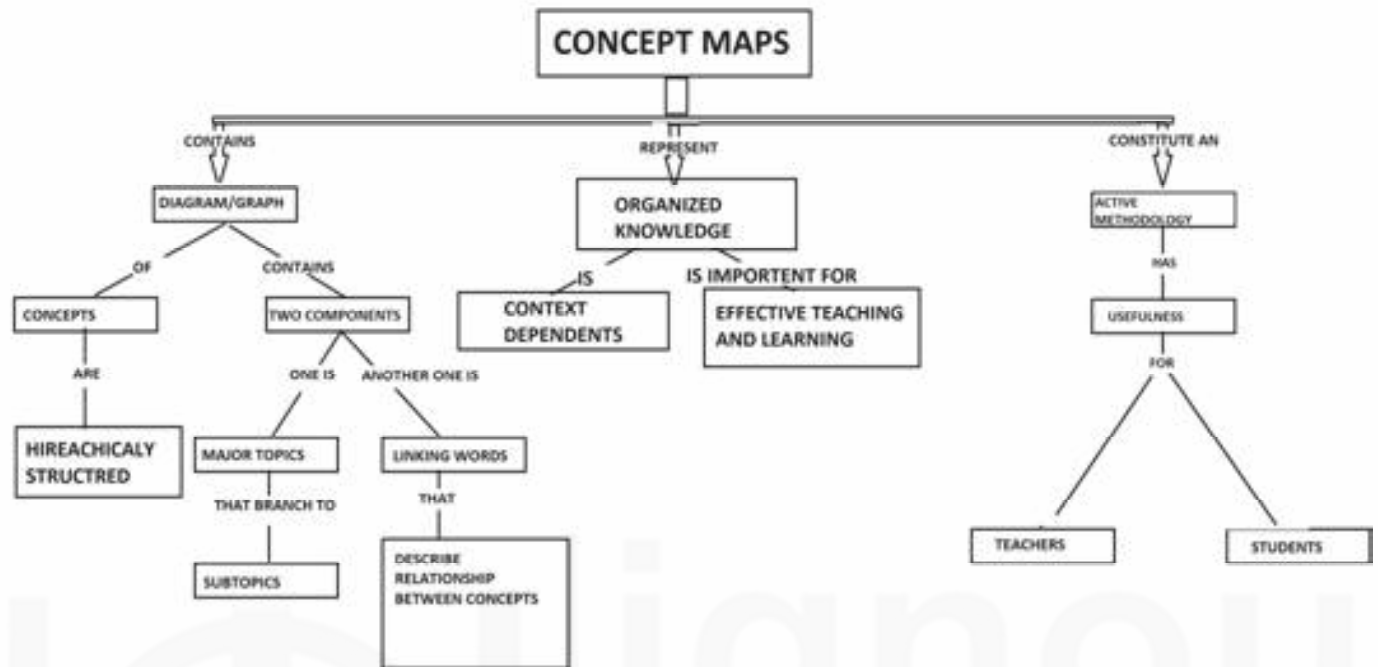
- An example of concept map is as follows.

Figure 9.1: Concept Map, as proposed by Novek

According to Joseph Novak, who developed the idea in the 1970's, concept maps are tools for organizing and representing knowledge in hierarchical structure. Novak conceptualized his work from the Ausubel's learning theory. Ausubel stressed the importance of prior knowledge in learning new concepts. Idea of Concept maps has been influenced by the learning movement of constructivism. Constructivists hold that learners actively construct knowledge based on their previous knowledge. Concept map allows teacher to show how different pieces of information relate to one another. As concept maps creating a visual map of knowledge, it is a good way to identify key concepts in lectures and readings. It is a valuable tool for educators in assessing the structure of learner conceptions. It is widely used to promote meaningful learning in various disciplines and in different contexts. Ragisha and Gafoor (2014) *Concept mapping allows understanding the relationships between concepts in the form of propositions by creating a visual map of the connections. From a pedagogical perspective, this allows to see the connections between ideas already present, to connect new ideas to knowledge already gained and to organize ideas in a logical structure, and to provide flexibility to the existing knowledge structure to permit future information or viewpoints to be included.*

Therefore it can be concluded that concept map helps the teacher as well as taught in following ways:

- Concept map increase the potential of teacher to formulate the multiple ways of constructing meaning for diverse group of learners

- It provides opportunities for teachers to know how learners may see or organize knowledge differently.

- Concepts map help in selecting appropriate instructional materials.

- Mapping help to develop well integrated, continuous and logically sequenced in content.

- With the help of concepts map teacher can design the content of the study that is relevant, meaningful and interesting.

- Concept map helps in holistic style of learning.

- Concept mapping helps to reduce abstract knowledge to concrete diagrammatic representation.

Concept maps are widely used instructional and teaching learning tools. It helps teachers and learner to identify and visually represent their views and knowledge. Teachers can also use concept map to identify learner's previous knowledge or misconceptions as it provide a graphical summary of what learners have learned.

Birbili **(2006)** quotes that Concept *maps can also be used to organize teaching or the entire curriculum. As a planning tool, they can help teachers plan, structure, and sequence the content of their teaching. As they create a map of what they want to teach, teachers can see how different themes and topics are linked, so continuity of experience is ensured, and develop units and activities that integrate different subjects.* They can use map for their own understanding of the concept and then use it to organize the knowledge and information that they will present to learners as well. Concept maps can be used for the purpose of both formative and summative evaluation. Concept maps can facilitate teaching and learning in several ways. It can help both teachers and learners to identify the key points of concepts and principles. It provides visual road map to connect meanings of concepts in propositions. It is an effective tool which makes structure of knowledge explicit and accessible.

Activity 3

Prepare a concept map of any topic of your own choice and use it in your classroom practices.

Check Your Progress

Fill in the blanks.

9. In concept map labeled nodes represent…………….. and lines or arcs represent ……………………between pairs of concepts.

10. …………………. developed the idea of concept maps

11. Concept maps are tools for organizing and representing knowledge in…………………….

12. Concept map helps in ……………style of learning.

13. Concept map makes learning…………….

14. Concept maps are …………………...displays that represent relationship between concepts and sub concepts.

9.7 CONSTRUCTIVIST LESSON PLANNING (5-E APPROACH)

The Swiss psychologist Jean Piaget is the originator of Constructivist school of thought in the 20th century. It is a learning theory that argues that individual constructs knowledge in unique ways based on his/her prior knowledge and experience. The theory suggests that people construct their own knowledge and understanding from an interaction between their own experiences and ideas. The role of teachers is very important with in constructivist classroom. Teacher acts as a facilitator whose role is to help learners in constructing knowledge. It believes that teacher must not only equip learners with information but teacher must begin with asking and facilitating so that learners come to conclusions on their own. Teacher must create learning experiences continually in conversation with learners that is as per needs of the learners.

The **5 E's (Engage, Explore, Explain, Elaborate and Evaluate) model** gets its name from the capital letters of each of its level of sequences is an instructional model based on the Constructivist theory of learning. The 5 E's can be used with learners of all ages. ATES (2013) analyzed that ***"Learners are prevented to memorize the subject with this model. It is aimed that learners take active part in various activities such as brain-storming, question and answer, drama, painting, cooperative learning, teamwork, presentation skills, discussion."*** This model allows teachers and learners to use and build on prior knowledge and experience, to construct meaning, to continually assess their understanding of a concept and create new knowledge. 5E Model not only implicates learners into activity at every stage in consideration of the information given to them but also encourages them to create their own concepts (Martin, 2000 as quoted by **ATES, 2013**). The five phases of "Constructivist Learning Approach" are as follows:

Engage: This is the first phase from where the process of 5 E's starts. Here, the learners first encounter and identify the instructional task and make connections between past and present learning experiences. It includes attracting learners' interest to the concept, revealing learners' prior knowledge, making learners aware of their own knowledge and querying them about the concept.   Teachers can ask a question, define a problem, show a surprising event and act out a problematic situation to engage the learners and focus them on the instructional tasks. Here the primary teacher's task is to grab the learner's attention. This is a warm up phase in which learners become ready to learn. In short, we can say that an "engage" activity should do the following two tasks:

1.   Make connections between prior and present learning experiences

2.   Predict activities and focus learners' thinking so that learners become mentally engaged in the concept, skill and process to be learned.

Explore: In the Exploration stage, learners have the opportunity to get directly involved with phenomena and materials by actively exploring their environment and manipulating materials. It provides learners with a common base of experiences. By involving themselves in activities learners develop a grounding of experience with the concepts. The teacher acts as a facilitator, providing materials and guiding the learners' focus. At this stage, learners work together in teams, therefore, build a base of common experience which helps them communicate and share experiences. Learners test their own knowledge by observing and gaining experiences about the phenomena.

Explain: Explain is the point at which learners begin to put their experiences into a communicable form. It helps learners explain the phenomena they have been exploring. This is the most active phase of teaching and it includes learners to share and discuss their own experiences with each other. They get opportunities to put their conceptual understanding or to demonstrate new skills or behaviours. It provides opportunities to introduce formal terms, definitions, and explanations for concepts, processes and skills. Explanations from teachers provide standard language for concepts. Introducing learners with formal nomenclatures of the concepts after having direct experience is far more meaningful than it was before that experience. Here, Learners compare their prior knowledge with observations and explain the relationship between them. Communication occurs between peers and the facilitator as well as within the learner. Learners support each other's understanding as they articulate their observations, questions and hypotheses. Works created by learners in writing, drawing, video, recordings, etc. provide recorded evidence of their development, progress and growth.

Elaborate: In elaborate stage, learners expand the learned concept and make connections to other related concepts, and apply their knowledge and understandings to the real world. At this phase, learners practice skills and behaviours by expanding their understanding of the concept/phenomena. Learners develop deeper and broader understanding of major concepts and refine their skills to apply the knowledge to real world events. Connections between knowledge formed at this stage, often, lead to further inquiry and new understandings.

Evaluate: This phase of the 5 E's is an on going diagnostic process. It allows teachers to determine if learners have attained understanding of concepts and knowledge. It also encourages learners to assess their understanding and abilities. Teacher observation, structured by checklists, learner interviews, portfolios designed with specific purposes, project and problem-based learning products are some tools of evaluation. Communications between learners and teachers provide concrete evidence of learning. These evidences of learning form a base to guide teacher in further lesson planning and directs for modification and change of direction, evaluate learners knowledge of the concept they have learned at the previous four stages and make an extraction. And, eventually, they assess their own improvement. Constructivist philosophy views evaluation as a continuous process, so learning forms a kind of cyclical structure. The learning process is open-ended and open to change. There is an on going loop where questions lead to answers but more questions and instruction is driven by both predetermined lesson design and the inquiry process. Loop continues as it is shown in figure 9.2.

Figure 9.2: 5-E Approach of Lesson Planning

Example of Lesson Plan using 5-E Approach

Subject: Social Science
Class: 9th
Topic: Population Policy
Objectives: Cognitive: 1. Learners will be able to define population. 2. Learners will be able to name and identify the problems caused by overpopulation 3. Learners will be able to explain the population rate of the country 4. Learners will be able to explain relationship between the population rate of a country by age group and the level of development. Psychomotor: 1. Learners will be able to construct a model depicting the social and economic problems caused by overpopulation. 2. Learners will be able to classify the countries according to population rate and present with diagrams with 90% accuracy. Affective : 1. Learners will demonstrate perseverance as they attempt to construct a model 2. Learners will display open-mindedness as they work with their peers to work on population policy.
Material: Different types of charts
The activities about Population Policy (5 E Approach):
Engage Lesson can be started with the following questions : Do you know the population of our country? What do you think about population in which you live? What kind of advantages or disadvantages are due to this population? Are there any crowded cities in India? What sort of problems are there? Do you have any experience about it? What kind of problems would there be if our country didn't have enough population? Various visuals will be used supporting the questions, learners are allowed to raise attention and their current knowledge is assessed.

Explore

Learners will be divided into groups and each group is allowed to choose a topic of interest. Examples of the topics are as follows:

Topic 1: Should there be any law to limit the population growth of a country?

Topic 2: What social and economic problems do the countries have due to overpopulation?

Topic 3: What social and economic problems do the countries have due to under population?

Topic 4: What kind of relationship is there between the population rate of a country by age group and the level of development?

Topic 5: Dramatize one or more possible problems of a country with overpopulation.

Topic 6: Dramatize one or more possible problems of a country whose young population rate decreases fast.

Explanation:

One representative of each group will share the results one by one. Teacher facilitates, explains and completes the lack of knowledge of learners if it is necessary. Teacher give information about the concept of ''Population Policy'' after the activities. Therefore, learners are allowed to understand what ''Population Policy'' is.

Elaborate

Learners are provided environment of discussion regarding Population Policy to use their new knowledge and explore its implications. Learners will be divided into two groups and ask question "Is it sensible to practice Population Policy in order to increase or decrease population in terms of human rights?" Ask yes or no. At the end of the discussion both teacher and learner will summarize the topic.

Evaluation:

Following questions will be used

What is Population Policy?

 What is the purpose of population Policy?

What are the advantages and disadvantages of Population Policy?

What are the problems of overpopulation in a country?

What are the problems of under population in a country?

Check Your Progress

Fill in the Blanks.

15.   …………… is the originator of Constructivist school of thought.

16.   5 E's stands for ………………………………………………………
…………

17.   Constructivist philosophy view evaluation as a ………………………
process.

18.   ………………activity make connections between prior and present learning experiences.

19.   ………………….. provides opportunities for teachers to introduce formal terms.

20.   In stage……………….., the learners expand the learned concept.

9.8   LET US SUM UP

This Unit has presented several aspects of planning teaching and learning. Planning is a vital component of the teaching learning process which provides a complete structure and context for both teacher and learners to accomplish the educational goals. Instructional planning aims to organize instructional activities effectively. Some considerations for instructional planning are positive school environment, physical environment, psychological environment, diverse group of learners, content, etc.

Effective teaching is a planned activity. Teacher plans the content of instruction, selects teaching materials, designs the learning activities, plans the pacing and allocation of instruction time etc. Every planning of classroom can be classify in three major plans i.e. (i) annual plan (ii) unit plan and (iii) lesson plan. Unit has explained use of concept map to identify learner's previous knowledge or misconceptions as it provide a graphical summary of what learners have learned. Concept maps can facilitate teaching and learning in several ways. Teacher acts as a facilitator whose role is to aid the learners in constructing knowledge. The 5 E's (Engage, Explore, Explain, Elaborate and Evaluate) model   gets its name from the capital letters of each of its level of sequences of an instructional model based on the Constructivist theory of learning.

9.9   UNIT END EXERCISES

1)   What is Instructional Planning? What are the various considerations for Instructional Planning in Classroom? Why are these considerations important for Instructional Planning?

2)   Discuss the Psychological Environment.

3)   As a teacher what points you will emphasis during your lesson planning?

4)   How can you create a positive environment of your school and classroom?

5) Explain constructivist approach of planning.

6) Describe the concept mapping as a technique for content & pedagogical planning.

7) Select the topic of your own choice and prepare a plan using the 5-E approach

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9.11 ANSWERS TO CHECK YOUR PROGRESS

1. A positive school environment must have appropriate facilities, well equipped and managed classrooms, good peer support, health facilities provided by school and appropriate policies and practices of discipline.

2. Physical environment of school refers to the material and tangible conditions of school. It includes Natural environment (air, noise, water, greenspace etc), Built environment (building, infrastructures, roads, transport systems etc) and Socio-economic and Cultural environment (the social and economic characteristics of the societies and communities in which the school is placed).

3. Diverse learner learners include learners from socially, economically, culturally, and linguistically diverse families, communities and learners of different abilities.

4. False

5. True

6. False

7. True

8. True

9. Concepts, relationship

10. Joseph Novak,

11. Hierarchical structure

12. holistic

13. visible

14. spatial or graphical

15. Jean Piaget

16. Engage, Explore, Explain, Elaborate and Evaluate

17. continuous

18. engage

19. explain

20. elaborate

UNIT 10 ORGANIZING TEACHING - LEARNING

Structure

10.1   INTRODUCTION

All of us know that contemporary classrooms are highly diverse in nature. Recognizing each child as different and unique in its own sense is a challenge for teachers. But, more important challenge is to teach children with diverse backgrounds. Diversity is not only reflected in terms of socio-cultural and economic backgrounds but also in the possession of knowledge. It is indeed important that today's teacher has to be like a magician. On the one hand, teachers have to use their information and transform them into usable knowledge and on the other hand, they have to find out the ways and means of teaching them rather than just transmitting or transferring them into the knowledge. Teaching always remains a planned behavioural activity and is controlled more by teachers. But in present times it is an activity which may be controlled, guided or facilitated by teachers, depending upon the nature of learners, their grade, content, locale and resources. Normally, instructional process is arranged in a continuum depending on the nature of teaching-learning process (activities) which proceeds in the classroom as teacher centered, child centered, and group centered. Teacher centered

instructional process is conventional in nature and all the teaching-learning processes are within the control of teacher right from planning stage to follow up stage. In child centered process though, the teacher does all the detailing of the activities from planning to execution stage but it is centered around the child. In group centered instructional process, children have the autonomy to plan, organize, manage and review the activities involved in teaching learning process. Before adopting any instructional process, teachers have to keep in mind the certain essentials for selecting an instructional approach. A wise teacher is always eclectic in selecting the instructional approaches.

The present unit will discuss different approaches to designing the instructional processes and their merits and limitations, along with key considerations for selecting an approach.

10.2 OBJECTIVES

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

identify various criteria for selecting an approach to instruction;

describe different approaches of instructional method;

differentiate between learner centered, teacher centered and group centered approaches to instruction; and

analyze how an eclectic approach to instruction is used by teacher.

10.3 DESIGNING INSTRUCTIONS

Knowledge of effective teaching and learning has increased significantly in recent years. For example, increase in knowledge of the psychology of child development and learning has provided teachers an intelligent and informed context for instructional decision-making. In addition, knowledge of teaching and learning styles has led to an appreciation of what constitutes the best practice in meeting individual learner needs. Educators recognize, too, that learning is an interactive process, and that learners need to be actively involved in tasks that are achievable, useful, relevant and challenging, if they are to respond successfully to the curriculum challenges posed for them. Above all, however, educators have learned that effective teaching occurs when the learner is placed at the focus of decisions that are made not only about the curriculum itself, but also about the "process" by which the curriculum is delivered. Within this context, there is acknowledgement of the need for positive relationships between teacher and learner.

10.3.1 Basic Consideration for Selecting a Method

Anjali is a science teacher and she has to teach on the topic "Kitchen Chemistry: Acid and Bases". She is bit confused about the instructional approach to be used in teaching the concept of acid and bases. The concept of acids and bases should also help the learners and their mothers in handling the different home based kitchen chemicals (kitchen products) safely and appropriately. In your life there are times when similar situation arises. What method of instruction do you suggest Anjali should use? Whether there will be a particular method of teaching the content? Which is the best method? What are the considerations Anjali must make while selecting a method.

While selecting an instructional approach a teacher has to follow the basic considerations:

i) **Learners:** Normally, teacher knows that in a classroom there are learners of diverse backgrounds. This diversity ranges from social, economical to intellectual level. To teach the group of learners of diverse backgrounds, it is necessary for teacher at least a method of instruction should be such that it offers learners to contribute in the teaching-learning process.

ii) **Grade Level of the Learners:** Next comes consideration for the teacher for selecting a method is the grade level of learners. If learners belong to the lower grade level, a method involving lots of activities may be chosen. But if the grade is higher than it, teacher would select a method wherein teacher would assign the work or distribute the work among learners and learners would be self-involved in the learning process.

iii) **Subject Matter**: The subject matter is another consideration while selecting method of instruction. The subjects like science and mathematics are scientific in nature, whose major emphasis is to verify the existing knowledge or discover the knowledge or solve the existing problem with rational scientific method. Therefore, appropriate approach to select an instructional method for teaching of science would be inquiry method or problem solving method. But in case of languages, problem solving or inquiry method is inappropriate, as in language teaching it is more often developing skills of language where drill and practice method would be an appropriate one.

iv) **Intended Learning outcomes:** Another key consideration while selecting the instructional method is the intended learning outcomes as specified in the subject matter or by the teacher. The intended learning outcomes are generally the behavioural changes that take place within learners after the content is taught to them. Normally, intended learning outcomes are framed by teacher but it also depends upon the content to be taught. It is normally set before the teaching-learning process starts. For example, if you want to teach learners about the reflection and its laws, the intended learning outcomes set by the teacher would be:

a) learner will be able to define the term reflection,

b) learner will be able to state the laws of reflection and

c) learner will be able to verify the laws of reflection.

v) **Learning Environments:** Learning environment refers to the diverse physical, cultural, social environment in which learners learn. It is also called the eco-system of school or classroom or any environment where teaching-learning process takes place. It includes physical, biological and psychological components and their continuous interactions among them will determine the learning environment. Thus, we can say, learning environment is an eco-system wherein individual entities play a key role in creating it. For example teachers' beliefs and behaviours, learners' belief and behaviours, school policies, motivation among learners and teachers, learners need and interest, appropriate ventilation and sunlight, etc., make learning environment. Learning environments have both a direct and indirect influence on learning, including their engagement in what is being taught, their motivation to learn, and their sense of well-being, belonging and personal safety. For example, learning

environments filled with sunlight and stimulating educational materials would likely be considered more conducive to learning than learning environment with drab spaces without windows or decoration, incidents of misbehavior, disorder, bullying and illegal activity. How adults interact with learners and how learners interact with one another may also be considered aspects of a learning environment and phrases such as "positive learning environment" or "negative learning environment" are commonly used in reference to social and emotional dimensions of a school or class.

vi) **Available Resources:** One of the other basic considerations for selecting an approach is available resources. Normally, resources refer to the material resources but they also include human resources. Often teacher requires help from its co-teachers, learners, and others like community members, experts and learners to enhance their abilities and competencies. Also a lot of times the teacher requires material resources like audio-visual and technological aids to supplement or integrate with teaching. Resources help learners to make their knowledge more concrete, permanent and effective.

vii) **Teacher Ability:** Teacher ability is another criterion that needs to be considered while selecting an instructional method. It is important that teacher must be equipped with the specific abilities i.e. pedagogical- technological- content knowledge.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

1. What are the basic considerations for selection of an approach to instruction?

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10.4   TEACHER CENTERED METHODS

During the last few decades, there has been a vast change in the instructional process followed by teachers in the classroom. Initially, instruction was based on the behaviouristic approach which has shifted to humanistic and more recently is focused on constructivist approach. But still in many classrooms across the globe, teachers more often use teacher centric methods especially where the size of the classroom is more than fifty. In teacher centric classrooms all the instructional activities and procedures are under the control of the teacher. Teacher plans, prepares and conducts the teaching-learning process including the kind of learning experiences to be provided to learners, and activities to be carried out by the learners. Though, it is teacher controlled, the teacher can bring flexibility into the classroom through learners' participation. There are various teacher centered instructional methods. Few of them are being discussed in details.

10.4.1 Lecture Method

The word '**lecture**' is derived from Latin word '*lectus*', which means "that which is read." It wasn't until the 16th century that the word was used to describe oral instruction given by a teacher in front of an audience of learners. Presently, teacher uses lecture method that involves, primarily, an oral presentation given him/her to a group of learners. Many lectures are supplemented by some sort of visual aid, such as a slideshow, a word document, an image, or a film. Some teachers may even use a whiteboard or a chalkboard to emphasize important points in their lectures. It is the most conventional teacher centered instructional method wherein teacher transmits the knowledge and learners are the passive recipients of it. All the activities related to teaching-learning process in the classroom and beyond the classroom, are under the control of the teacher. These activities are planned and rigid in nature. Lecture method is generally applicable to learners who are studying in higher grades and above average. Average and below average learners feel disinterested in transaction of the content through lectures. This method fits into the contents wherein teacher has to extensively focus on narration, memorization and information. It is a method of instruction which is suitable to a classroom of large size wherein large syllabus is to be covered in limited time. It is not suitable to contemporary multicultural classrooms as it does not emphasize two cardinal principles of teaching activity and child-centeredness. As teacher, one should refrain from using lecture method in schools, especially up to secondary level, as it is the stage where child learns better through concrete experiences rather than through mere abstract presentations.

ADVANTAGES OF THE LECTURE METHOD

Lecture method has a few advantages that have made it most used method of teaching for so long. These advantages are discussed below:.

a) **Teacher control:** Because the lecture is delivered by one authoritative figure – a teacher, a professor, or an instructor, s/he has full control over the transaction of the lesson and the tone of the classroom. S/he is able to shape the course of the lecture. So, lectures remain highly consistent.

b) **New material:** Lectures are literally just long-winded explanations of information, deemed important by the lecturer. As such, learners can absorb large quantities of new information.

c) **Effortless:** The lecture method makes the learning process mostly effortless on the part of learners, who need only to pay attention during the lecture and take notes when they feel necessary. Because so little input is required from learners, it's the most clear, straightforward and uncomplicated way to impart learners to large quantities of information – as explained above – and in a way that is controlled and time sensitive. Learners just need to know how to take good notes

DISADVANTAGES OF THE LECTURE METHOD

What's funny about the lecture method is many of the pros listed above could actually be seen as cons as well. Many don't find the lecture method helpful in the least, and you'll find the explanations below:

a) **One-way communication:** People, who are against the lecture method, find it as a one-way communication. Professors dictate information to learners, who have little or no opportunity to provide their own personal inputs, or examine the information being delivered. Learners just have to sit down and

take information; sometimes, learners will even be forced to agree with the lecture if they want a passing grade. If the lecture is on a sensitive topic over which there is much conflicting discourse, you can imagine the problems this might cause.

b) **Passive listeners:** Not only do people find the lecture method a biased, one-way communication, they also see it as a wholly passive experience for learners. This isn't just harmful because of the ways we described above. Not being actively engaged in a discussion over certain learning experience can make the learning experience itself seem worthless to a learner. After all, the aim of education isn't to programme learners to think a certain way according to their instructor's lectures but to critically analyze the information being provided and learn how to apply it in different contexts. If learners have no opportunity to discuss the course material with the person delivering the lecture, they will receive only a shallow understanding of the subject being discussed. Simply put, they might even be bored by the material because they will have no opportunity to learn how the subject applies to them on a personal level.

c) **Strong speaker expectations:** The lecture method can be disadvantageous to the professor as well. Not all academics can be expected to have the same level of public speaking skill. What if a teacher is a genius in his or her field, knows the material from every angle, and is enthusiastic about the subject… but has trouble speaking in front of large groups? The quality of a professor's course should not suffer because s/he is unable to prepare a decent lecture. Just as being lectured to might not be the learning method of choice for many learners, being the one that is expected to do the lecturing might not be the best way for every instructor to present her/his course material.

Check Your Progress

Note: a) Write your answers in the space given below:

    b) Compare your answers with those given at the end of the Unit.

2.   How would you enrich your lecture to make it interesting and interactive? Give your view.

      ....

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10.4.2 Demonstration Method

Demonstration method works on the principle of activity centeredness and, to some extent, on child centeredness. Therefore, it is better off than the lecture method. Demonstration method is based on performing some activities or experiments in front of learners and learners minutely observe them. Demonstration method has dual purposes. One, it is in accordance to the maxim of teaching-concrete to abstract i.e. concepts, which are abstract in nature and harder to understand, can be demonstrated through an activity or experiment, which would facilitate the teacher to explain them easily and learners too can internalize them effectively. Second, learners can replicate the same demonstration wherein they

can also understand concepts by doing. Moreover, demonstration helps learners develop their motor skills. A good demonstration method depends upon the following aspects:

i) **Demonstration should be planned and rehearsed:** It is necessary for a teacher to identify the concepts that need to be demonstrated through activity or experiment. Therefore, initial planning and rehearsal is must for a successful demonstration. During planning stage, it is necessary that all the materials required for demonstration should be arranged beforehand and they should be placed on the demonstration table in a sequential manner so that teacher while experimenting needs not to worry about acquiring material as well as searching for it. After that, teacher needs to practice that demonstration as many times as possible so that it leads to expected outcomes.

ii) **Purpose of demonstration**: Before demonstration, teacher should be clear about its purpose and make the aim of the demonstration clear to learners beforehand. Teacher should clearly state what specific things need to be observed while demonstration, based on which inferences can be drawn or generalization can be made.

iii) **Active participation of learners**: Teacher should ensure that learners not only observe but also actively participate during the demonstration. It could be in the form of setting up of instruments related to experiment or activity or it can be in the form of seeking answers from the learners. It can also be that learners can write their observations on the blackboard.

iv) **Training in scientific thinking**: Demonstration method provides learners with opportunity to develop process skills i.e. observe, explain, analyze, infer, verify and review.

MERITS

Demonstration method has several merits over the lecture method. Some of them are as follows:

It inculcates the habit of scientific thinking among learners.

It is psychologically sound method as it takes into account the teaching from concrete to abstract.

It does provide opportunity to learners to participate during demonstration.

Theorization of concepts through verbal mode by teacher is reduced and focus is on demonstration of concepts through experiment or activity..

It is suitable for a multicultural and differential classroom.

LIMITATIONS

Demonstration method is time consuming as lots of effort on the part of teacher is required during planning, organizing and conducting phase.

It is a resourceful method so sometimes teacher is unable to organize the materials required for demonstration.

If demonstration fails in achieving the purpose, then it will have negative impact on the morale and attitude of learners.

All the topics or contents can not be covered through this method.

> **Activity 1**
>
> Indentify a topic from your teaching subject at secondary level. Plana demonstration lesson and deliver it in your classroom. Discuss with learners about its impact and prepare a report.

10.4.3 Team Teaching

The word '**team**' is associated when two or more than two members join together to achieve some specific objectives. In team teaching too, two or more than two teachers with special abilities, competencies and specialization join together and teach in a classroom. According to R.A. Singer (1964), team-teaching may be defined "**as an arrangement whereby two or more teachers cooperatively plan, teach and evaluate one or more class groups in an appropriate and agreed teaching plan in given length of time, so as to take advantage of specific competencies of the team membe**rs". According to David Warwick (1971), team teaching represents "**a form of organization in which individual teacher declared to pool resources, interests and expertise, in order to devise and implement a scheme of work suitable to the needs of their learners and the facilities of the institution**".

From the above definitions, it can be concluded that team teaching involves a group of teachers working cooperatively in a team to develop a programme of instruction and share among themselves teaching, evaluation and course improvement.

CHARACTERISTICS OF TEAM TEACHING

i) **Group of teachers:** Team teaching generally involves a group of teachers. The number of teachers depends upon nature and objectives of the course, the size of the class and the facilities to be used.

ii) **Joint responsibilities**: In team teaching, teachers work together and are jointly responsible for planning and instruction of a course.

iii) **Cooperative teaching**: Team teaching is also referred to cooperative teaching, as teachers cooperatively develop a programme of instruction and share in planning, organizing, teaching, evaluation and course improvement.

iv) **Specific competencies**: In team teaching, each individual teacher has specific competencies and work is assigned based on these specific competencies. In team teaching, a teacher needs to be multi-tasking. Teachers, who are good in planning would get an appropriate chance for instruction and length of time so as to use special competencies of teaching content to a group of learners.

v) **Need-centered:** In team teaching, teachers have to consider the needs, interests and development level of their learners and they should teach cooperatively to satisfy learners' needs and interest and to remove their difficulties and problems.

vi) **Autonomy to teachers:** Team teaching provides autonomy to each of the teachers to choose their teaching related activities and responsibilities as per their needs, interest and abilities.

vii) **Flexibility in teaching:** Team teaching provides enough of flexibility to teachers in scheduling their activities to meet the needs of learners and themselves.

viii) Improvement in teaching-learning process: Team teaching is a resultant of joint collaboration of teachers who have some specific abilities which would immensely help the learners in improvement in learning outcomes.

ix) Pooling of resources: In team teaching, resources are pooled up so as to benefit learners at large and help teachers individually.

ADVANTAGES OF TEAM TEACHING

a) **Better planning:** In traditional system, teachers separately spend their time individually in planning the same content at different period of time for two different classes or same classes. In team teaching both teachers can devote more time to and energy in planning and preparing content for the benefit of learners.

b) **Improvement in teaching:** In team teaching, teachers are given the opportunity to observe each other teaching and thus obtain feedback on each other's teaching and thus it helps in improving their skills of teaching. In traditional teaching, teachers are devoid of this opportunity of observing the lesson of each teacher.

c) **Benefit of specialization:** In team teaching, teachers normally are chosen based on their specialization, which would immensely help learners in getting deeper understanding of the content which is not the case with single teachers.

d) **Useful for bright learners:** Team teaching would be helpful to bright learners as they get more knowledge about the subject matter, which is sometimes not possible in single teacher classroom. They are given extra work and they do not lose interest as they do in traditional classroom teaching.

e) **Optimal utilization of resources:** Team teaching provides opportunity for optimal utilization of human resources. Learners are benefited by the best of available teachers.

f) **Better interaction:** Both teachers and learners get opportunities to interact with experts in a subject or a specialized field. It gives them useful exposure in terms of learning new and specialized field things. It also provides learners motivation and inspiration for reaching the top in the field of learning, instruction and research.

g) **Flexibility:** It is a highly flexible method of teaching whereas traditional methods of teaching are rigid. It is quite flexible in terms of scheduling and grouping techniques to meet the needs of a particular teaching learning situation. The time table also allows flexibility for the organization of team teaching.

DISADVANTAGES

a) **Costly method:** Team teaching is costlier than traditional method as it hires team of specialized teachers.

b) **Lack of material facilities**: Inadequate space and material facilities in the form of large rooms, furniture, laboratory, library, workshops, teaching aids, materials and communication equipments act as a barrier for success of team teaching.

c) **Lack of cooperation:** The basis of team teaching is cooperation. But sometimes teachers hesitate to cooperate with other teachers. Hence cooperation from all teachers cannot be expected.

d) **Lack of accountability:** In traditional teaching, a teacher teaches a subject to a particular class and s/he is accountable for the results and progress of learners into the subject. In team teaching, since it is the joint responsibility of team of teachers teaching the learners therefore accountability rests with all the team members. One teacher can shirk its responsibility to other teachers.

e) **Difficulty in maintaining harmony:** Team teaching requires proper understanding, cooperation and harmony among the members of the team. There is difficulty in maintaining proper team spirit, positive attitude towards the assigned work, proper coordination and harmony among the members of the team.

f) **Non availability of specialized teachers:** All teachers of the team should have a thorough knowledge of the subject along with the necessary skills to handle the classroom management along with academic activities. Such type of competent and specialized teachers with complete willingness and positive attitude towards team teaching are not available.

Check Your Progress

Note: a) Write your answers in the space given below:
  b) Compare your answers with those given at the end of the Unit.

3. Discuss in brief about basic features of team-teaching.

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10.5 LEARNER CENTERED METHODS

Learner-centered instruction grew out of the humanistic movement in psychology that focuses on the individual and places the responsibility for meeting needs and achievements of learner. This approach came into existence against the wake of the traditional approach of teacher centered instruction. Rogers (1969) has observed that in this approach learner assumes responsibility in the supervision of the teacher for decisions, actions and consequences. The objective is to help learners use their talents to become self directed, self responsible and independent learners. This approach relies heavily upon the direct and own experiences of learners. According to this approach, learners acquire skills and abilities through activities under the guidance of teacher. Teacher arranges, manages and guides learning activities which are based upon the needs, interests and cognitive development of learners. The role of the teacher in learner centered instruction is to facilitate learner and the learning process. Teacher uses a variety of behaviours to initiate, nurture and maintain a facilitative environment. Learner centered approach is generally characterized by following points:

I. Learners are active participants in the process of learning.

II. Learners engage themselves in need based activities under the supervision of teacher.

III. Learners select content, activities and experiences according to their academic and social needs.

IV.   Teachers' functions are more as facilitators.

V.   Learners become independent learners.

There are different methods of instruction under learner centered approach. In the present section we will discuss the two important methods of instruction: (i) Inquiry Approach (ii) Problem Solving

10.5.1   Inquiry Approach

Inquiry approach is a scientific method of instruction. The credit of using inquiry approach in teaching goes to John Dewey, who in his publication *how we think*?, presents an alternative approach to passive learning. In 20th century John Dewey, the exponent of discovery learning and reflective thinking says "knowledge is an outcome of inquiry and resource in further inquiry". Generally speaking, inquiry is the process of finding out by searching for knowledge and understanding. Inquiry involves identifying problems, posing questions and seeking answers. It can be conducted in a variety of ways such as observing nature, predicting outcomes, manipulating variables, analyzing situations and evaluating assertions. Inquiry may involve discussing topics with others, reading printed material, conducting field studies and surveys and carrying out laboratory investigations or all of threes while attempting to discover new knowledge to figure out things and to evaluate products and services. Inquiry teaching may involve many processes or mental activities. The amount of time varies from one period to several months. Most important, these learning activities should begin with learners posing their own questions regarding topics under study. Inquiry method is often incorporated into the instructional process to engage learners in the following: questioning, process skills, discrepant events, inductive activities, deductive activities and information gathering. The inquiry approach requires a skilled teacher who can develop a learning environment that stimulates learner curiosity and desire to investigate. Carefully planned questions can engage thinking and motivate learners to seek information while carefully guided investigative activities can lead learners to make discoveries that have personal meaning. The power of an inquiry-based approach to teaching and learning is its potential to increase intellectual engagement and foster deep understanding through the development of a hands-on, minds-on and 'research-based disposition' towards teaching and learning. Inquiry honours the complex, interconnected nature of knowledge construction, striving to provide opportunities for both teachers and learners to collaboratively build test and reflect on their learning (Stephenson, 2007). Inquiry approach requires a high level of interaction among the learner, the teacher, area of study, available resources, and the learning environment. Learners become actively involved in the learning process as they:

a.   act upon their curiosity and interests;

b.   develop questions;

c.   think their way through controversies or dilemmas;

d.   Look at problems analytically;

e.   inquire into their preconceptions and what they already know;

f.   develop, clarify, and test hypotheses and,

g.   draw inferences and generate possible solutions.

Gagne (1963): According to him "enquiry is apparently a set of activities characterized by problem solving approach in which each newly encountered phenomenon becomes challenge for thinking**".**

Hampshire College: "It is a form of self directed learning in which learners take more responsibility for determining what they need to learn, identifying resources and how best to learn from them, using resources and reporting their learning, assessing their progress in learning."

CHARACTERISTICS OF INQUIRY APPROACH

Learning is stimulated by inquiry, i.e. driven by questions or problems

Learning based on a process of seeking knowledge and new understanding

It emphasizes learner-centered approach to teaching in which the role of the teacher is to act as a facilitator

Self-directed learning with learners taking increasing responsibility for their learning and the development of skills in self-reflection.

It is an active approach to learning

STAGES OF INQUIRY BASED INSTRUCTION

Pedaste et al. (2015) while reviewing 32 articles on the different phases of inquiry based learning led to a new inquiry based learning framework that includes five general inquiry phases: Orientation, Conceptualization, Investigation, Conclusion and Discussion. Within these five phases, several sub phases are:

I. **Orientation**-It refers to stimulating interest and curiosity among learners in relation to the problem at hand. During this phase of learning, topic is introduced by the teacher or learner. Identification of variables and defining the problem is the major outcome of this phase.

II. **Conceptualization**-It is a process of understanding a concept or concepts belonging to the stated problem. This phase is divided into two sub-phases i.e. questioning and hypothesis generation. In questioning, learner raises several questions(research) based on the stated problem whereas in hypothesis learner forms several tenable solutions linked with the stated problem which are tested and verified, based on the available evidences. Hypotheses are generally based on the research questions. Both questions and hypotheses are based on theoretical justification and contain independent and dependant variables. Thus, the main outcomes of conceptualization are research questions or hypotheses to be investigated by the learner.

III. **Investigation-** It is third phase of the inquiry where learner turns toward action and starts searching for the solutions in response to the research questions or hypotheses. Investigation includes three sub-phases: exploration, experimentation and data interpretation. Exploration is planned and systematic process of gathering information with the intent of finding a relation among the variables involved (Lin, 2004 cited Padaste, 2015). But, experimentation is making and applying a strategic plan to carry out the action and it is directly linked to hypotheses formation. Testing of hypotheses is generally done in experimentation by manipulating the variables. Data collected through exploration and experimentation is subjected to analysis and interpretation.

It is also called the meaning making stage of the inquiry in relation to the stated variables. This new knowledge is the outcome of this phase and it takes us back to earlier stated research questions and hypotheses.

IV. **Conclusion:** In this phase learners address their original research questions or hypotheses and consider whether these are supported or answered by the results of study. This phase may produce new theoretical insights.

V. **Discussion**: It is the process of presenting findings of particular phases or the whole inquiry cycle by communicating with others and /or controlling the whole learning process or its phases by engaging in reflective activities. Discussion involves two sub-phases: communication and reflection. Communication is an external process and relates to dissemination of new knowledge to peer groups, experts and others so that it may be reviewed on the basis of constructive comments and feedback suggested by them. Reflection is the process of describing, critiquing, evaluating, and discussing the whole or parts of inquiry. Reflection is more of an internal process and it can be done through several activities like narrative journal writing, questioning, writing daily journal, etc.

ADVANTAGES AND LIMITATIONS OF INQUIRY APPROACH INSTRUCTION

Inquiry approach to instruction is based on the premise of self directed learning wherein there is a minimum intervention of teacher. Therefore, this approach to instruction has several advantages than the conventional approach to instruction. But, inquiry approach suffers from several limitations, especially in the Indian classroom context.

ADVANTAGES

a. Inquiry approach is a self learning method and the learner uses the mental process therefore, it enhances the intellectual capacity of the learner.

b. Learning is based on the direct experiences of the learner which makes content easier to comprehend.

c. It develops the ability of learners for experimentation.

d. Inquiry approach uses multiple senses of the learner therefore it helps learners to understand the concepts more clearly and retain them for longer period of time.

e. Inquiry is based on constructivist approach thus every time it would be possible that learner will be able to create new knowledge which has sound base on experimentation.

f. It minimizes verbal learning and gives learner more time to assimilate and accumulate information.

LIMITATIONS

a. Training of teachers to facilitate learner's learning through inquiry.

b. Strength of the classroom is always critical for inquiry learning. Inquiry approach is feasible if the classroom strength is small.

c. School textbooks are not written on the basis of inquiry learning.

d. Inquiry learning requires plenty of resources. Normally schools are short of resources.

e. Inquiry approach is time consuming and it is based on conceptual approach rather than examination oriented approach.

f. Inquiry approach is time consuming therefore syllabus completion would be bigger issue.

Activity 2

Indentify a topic from your teaching subject where you can use inquiry approach. Prepare a plan based on steps explained above and execute it in your classroom. Prepare a report on its effectiveness.

10.5.2   Problem Solving

Problem solving is another learner centered approach to instruction**.** Problem solving is often used synonymously with inquiry. It presupposes that learners can take on some of the responsibility for their own learning and take personal action to solve problems, resolve conflicts, discuss alternatives and focus on thinking as a vital element of the curriculum. It provides learners with opportunities to use their newly acquired knowledge in meaningful, real-life activities and assists them in working at higher levels of thinking. It is associated with nature of scientific inquiry as well as instructional methodology. Gagne (1977) in his learning theory has placed problem solving at highest level of learning in hierarchy. He pointed out that the end result of problem solving is when the learner actually discovers a higher order rule or generalization and constructs new relationship and meaning for a concept under investigation. Problem solving engages learners in investigations where they raise questions, plan, procedures, collect information and form conclusions.

According to **Risk,** It is planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution. It involves reflective thinking and not merely the accumulation of facts or the blind acceptance of ideas which someone in authority has given us.

Kulsan and Stone defined Problem solving in scientific sense means some perplexity in the environment or some unexpected or different occurrence which must be explained.

CHARACTERISTICS OF PROBLEM SOLVING

i. It begins with the assumption that learning is an active, integrated, and constructive process influenced by social and contextual factors.

ii. It is characterized by a learner-centered approach with teachers as "facilitators rather than disseminators"

iii. It is based on purposeful activity.

iv. It is based on scientific skills and abilities like reflective thinking and reasoning.

METHODS OF PROBLEM SOLVING INSTRUCTION

Problem solving method of instruction is generally based on the assumption that learner adopts this method while solving different problems arising out of teaching a particular content to learners, in the workplace or in daily life. It is more of training to the learner to develop the habit of solving the problems based on the approach. This approach is based on the following:

(i)   Decision making is based on data, rather than hunches.

(ii) Determining root causes of problems, rather than reacting to superficial symptoms.

(iii) Devising permanent solutions, rather than relying on quick fixes.

Steps to be followed in this method of instruction are:

I. **Recognize and Define the Problem**: You must have visited a doctor and have experience of curing yourself especially when the symptoms of your illness resemble the symptoms of the disease you are suffering from. The similar situation can exist in the life of learner and teacher in teaching-learning process. Learner diagnoses the situation, identifies and discusses the symptoms and scope of the problem. Learner uses variety of tools such as brainstorming, interviewing, and completing questionnaires to gather information. Learner raises, reviews, and discards statements of the problem and makes a tentative definition of the underlying problem. While defining the problem, the following points should be kept in mind:

   1. It should be worded in a concise, definite and clear language.

   2. Problem should contain some keywords which may help in better understanding of the problem.

   3. It should be in the form of question or statement.

II. **Analyze the Problem to Determine its Root Cause**: You must have found that in initial phase when doctor starts treatment based on the symptoms and still the problem persists, the doctor realizes that there's actually a deeper problem that needs attention. However, if the doctor looks deeper to figure out what's causing the problem then only one can fix the underlying systems and processes so that it goes for good. Root Cause Analysis (RCA) is a popular and often-used technique that helps to answer the question of why the problem occurred in the first place. It seeks to identify the origin of a problem using a specific set of steps, with associated tools, to find the primary cause of the problem so that you can:

   1. determine what happened;

   2. determine why it happened; and

   3. figure out what to do to reduce the likelihood that it will happen again.

   RCA assumes that systems and events are interrelated. An action in one area triggers an action in another and so on. By tracing back these actions, you can discover where the problem started and how it grew into the symptom you're now facing. It is also the stage wherein you can redefine the problem based on the causes and analysis.

III. **Generate Alternative Solutions:** At this stage rather than single out a solution learner should explore full range of viable solutions before reaching conclusion. To generate variety of solution learner must:

   1. generate as many as possible potential solutions;

   2. relate each solution to the cause of the problem; and

   3. merge similar or related solutions.

   It is also a stage where learner must reduce redundancy and eliminate any possibilities that do not address the causes of the identified problem.

IV. **Select a solution:** In fourth step, evaluate each potential solution identified in earlier step for its strengths and weaknesses. Selecting a solution entails

searching for the most effective solution by applying two general criteria. An effective solution:

is technically feasible

is acceptable to those who will have to implement it.

Feasibility is determined by asking the following questions: Can it be implemented within a reasonable time? Can it be done within cost limits? Will it work reliably? Will it use staff and equipment efficiently? Is it flexible enough to adapt to changing conditions?

Ask these questions when evaluating a solution's acceptability: Problem Solving Overview: Do the implementers support the solution, perceiving it as worth their time and energy? Are the risks manageable? Will the solution benefit the persons affected by the problem? Will it benefit the organization?

Selecting a solution requires you to choose one that will be effective – one that has sufficient technical quality to resolve the problem, and is acceptable to those who will implement it.

V.   **Implement the solution:** Choosing a solution does not immediately solve a problem. Putting a solution into action may prove as difficult as deciding one. The implementation stage requires action planning: What must be done? Who will do it? When will it be started? When will key milestones be completed? How will the necessary actions be carried out? Why do these actions lead to a solution?

VI.   **Evaluate the Outcome:** In simplest terms, evaluation is the monitoring of problem till the final solution. It means additional feedback mechanisms to detect the need for midcourse corrections and to ensure that the problem is solved without creating new problems. Collecting data and reporting on what has been accomplished. Finally, it includes reflecting on its processes and results.
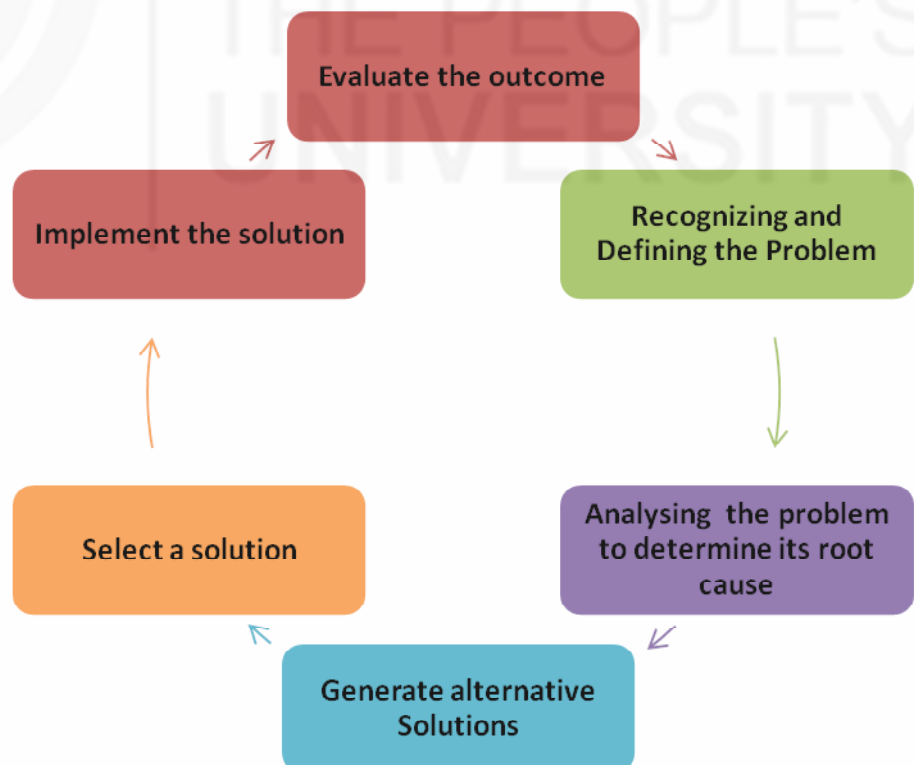

Fig 10.1: Steps of Problem Solving Instruction

ADVANTAGES OF PROBLEM SOLVING METHOD

It ensures the active participation of the learners in teaching-learning activity.

It habituates learner to study regularly and be organized.

It helps learners gain scientific view and thinking.

It makes learners interested in learning.

It helps learners improve their sense of responsibility.

It provides learners opportunity to face the problems boldly and to deal with it through a scientific approach.

It helps learners benefit from others' ideas and help each other.

It predicates the learning to a more logical and doughty foundation.

It improves the ability of learners to identify problem and put forward hypotheses.

It helps learners adopt the idea of calmness in making a decision.

DISADVANTAGES OF PROBLEM SOLVING METHOD

It takes too much time.

It is not possible to apply this method to all disciplines.

It can load some worldly burden on learners.

It can be difficult for learners to provide the materials and sources which is required for solving the problem.

Evaluating the learning through this method can be difficult.

10.5.3 Strategies and Techniques of Conducting Inquiry and Problem Solving

Questioning: Questions are fundamental to learning and also heart of inquiry learning. Asking a right question is critical in investigative work. Questions engage thinking and orient mental activity towards meaningful ends. For instructional purposes questions can be classified into different types: what where, which, when and why. Learners must ask relevant questions and develop ways to search for answers and generate explanations. Questions can also be asked to direct learner thinking along the lines of the process skills such as observing, inferring, hypothesizing and experimenting. Emphasis is placed upon the process of thinking as this applies to learner interaction with issues, data, topics, concepts, materials, and problems. Divergent thinking is encouraged and nurtured as learners recognize that questions often have more than one "good" or "correct" answer. Such thinking leads in many instances to elaboration of further questions. In this way learners come to the realization that knowledge may not be fixed and permanent but may be tentative, emergent, and open to questioning and alternative hypotheses.

Discrepant events: A stimulating approach to initiate inquiry is to use discrepant events. A discrepant event is one that puzzles the observer. It causes the observer to wonder why an event occurred as did; it leaves the observer at a loss for an explanation. An inquiry session initiated through discrepant events usually begins

with a demonstration or film preceded by some directions to focus learners attention on what they are to observe. Discrepant events can be used to stimulate inquiry about numerous concepts and principles. The discrepant event approach receives support from learning psychologists as valid instructional method. Discrepant events influence equilibration and the self-regulatory process, according to the Piagetian theory of intellectual development. Situations that are contrary to what a person expects cause him to wonder what is taking place. With proper guidance the learner figures out the discrepancy and attempts to find out the suitable and acceptable explanation, that rests temporarily at a new cognitive level.

Inductive Activities: In this inquiry approach, learner is presented with learning situation in which they can discover a concept or principle. In this approach the attributes and instances of an idea are encountered first by the learner, followed by naming and discussing the idea. This strategy is the opposite of the deductive inquiry. The information-seeking process of the inductive inquiry method helps learners to establish facts, determine relevant questions, develop ways to pursue these questions and build explanations. Learners are invited to develop and support their own hypotheses. Through inductive inquiry, learners experience the thought processes which require them to move from specific facts and observations to inferences. To help learners accomplish this, the teacher selects a set of events or materials for the lesson. The learner reacts and attempts to construct a meaningful pattern based on personal observations and the observations of others. Learners generally have some kind of theoretical frame when they begin inductive inquiry. The teacher encourages learners to share their thoughts so that the entire class can benefit from individual insights.

Deductive Activities: The focus in deductive inquiry is on moving learners from a generalized principle to specific instances that may be subsumed logically within generalizations. The process of testing generalized assumptions, applying them, and exploring the relationships between, specific elements is stressed. The teacher coordinates the information and presents important principles, themes, or hypotheses. Learners are actively engaged in testing generalizations, gathering information, and applying it to specific examples. Deductive inquiry is based upon the logical assimilation and processing of information.

Check Your Progress

Note: a) Write your answers in the space given below:
     b) Compare your answers with those given at the end of the Unit.

4.   How problem solving is different from inquiry method of instruction?

....

....

....

10.6   GROUP CENTERED METHODS

The classroom normally connotes to a group. It means, as a regular feature, teacher adopts group centered method of instruction rather than individual centered. As a result, majority of times instead of facilitating the classroom interactions,

teacher takes control over it and transmits the information to the learners without having any understanding whether learners are able to absorb it. What are the needs of the learners? Do they already possess some knowledge related to the content which has been delivered? This mistake often takes place when we equate our classroom as a group of learners which is actually not true.

Teachers who are of the view that they are teaching to group of learners (classroom) have mistaken the very concept of group. Group always connotes set of individuals that have special characteristics and are limited in numbers. When we say group centered instruction, it means teaching-learning process takes place within the few members who are part of the group. In group centered instructions teacher has the minimal role. Teacher assigns the activity to learners, which needs to be completed by them. It is the responsibility of the group members to plan, organize, manage and execute all the tasks. The role of teacher is to act as more of a facilitator, mentor or guide. The task will be completed under teacher direction. It does not mean that teacher regularly interferes in the activity. The autonomy and the accountability of the learner is key for group centered instruction. Depending upon the task or activity, the group can be small or big in size. Within the group centered instruction following are commonly used in the classroom by teachers and are described below:

10.6.1 Brain Storming

You often come across a problem and try to find out a solution. But, when you and your colleagues or learners sit together for loud thinking to find solution of the problem, you generate a large number of ideas for the solution of a problem. This is normally called '**Brainstorming'**. Brainstorming is generally called out of the box thinking rather than thinking on the established pattern. It is the process of developing new way of looking at things. This is normally applied by teacher when conventional ideas are not working as a solution to the problem.

Rules of Brainstorming

Focus on quantity: It generally focuses on the maxim *quantity breeds quality.* It means greater the number of ideas generated, the greater is the chance of producing a radical and effective solution.

No criticism: In brainstorming 'no criticism' means all ideas are welcome, even if they partly solve the problem or not. Not holding back of ideas is key to it. It helps other group members to focus on extending or adding or modifying the ideas. By suspending the judgment, one creates a supportive atmosphere where participants feel free to generate unusual ideas.

Unusual ideas are welcome: To get a good and long list of ideas, unusual ideas are welcomed. They may open new ways of thinking and provide better solutions than regular ideas. They can be generated by looking from another perspective or setting aside assumptions.

Combine and improve ideas: Good ideas can be combined to form a single very good idea, as suggested by the slogan "1+1=3". This approach is assumed to lead to better and more complete ideas than merely generating new ideas alone. It is believed to stimulate the building of ideas by a process of association.

PROCEDURE OF THE METHOD

As a teacher, you can follow the steps given below for brainstorming:

i) **Set the problem:** The very first step of brainstorming is to define the problem. The problem must be clearly worded and often in a question form. If the problem is too big, the leader should divide it into smaller components; each of the questions is complete and definite.

ii) **Create a Background Memo:** It is a form of invitation and informative letter to the participants, containing the session name, problem, time, date, and place. The problem is described in the form of a question, and some examples are given. The ideas are generally solutions to the problem, and used when the session slows down or goes off-track.

iii) **Select Participants:** The team leader of the brainstorming panel selects the team member. Smaller groups in the brainstorming sessions are more productive than the larger ones. Variation in the composition of team members is key to the brainstorming session. Some of them are as follows:

Several core members of the project who have proved themselves.

Several guests from outside the project, with affinity to the problem.

One idea collector who records the suggested ideas.

iv) **Create a List of Lead Questions:** Normally when we go for brainstroming sessions, every member plunges deeply into it. These lead to sometimes decrease in divergent and convergent thinking. So, as a team leader you must prepare some lead questions which should stimulate creativity by suggesting a lead question to answer, such as *Can we combine these ideas?* or *How about a look from another perspective?*.

v) **Conduct Session:** Brainstorming normally works on certain basic rules and every member of the team must adhere to these rules.

Leader presents the problem and if needed provides further explanation.

Leader invites ideas from the brainstorming panel

In the case of paucity of ideas, leader suggests lead questions to encourage creativity.

Every participant presents his or her ideas, and the idea collector records them.

The most associated idea (problem) is elected from the number of ideas.

Ideas need to be elaborated to improve its quality.

Leader organizes the ideas based on the topic goal and encourages discussion. Additional ideas may be generated and categorized.

The whole list is reviewed to ensure that everyone understands the ideas.

Duplicate ideas and obviously infeasible solutions are removed.

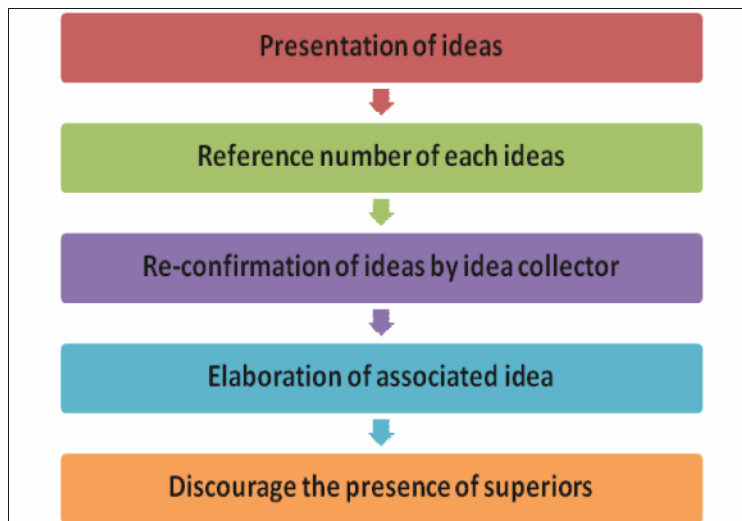The leader thanks all participants and gives each a token of appreciation

Figure 10.2: Process of Brainstorming

10.6.2 Cooperative Learning

Cooperative learning is yet another successful teaching strategy of group centered instructions. Hassard(1990) pointed out; cooperative learning is a powerful learning instructional method in which groups of learners work together to solve problems and complete learning assignments. It is a deliberate attempt to influence the culture of the classroom by encouraging cooperative actions among learners. Watson (1992) pointed out that cooperative learning have some key elements: One, cooperative groups have two to seven members working together. Second, each of the learners of the group are either assigned different tasks or each learner can study the same body of information. Third, groups are generally heterogeneous with respect to academic ability, gender, social background. Fourth, incentives to the individuals or group are rewarded for success. This reinforces learning and cooperation. In cooperative learning learner must be accountable for their personal achievements and contribute to the group. Experienced teachers know well that it is easy for some learners to ride on the efforts of others during group work; therefore, teachers who are using this strategy should be on guard against this occurrence. Cooperative instruction can take many forms, nevertheless the important steps to be followed in cooperative learning are as follows:

Step 1: Organize learners into groups, using criteria to make decisions regarding this process. Determine the desired outcomes for the investigation to be undertaken, then place the learners into groups accordingly.

Step 2: Identify ideas or topics that will motivate learner inquiry. Some teachers provide a preliminary list of ideas for their learners that relate to the course or unit under study, focusing their thinking process. However, this approach should encourage brainstorming in order to identify additional ideas for investigation by learners.

Step 3: Ask each group to provide a preliminary outline of their study or project. This step immediately places learners on a productive path. When you examine the outline, provide suggestions and guidance. It is the responsibility of the teacher to make sure that each learner in the group knows what exactly s/he has to do.

Step 4: Monitor the investigations. You should have a good idea where each group is while the investigations are carried out. Some inquiries and projects will be conducted during class time, making them easy to monitor. Other investigations

will take place after school and on weekends. For this type of work, take some time during class to ask for information to determine how groups as well as individuals are progressing.

Step 5: Help learners to prepare their final reports so that they do well and feel good about their work. Help learners form an outline for these reports and designate who will do each part of the write-up. The report is an opportunity for learners to demonstrate their process skills, the questions and they attempt to answer, the inferences and graphs they construct to communicate their findings. This phase of work is ideal for helping learners represent knowledge, visualize models, give explanations and demonstrate various skills.

Step 6: Assist each group to identify learners to take part in presenting their report. This aspect of cooperative group work develops presentation skills and confidence in speaking before others.

Strep 7: Evaluate the investigations and projects. This often takes the form of assigning points to groups and individuals learners and entering into the grade books.

ADVANTAGES OF COOPERATIVE LEARNING

1. The group provides each member with an opportunity to participate and thereby influences decision making.

2. Face to face learning situations promote an atmosphere of cooperation and empathy seldom achieved in other learning situations.

3. Personal relationships are usually less problematic. There is also a greater chance of different opinions and varied contributions.

4. It encourages broader skills of cooperation and negotiation.

5. It promotes learner autonomy by allowing learners to make their own decisions in the group without being told what to do by the teacher.

6. Although we do not wish any individuals in groups to be completely passive, nevertheless, some learners can choose their level of participation more readily than in a whole-class or pair work situation.

DISADVANTAGES OF COOPERATIVE LEARNING

1. It is likely to be noisy.Some teachers feel that they lose control., and the whole-class feeling which has been painstakingly built up may dissipate when the class is split into smaller entities.

2. Not all the learners enjoy it, since they would prefer to be the focus of the teacher's attention rather than working with their peers.Sometimes learners find themselves in uncongenial groups and wish they could be somewhere else.

ROLE OF THE TEACHER

1. The teacher can merely provide a setting and atmosphere in which such attitudes and behaviours may develop.

2. Careful encouragement and direction is needed constantly by the teacher.

3. The teacher creates and maintains a mutual feeling of responsibility to achieve group goals.

4. The teacher is responsible for contributing specific information when needed.

GROUP ACTIVITIES

It is often been found out by us that we are being typecast in our teaching-learning process and often our classrooms look like a place of burial where neither teacher has the interest to teach in the classroom nor are the learners keenly interested in listening what the teacher is teaching them. As a result both teacher and learner lose interest in the classroom learning process and eventually the entire process become boring after certain period of time. To avoid reaching such situation, it is indeed necessary that you as a classroom leader should arrange such activities and engage all the learners in the classroom so that learners remain motivated and interested in your classroom. It can happen only when you as a teacher arrange group centric activities. Group activities are the ones where involvement or participation of the maximum number of learners is ensured by the teacher. Learner not only participate in it but also enhance knowledge by gathering information and processing it by solving problems and articulating what they have discovered. Each activity provides learners with opportunities to deepen their learning by applying concepts and articulating new knowledge and many of these activities also provide the teacher feedback to the learners' learning. Some of the common group activities, you as a teacher can carry out in your classroom are as follows:

Think–Pair–Share: In this type of activity, as a teacher you ask your learners to think of a question of their own and then write it on the blackboard. Thereafter, teacher provides an opportunity to learners to think and discuss it in pairs, and finally together with the whole class. The success of these activities depends on the nature of the questions posed. This activity works ideally with questions to encourage deeper thinking, problem-solving, and/or critical analysis. The group discussions are critical as they allow learners to articulate their thought processes. Advantages of the think-pair-share include the engagement of all learners in the classroom (particularly the opportunity to give voice to quieter learners who might have difficulty sharing in a larger group), quick feedback for the instructor (e.g., the revelation of learner misconceptions), encouragement and support for higher levels of thinking of learners.

Role Play: This is the most common method normally adopted by teachers for group centric activities. In role play method teacher or learners selects the content to be played or dramatized, often picked up from the history, narrative tales, stories, etc. After that, it is either the teacher who assigns the role or character to learners or learners themselves select a character of their own and present in front of the class or audience. The learners who enact the characters from historical figures, authors, or other characters present the perspective of character. Advantages include motivation to solve a problem or to resolve a conflict for the character, providing a new perspective through which learners can explore or understand an issue and the development of skills, such as writing, leadership, coordination, collaboration and research.

Jigsaw: A Jigsaw is a puzzle type activity (like rubrics) where learners are grouped into teams to solve a problem. This strategy involves learners becoming "experts" on one aspect of a topic, and then sharing their expertise with others. These can be done in one of two ways – either each team works on completing a different portion of the assignment and then contributes their knowledge to the class as a whole, or within each group, one learner

is assigned to a portion of the assignment (the jigsaw comes from the bringing together of various ideas at the end of the activity to produce a solution to the problem). First divide a topic into a few constitutive parts ("puzzle pieces"). After that, form sub-groups of 3-5 learners and assign each sub-group a different "piece" of the topic (or, if the class is large, assign two or more sub-groups to each subtopic).

Each group's task is to develop expertise on its particular sub-topic through brainstorming, developing ideas, and if time permits, researching. Once learners have become experts on a particular sub-topic, shuffle the groups so that the members of each new group have a different area of expertise. Learners then take turns sharing their expertise with the other group members, thereby creating a completed "puzzle" of knowledge about the main topic. A convenient way to assign different areas of expertise is to distribute handouts of different colours.

For the first stage of the group work, groups are composed of learners with the same colour of handout; for the second stage, each member of the newly formed groups must have a different colour of handout. The jigsaw helps to avoid tiresome plenary sessions because most of the information is shared in small groups.

This method can be expanded by having learners develop expertise about their sub-topics first through independent research outside of class. Then, when they meet with those who have the same subtopic, they can clarify and expand on their expertise before moving on to a new group. One potential drawback is that learners hear only one group's expertise on a particular topic and don't benefit as much from the insight of the whole class. To address this issue, you could collect a written record of each group's work and create a master document—a truly complete puzzle—on the topic. The advantages of the jigsaw include the ability to explore substantive problems or readings, the engagement of all learners with the material and in the process of working together, learning from each other, and sharing and critically analyzing a diversity of ideas.

Circle of Voices: In this method, learners are given a topic and allowed a few minutes to organize their thoughts about it. Then the discussion begins, with each learner having up to three minutes (or choose a different length) of uninterrupted time to speak. During this time, no one else is allowed to say anything. After everyone has spoken once, open the floor within the subgroup for general discussion. Specify that learners should only build on what someone else has said, not on their own ideas; also, at this point, they should not introduce new ideas.

Snowball groups/pyramids: This method involves progressive doubling: learners first work alone, then in pairs, then in fours, and so on. In most cases, after working in fours, learners come together for a plenary session in which their conclusions or solutions are pooled. Provide a sequence of increasingly complex tasks so that learners do not become bored with repeated discussion at multiple stages. For example, have learners record a few questions that relate to the class topic. In pairs, learners try to answer one another's questions. Pairs join together to make fours and identify, depending on the topic, either unanswered questions or areas of controversy or relevant principles based on their previous discussions. Back in the large

class group, one representative from each group reports the group's conclusions (Habeshaw et al, 1984; Jaques, 2000).

Fishbowl: This method involves one group observing another group. The first group forms a circle and either discusses an issue or topic, does a roleplay, or performs a brief drama. The second group forms a circle around the inner group. Depending on the inner group's task and the context of your course, the outer group can look for themes, patterns, soundness of argument, etc., in the inner group's discussion, analyze the inner group's functioning as a group, or simply watch and comment on the role play. Debrief with both groups at the end in a plenary to capture their experiences. Be aware that the outer group members can become bored if their task is not challenging enough. You could have groups switch places and roles to help with this. Also note that the inner group could feel inhibited because of the observers; mitigate this concern by asking for volunteers to participate in the inner circle or by specifying that each learner will have a chance to be both inner and outer group members. Although this method is easiest to implement in small classes, you could also expand it so that multiple "fishbowls" are occurring at once.

Activity 3

Organize a discussion on usefulness of cooperative learning methods at secondary level with your teacher colleagues. Prepare report on their view points on its utility.

10.6.3 Discussion Method

The inception of the discussion method of instruction could be traced out during the time of pre-Vedic period where Gurus used it for deliberations among learners. Even during the ancient Greek period, the great philosophers like Plato and Socrates used this method extensively for deliberations during teaching –learning process. One can say with authority that discussion method is one of the oldest methods of instruction. Discussion is a method in which the teacher leads or guides the learners in expressing their opinions and ideas with a view to identifying and solving problems collectively. Oyedeji (1996) explained that the discussion method works on the principle that the knowledge and ideas of several people are more likely to find solutions or answers to specific problems or topics. This is in line with the saying that "Two good heads are better than one". Discussion method of teaching engages both teachers and learners in thinking. It also develops in learners social skills of talking and listening.

According to the James Lee "the discussion is an educational group activity in which the teacher and the taught talk over the problem." Discussion is a kind of reflective thinking by two or more persons, who cooperatively exchange information and ideas in an effort to solve problems or to gain understanding of a problem. In discussion method learners employ the skills of analysis, comparison, evaluation and conclusion to reach the solution of the problem.

According to Stephens and Stephens (2005), discussion as a process of giving and talking, speaking and listening, describing and witnessing which helps expand horizons and foster mutual understanding. They explain further that it is only through discussion that one can be exposed to new points of view and exposure increases understanding and renews motivation to continue learning. Bridges (1988)

notes that discussion is concerned with the development of knowledge, understanding or judgment among those people taking part in it. He believes that discussion is more serious than conversation because it requires to be both "mutually responsive" to the different views expressed.

Discussion is a teaching strategy in which the teacher brings learners face to face as they engage in verbal interchange of ideas. The teacher in his interactions with his learners performs a variety of roles. As a teacher, his main business is to transmit the knowledge, and in doing so, s/he specifies the objective of lesson and examines the needs and background of the learners' relevance of the topic and its suitability. While applying the discussion strategy, teacher plays the role of a manger, a guide, an initiator and a summarizer. Discussion method is generally used for following purposes: laying plans for new work; making decisions for future action; sharing information; obtaining and gaining respect for various points of view; clarifying ideas; evaluating progress, etc.

Thus discussion method of instruction has the following characteristics:

i.   Discussion method is based on the exchange of ideas, concepts, and information among learners.

ii.   It provides learners opportunity to express freely their ideas.

iii.   When shared among the group members, it develops clarity of ideas.

iv.   It is group centered, therefore it stimulates mental activity of each of the members of the group.

v.   In this method, there is a high probability that there is an agreement or disagreement among the group members related to acceptance of an idea.

vi.   It is a systematic process of making a collective decision through competitive cooperation.

vii.   It is oral method of instruction.

viii. It trains the learners for reflective thinking.

COMPONENTS OF DISCUSSION

There are four main components of discussion:

Leader: In discussion method, planning, selection and organization of content are done by the teacher; therefore teacher normally acquires the role of leader in discussion. It is not that teacher alone can act as a leader. But any senior person, by virtue of its experience and position, can also be the leader of the group discussion. The role of the leader should be of democratic nature wherein s/he not only keeps an overall control of the discussion but also provides proper direction to the discussion. The role of the leader would be to give equal chances to all its members as far as possible to express their ideas or opinions freely by adopting the principle of equality. The main function of the leader is to facilitate the process of group thinking among the members.

Group: Normally, a class or a smaller entity of it comprises the group**.** A group can be homogeneous or heterogeneous in nature in terms of specific abilities. Ideally a group of heterogeneous social and intellectual backgrounds would serve a better purpose for discussion group as it provides diverse thinking and thus contributes more to the discussion than the homogeneous group.

Problem: Identification of the problem and working for its solution is the key for the discussion. In classroom based discussion, normally it is the responsibility of the teacher to define or state the problem in front of the learners, otherwise it is the senior person in the group who does it. It is important to remember here that the problem should be defined by the teacher or leader in exact manner. Leader or teacher should not impose the problem upon the group of learners. The problem should be in accordance with the abilities, need, interest, relevance and practical utility of the learners.

Content: According to Johnson, the content of the discussion is the body of knowledge, facts and generalization which must be drawn upon, if any problem is to be discussed and resolved. In many cases facts needs to be rediscovered or verified, and sometimes, we need to establish the relationships or verify the assumptions or hypotheses.

PROCEDURE FOR ORGANIZING DISCUSSION

Discussion is a group centered activity and usually, it takes place for the whole class or a small group, therefore it is necessary that leader does it in a very organized manner. The following are the key points for organizing a discussion:

1. **Planning the discussion:** Discussion methods would produce desirable results, if teachers and learners sit together cooperatively to work out the plan.

2. **Preparation:** It is indeed necessary that thorough preparation is essential for successful implementation of the plan. The teacher and learners should be widely and deeply read and thus prepare the material critically and contentiously. Points are to be arranged logically. It is necessary that problems should be sensed problems by the learners.

3. **Conduct of discussion:** The strength of the discussion method is that every member of the group should be free to express their views, ideas and opinions and thus contribute to the progress of discussion. The teacher not only sees that everyone is contributing but also creates an environment which promotes healthy discussion. S/he should also motivate participants by asking questions or providing clues so that discussion moves in the right direction. A relaxed and informal environment is required in the discussion and challenge for the teacher is that it does not turn into a competitive quarrel. The discussion should be result oriented.

4. **Evaluation:** It involves evaluating the solutions put forward by the learners in light of the problems. The discussion should remove prejudices, change of attitudes, and increase of knowledge.

ADVANTAGES

It helps in clarifying issues

It helps in crystallizing the thinking process.

It helps learners discover what they do not know.

Discussion is reflective practice.

It builds social skills among learners.

It provides learners opportunities to speak freely but correctly, respect the ideas of others, share interests, ask questions, and comprehend the problem.

It helps teacher discover talents among the learners.

DISADVANTAGES

It is not suitable for all topics.

Discussion can get out of hand, if not properly controlled, and leads to emotional tension.

Class may turn into a market place.

Confusion may arise as a result of poor management.

It may be dominated by a few members.

Often discussion may go off the track resulting into non-achievement of desired objectives.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

5.   Discussion method develops in the learner social skills. Explain?

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10.7   CONTEXT SPECIFIC APPROACHES

Method of instruction is the most important link in the total teaching-learning process. It is a link between the pre-determined objectives and the change in the behaviour of the learner. Method of instruction determines the quality of result. It is always a matter of debate whether teacher follows a specific method to teach content or teacher should be eclectic in approach while selecting a method of instruction. Effective teaching is not a set of generic practices, but instead, is a set of context driven decisions about teaching. Effective teachers do not use the same set of practices for every lesson. A good teacher always constantly reflects about his/her work, observes whether learners are learning or not and adjusts his/her practices accordingly (Glickman, 1991).

1.   **Instruction is eclectic:** Teaching is not constrained by a belief that there is one best method of teaching. Teachers should be invited to extend their range of instructional approaches in a secure, risk-taking environment.

2.   **Instruction is tied directly to the success of the learning experience:** Effective instruction occurs when the teacher links sound curriculum development and excellent instructional practice in a successful learning experience. Reciprocal, positive relationships between teacher and learners are also necessary for instruction to be truly effective. This means learner must be viewed as an active participant in the teaching-learning process.

3. **Instruction is empowered professional practice in action:** Instructional judgement must be encouraged and nurtured in classroom professionals so that they acquire the flexibility needed to adapt to instructional practice to meet a wide variety of learner needs.

4. **Instruction integrates the components of the Core Curriculum:** When making instructional decisions, teachers should consider the content, perspectives, and processes specified in the curriculum for a Required Area of Study or a Locally Determined Option, and the appropriate Common Essential Learning. Teachers also need to make decisions regarding adaptation of instruction to meet individual learning needs.

5. **Instruction is generative and dynamic:** Ever changing variables affect instructional decision-making. Educators are encouraged to extend their range of instructional approaches based on a foundation of research, a wide range of practical and theoretical knowledge, and a regard for learners as active participants in the learning process.

6. **Instruction acknowledges a comprehensive understanding of the instructional cycle:** Teachers begin the instructional cycle by assessing individual learning needs, interests, and strengths through observation and consultation with learners. They then determine the instructional approaches required, deliver instruction in a manner appropriate to learners' learning abilities and styles, and evaluate learners' growth-and understanding. The cycle concludes with teachers' self-reflection and further teacher learner consultation.

7. **Instruction finds best expression when educators collaborate to develop, implement, and refine their professional practices:** Instructional practice can be improved through sustained and systematic attention to professional development. Teachers can improve their own instructional practices by participating in professional development programs or working with peers and supervisors. These programs must include elements of the individual reflection.

10.8   LET US SUM UP

Classroom teaching has various components and methods of instruction are one of them. Teacher has various methods of instruction in its armory, which have been learnt either in pre-service or in-service training. Sometimes, teacher innovates methods based on the circumstances of the classroom. There are various criteria which determine the method of instruction to be used in the classroom teaching. These are learner, content, learning environment and learning outcomes.   Methods of instruction can broadly be classified as teacher centered approach, learner centered approach and group centered approach. Within each of the approaches, there are several methods of instruction having its own merits and demerits. But it is important for a teacher to be eclectic in approach while choosing a method of instruction.

10.9   UNIT END EXERCISES

1. How learner characteristics influence selection of instructional method?

2. Teacher centered approaches is unsuitable in middle and upper middle classrooms. Why?

3. Why we should adopt learner centered approach of instruction in contemporary classrooms?

4. Cooperative learning develops social skills among the learners. How?

5. Why teachers should be eclectic in approach in selection of teaching methods?

10.10 REFERENCES AND SUGGESTED READINGS

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10.11 ANSWERS TO CHECK YOUR PROGRESS

1. Intended learning outcomes, Nature of content, Learner Characteristics, Teacher ability, Size of the class and available resources

2. Answer based on your understanding.

3. Group of teachers, Joint responsibilities, Cooperative teaching, Specific Competencies, Need- Centered, Autonomy to Teachers, Flexibility in Teaching, Improvement in teaching-learning process, Pooling of Resources

4. Though problem solving and inquiry based instruction are similar in nature, problem solving is different in many respect with inquiry approach. Inquiry approach is the process of starting from observations to develop an understanding of a concept and the process would start out with deciding what concept you wanted to explore whereas problem solving is addressing a situation, occasionally having to determine what the outcome needs to be but usually with that defined and determining how to achieve that outcome. This usually involves comparing the situation to previous experiences, identifying similarities and differences.

5. Discussion is a group centric method wherein members of the group are participating in it. It is important that in group centric instructional method one needs cooperation, decision making, leadership qualities, appreciation of individual differences, respect for ideas, etc.

UNIT 11 TEACHING-LEARNING RESOURCES

Structure

11.1 INTRODUCTION

Resource plays a vital role in the teaching-learning process. In education the meaning of resource is any device, object or machine used by a teacher to clarify or enliven a subject. It can also be viewed as material and equipment used in teaching learning process.

There are so many aspects of word "resource". At some place, it is taken as a source of supply and support or aid that can be readily drawn upon. This word is also used as to refer to a capability or determination to persevere and in the context of classrooms, resources can be defined as physical demonstration aids, learners' contextual understandings, teacher subject expertise, and structured organization of materials, ideas and activities.

You all are aware of the importance of resources for teaching and learning. So question has shifted from "*does* teaching-learning resources/technology enhance learning" to "*how* and in *what contexts* can teaching-learningresources/technology be used to enhance learning." In this unit, we will discuss about these issues and

also about the contexts, in which various resources are going to be useful in teaching-learning process.

11.2 OBJECTIVES

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

- describe the term "teaching-learning resource";

- analyze the need of resources for teaching and learning process;

- categories various types of teaching-learning resources;

- explain the importance of learner-oriented environment as learning resource;

- delineate the role of classroom as resource;

- discuss the function of community as teaching-learning resource;

- describe importance of improvised resources;

- identify ICT and multimedia resources for teaching-learning; and

- select and integrate the appropriate resources in teaching and learning based on certain criteria.

11.3 TEACHING-LEARNING RESOURCES

In present era of changing world i.e. digital and techno savvy, the characteristic of learner is also changing. Around 12-15 years ago we could visualize that a learner was supposed to sit silently on his seat and tried to grasp what teacher was teaching. It is an old notion where we envision that learners should be in passive role and teachers have to play an active role in the classroom. According to present concept the learners should be in the active role and teachers must be in the role of facilitator. NCF-2005 also proposes that learning should be child oriented as well as activity oriented.

Learners, especially those belonging to adolescence age group do not understand the seriousness of education in their age; but it is they who readily want to participate in process of getting education. So, this is the responsibility of teachers to make their learners curious, eager to learn and also to be able to apply whatever they have learnt. To achieve this active environment and active learning is essential. The meaning of 'active learning' is such type of learning in which learners are engaged with the learning materials, full participation in the class, and work together to seek the knowledge. For this a teacher should create learning friendly environment for his learners. These things can be ensured by use of learning resources in the classroom.

11.3.1 Concept and Meaning

Teaching-learning resources are those resources what teachers use to assist learners to meet the expectations for learning defined by curriculum. We can also define these resources as materials used by a teacher to supplement classroom instruction or to stimulate the interest of learners. Obviously, teaching learning resources aid to retain more concepts permanently. Also, learners can learn better when they are motivated properly through different teaching learning

resources. Here are few definitions, which will help you to understand the concept of teaching-learning resources:

Teaching learning resources are tools that classroom teachers use to help their learners learn quickly and thoroughly. A teaching aid can be as simple as a chalkboard or as complex as a computer program.

Klaus (2010)

Teaching learning resources is a material which the teacher uses to facilitate the learning, understanding and acquisition of knowledge, concept, principles or skills by his learners.

Tamakloe, Amedahe and Atta (2005)

Teaching learning resources assists in and supports learner learning. It helps learners to understand and enjoy the lesson which the teacher teaches them. It helps learners understand the object of the lesson the teacher is conveying. Additionally, teaching learning resources helps the teacher to test whether the learners have improved their understanding of the subject.

Hayford (2013)

Gross *et al*. (1971) also emphasized on the need of these resources in the classroom. These learning resources are facilities, which are very important for effective learning because they stimulate learning and foster development at desirable changes in the behaviour of a learner. The basic purpose of teaching is to enable learning. The most effective teaching is that which results in the most effective learning.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

1.   Define Teaching-Learning Resources in your own words.

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11.3.2   Importance of Resources in Teaching-Learning

In the former discussion we discussed what teaching-learning resources are. We have also discussed that these resources also play a very significant role in teaching and learning and how these resources play a significant role in teaching and learning. It is a Chinese proverb that "What I hear, I forget; what I see, I remember and what I do, I understand". In order to attain remembering and understanding the content, teaching- learning resources are needed. The importance of teaching-learning resources is as follows:

i.   Forgetting is an integral part of our memory. We all have tendency to forget. For memorizing and retaining any concept appropriate use of teaching-learning resources are very effective.

ii.   Teaching-learning resources also motivate the individual. If teacher is using these resources to clear any concept then because of motivation learners can learn better.

iii. In teaching-learning process, when a teacher uses these resources, learners use more than one sense organ. Uses of more sense organs make the learning permanent because these resourceshelp to develop the proper mental image. Learners can learn any conceptby using various senses like looking, hearing, touching, smelling and doing (schema).

iv.   Through teaching-learning resources, the teacher clarifies the content more easily.

v.   Teaching-learning resourcesmake available direct experience to the learner which is helpful in learning.

vi.   Interest is related to motivation and motivation is essential for learning. The teaching-learning resources make the environment interesting for the learners.

vii. In teaching; illustration with examples makes learning very successful. Teaching-learning resources provide absolute picture for conceptual thinking.

viii. Teaching-learning resources are also helpful in increasing the vocabulary of the learners.

ix.   Teaching-learning resources also remove dullness from the classroom and make the classroom live and active.

x.   Teaching-learning resources are also helpful in time and money saving.

11.3.3   Types of Teaching-Learning Resources

To make the teaching-learning process effectual, so many resources are available. These resources are also known as teaching aids. We can categories these resources in different way as; traditional teaching-learning resources & modern teaching-learning resources or audio teaching-learning resources/aids, visual teaching-learning resources/aids & audio-visual teaching-learning resources/aids. The brief classification of these resources is as follows:

a.   **Audio Teaching-Learning Resources**: Those resources which involve the sense of hearing are known as audio teaching-learning resources as; radio, tape recorder, audio CD, gramophone etc**.**

b.   **Visual Teaching-Learning Resources**: Those resources which involve sense of vision are known as visual teaching-learning resources as;charts, pictures, models, real objects, flash-cards, maps,chalkboard, flannel board, bulletin board, overhead projector, slides etc.

c.   **Audio-Visual Teaching-Learning Resources**: Those resources which involve the sense of vision with sense of hearing are known as audio-visual resources as; television, film strips, film projector, audio-video CD etc.

Check Your Progress

Note: a) Write your answers in the space given below:

b) Compare your answers with those given at the end of the Unit.

2. What are major types of teaching learning resources?

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11.4 LEARNER AND THEIR ENVIRONMENT AS LEARNING RESOURCES

"I never teach my pupils; I only attempt to provide the conditions in which they can learn." — Albert Einstein

That environment is known as learner-centered environment in which learners and teachers are learning from each-other. Learner-centered or learner oriented environment proposes a global shift away from instruction that is fundamentally teacher-centered, at times persuasively termed as 'sage on the stage' focusing instead on learning outcomes. Education in our middle schools and high schools these days is rapidly changing. The old notion of a classroom where the learners are sitting quietly and neatly in their seats, while the teacher is up front pouring pearls of wisdom and knowledge into their brains is absurd. Now the teachers are only facilitators and learners are primary operational, so if learners have to perform the key role in teaching-learning process, the environment of this process also should be learner oriented.

For making the classroom environment as resource for learning, schools must create learning environments that are as engaging and relevant as the ones that learners incline to outside of school. When learners will be more engaged with learning, automatically they will enjoy this process. It is also a fact that when learners are more engaged and more successful when they can connect to what they are learning, to situations they care about in their community and in the world, so teacher should try to give them chances to gain experiences from the community and real world. To make the environment learner oriented following steps can be pursued by the teachers:

➢ Feedback is related to reaction on learner's performance of activities such as given responses by the learners during the class, creative activities, assignments, project work, discussion, etc. Here, the role of teacher is to provide more individualisation of feedback to deal with more qualitatively assessed learner activities to make classroom environment resourceful.It has been found in researches that feedback, given by the teacher makes environment as resource for the learners. McCombs(1997, 1999, 2000) has done extensive work on learner oriented teaching and learning process and she found that positive feedback between learner and teacher influence

the learning and it gives encouraging climate for learning inside and outside of the classroom.

➢ Experiences gained during the time of learning are also helpful in making learning environment as resource. When learners get good experiences while learning,a constant positivity affects their understanding.

➢ Use of new technological tools in the classroom converts learning environment into a resource. These tools give opportunity to learners to be more creative.

➢ A teacher should know his learners. It makes class more alive. A brilliant way to know the learners to establish a good rapport with learners'. Teacher should know the name and background of each and every learner. If a teacher calls his learners by their name learners feel more attached to that teacher. Most learners enjoy this recognition and it empowers their engagement to learning.

➢ To make environment learner friendly, teaching style of teacher should be according to the learner. Teachers should try to keep their class interactive. To make the class learner oriented, teacher should provide the chance to the learners to teach their peer group. This also facilitates the learning process of the learners by making them aware of their responsibilities to attaining class objectives.

➢ To make the environment as resource the teaching content should be relevant. Learners should know clearly that why they are going to study any particular topic. The learning goals of the class need to be perceived as relevant to the learner's aspirations or experience. In some classes, this can mean the use of socially relevant topics or case studies extended to problem-based learning.

➢ Each learner is different in their own way. Some learners learn best by listening, some learners do well with lecture, class discussions, etc. Lecture is considered the least effective teaching method, although some learners learn best by simply listening. Some learners really increase their learning potential when they get opportunity to do something by themselves, they learn by doing. Therefore, teacher should try to use all these things in teaching and learning

➢ It is a proverb "*during the class when a teacher stands his learners sit, when a teacher sits his learners lie down and when a teacher lies down his learners are just like inactive beings"*. Therefore not only learners but also a teacher should play a very active role in the classroom. Active teaching helps teacher to make environment resourceful. For this teacher can use soft skills as humour or storytelling. Also teacher should be like a role model for the class.

➢ To convert learning environment in resource, teachers are encouraged to share their passion regarding the subject and to feel free to get personal by offering their own examples. The use of eye contact, voice modulation, provocative questions and the long entrusted pause to wait for answers continue to be important methods for drawing learners into the learning process. In a large classroom, teacher can walk the passageways to further involve learners in the new learning mode.

➢ Provide situations that give learners an acceptable challenge. Activities those are slightly difficult for the child will be more motivating and provide for stronger feelings of success when accomplished.

➢ Give learners opportunities to evaluate their own accomplishments. Rather than stating that you think they have done a good job, ask them what they think of their work.

➢ To make the learning environment friendly for the learners, learner support is a critical component. Learner support describes about what a teacher should do to help his/her learners beyond the formal delivery of content or skills development. Learner support covers a wide range of functions and is a topic that will be dealt with more depth elsewhere.

➢ Most learners learn best when there is a logical sequence, delineated lesson that provides the objective and systematic steps to do the assignment. These type of learners benefit from the use of rubrics so that they can follow lectures and assignments in a better way.

➢ Do-it-yourself, peer-instruction exercise, debate, discussion, project-based learning, and learner-centred learning environments are some other software tools which convert environment into resource.

➢ Temperature of classroom also plays a key role in making classroom environment learner friendly. If the classroom atmosphere is too cold or hot, learners will have more of a hard time concentrating on what their learning task is. So the classroom temperature should be according to weather.

➢ Sitting arrangement for learners should be comfortable.

➢ The study area should be calm and quiet. The availability of light should be good with proper ventilation.

➢ Teachers should give break to learners on regular time interval.

A resourceful environment grows out of curricular decisions and in-class strategies which encourage learners' interaction with the content, with one another and the teacher, and with the learning process. It encourages learners' reflection, dialogue, and engagement, and requires a reliable assessment of their content mastery.

Check Your Progress

Note: a) Write your answers in the space given below:

    b) Compare your answers with those given at the end of the Unit.

3. Mark these statements as true or false

    In learner-centered environment, learners and
    teachers both learn with each-other.   True/False

    To make classroom environment as resource,
    schools must create learning environment full
    of activity and relevant.   True/False

    Feedback doesn't play any role to make
    classroom as resource.   True/False

11.5 CLASSROOM AS A RESOURCE

"I'm a teacher and my classroom is filled with a range of learners with different needs and goals."   *Marietta*

Anything what a teacher uses in classroom area to make teaching-learning more successful is known as classroom resource. The most efficient and effective part of this process is teacher who makes the environment more lively and learning oriented. A classroom is also a resource for teaching and learning and a teacher can use his classroom like a resource.

For a teacher dealing with learners in the classroom is a really very difficult task because all are different to each-other in some aspects. Therefore, for a teacher it is very important that s/he would include variety of learning resources during the teaching, because adoption capability and preferences of learners may be different.

To make his/her class learner friendly and convert it as a resource room, teacher has to carry extra effort and this depends on the competency of the teacher that how is s/he going to convert his/her traditional classroom into resourceful classroom.

Grubb (2008) has categorized classroom resources in four categories, which directly influence the achievement of learners and continuation of education. Application of these resources in the classroom converts traditional class in the resource room.
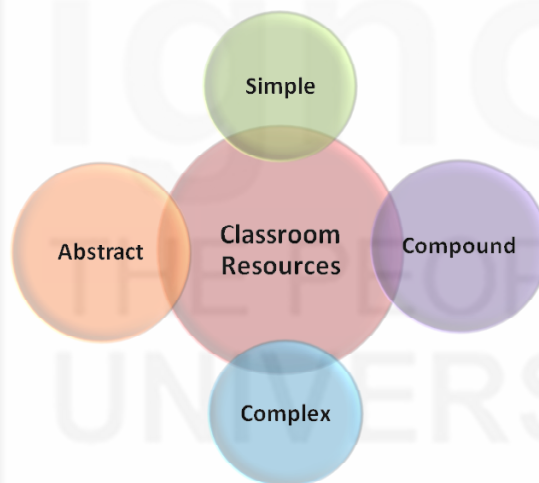

Figure 11.1: Classroom Resources (Grubb, 2008)

Simple Resources: These are the resources which are physical objects and can be directly bought, adjusted and measured for example- textbooks, blackboard, chalkand other technological things. Along with this in simple category other classroom factors for example- teacher and learner ratio, teacher experience and expertise, etc. are also included.

Compound Resources: Use of two or more than two resources which are jointly necessary for better outcome, are included in compound category as; class size reduction *and* adequate teacher preparation or use of technology and expertise of teacher on them etc.

Complex Resources: In this category Grubb (2008) has included those resources which are not easily bought, measured or adjusted for example- instructional approaches and teaching philosophies.

Abstract Resources: Those resources that are difficult to discern and measure, and often embedded in a web of relationships and practices within a specified

school as; collegial decision-making practices, internal teacher accountability, distributed leadership roles etc.

Developing Classroom as a Resource Room

To create the classroom as resource room a teacher should follow these steps:

➢ According to Judson (2006) when we establish any classroom innovation, it is the teacher who is the key determinant of implementation. If the teacher is not handling these resources and dealing with learners properly; all things are useless. Therefore for the classroom as resource of teaching-learning process a teacher should be knowledgeable and expert. With respect to educational technologies, teacher beliefs in self-efficacy and the school context can affect their implementation and use of technology (Judson, 2006).

➢ The traditional resource chalk and blackboard are the best materials to make a class resource room. If a teacher has expertise in use of blackboard, other resources are secondary. Although using blackboard is basic skill of teaching but so many teachers are not very skilled in use of blackboard. Teacher can use chalk and blackboard in variety of way as; writing of important points of content, for lower classes writing full answers, draw diagrams, flowcharts, tree-charts, figures, to solve mathematical problems by him/her and learners also, use of colour chalks for diagram and figures etc.

➢ Teaching technique of the teachers and attribute of teachers also influence the classroom and learning outcome of the learners. An expert teacher can handle the all complexity of the classroom and can convert a normal classroom into a resource, which is learner friendly but for this a teacher should has bundles of techniques and ability to apply these techniques appropriately.

➢ To make the classroom as resource a teacher can use various innovative learning and teaching methods, techniques and strategies as per the content and level of learners. For lower classes teacher should use schemes of work, phonics, different letters and sounds, spelling and story writing ideas.

➢ To make the classroom as resource instruction which is the main function of the class; should be on optimum level. The determinants of the good classroom instruction are the **relationships and interactions** between teachers, learners, materials, and their environment (see Figure 11.2).
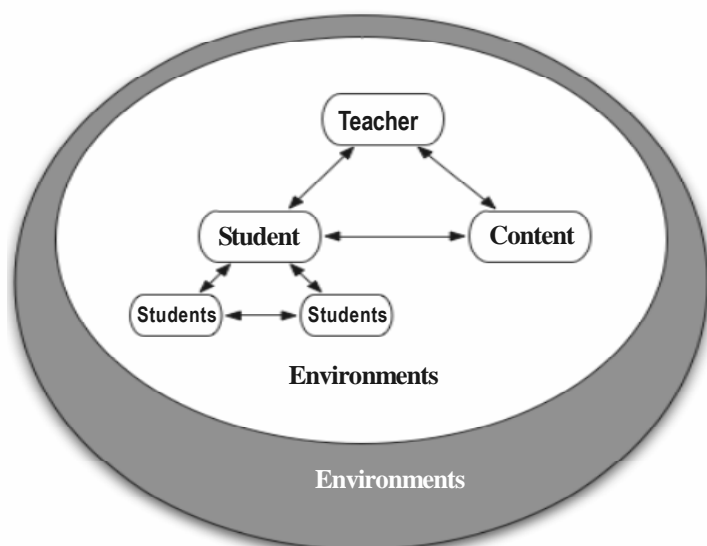

Figure 11.2: Instruction (Cohen, Raudenbush and Ball, 2002)

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➢ **Layout of physical classroom** space also influence the environment of classroom. In their study Marx *et al.* (1999) found that the layout of physical classroom space influences the relationships among the learners, their peers, the teacher, and the content being taught. The seating arrangement of the class affects the interaction and interrelationship of teacher and learners and also between the learner and learner. The semicircle seating formation makes classroom more interactive and every learner take participation in the teaching-learning process. At the same time traditional rows and columns seating style, affect classroom interaction and relationship negatively. Those learners who sit in 'T-zone' or central and front areas get more attention from the teacher side and be more interactive with teachers. In other words, the physical arrangement of the space impacts classroom interactions and learner engagement with their teacher (Marx *et al.*, 1999, Rivlin& Weinstein, 1984).

➢ **Interaction among learner-learner will increase learning.** So the interaction should not be only between teacher and learners but sometimes teacher should enforce interaction among learners. For this s/he can give any brain storming topic to learners to express their perception and ideas. And during discussion teacher should play a role of facilitator.

➢ Smart Class is a solution designed to help teachers in meeting with new challenges and developing learners' abilities and performance. The Smart Class is a system designed to bring the teacher and learners at different physical locations together in an interactive environment, using videoconferencing and live broadcasting techniques.

➢ With the development of technology Indian classrooms are being more technical. We can see smart boards in the classroom and these boards make class as a resource. These smart boards are interactive whiteboards that uses touch detection for user input in the same way as normal PC input devices as; scrolling and right mouse-click. A projector is used to display a computer's video output onto the whiteboard, which then acts as a huge touch screen.

Other factors related to teacher like prepared lesson-plans, credentials of teacher, years of teaching experience, behaviour of teacher with learners, instructional quality, emotional climate of classroom make a classroom as resource. If a teacher is able to hold the attention of learners, amount of social interaction, amount of task involvement, and group glee make classroom more alive.

Before using these materials in the classroom a close assessment of the resources is required. A teacher should ensure that the materials are able to satisfying those purposes for which the materials are being used.

Check Your Progress

Note: a) Write your answers in the space given below:

     b) Compare your answers with those given at the end of the Unit.

4. Which style of seating arrangement of classroom makes class more interactive and alive?

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11.6   COMMUNITY AS A LEARNING RESOURCE

Community-based learning helps learners in building a sense of connection to their communities.After family society and community plays a very significant role for informal education. The role of community is very important for the child because it helps in shaping the behaviour of child. Community is a school in itself for history, literature, cultural heritage, and natural environments. Community or society can play also an important role in formal education.

Use of community as learning resource is also promoted as a way to develop stronger relationships between the school and community, while also increasing the community's investment in, understanding of and support for the school and the learning experiences it provides. Local businesses and community groups are traditional sources of after-school internships and summer jobs, but they can also be important sources of expertise in areas such as media, the arts, science, and technology. Community is not just an agency of informal education but it also works as learning resource for a learner. This resource is free and inexpensive. But sometime teachers ignore this resource due to various reasons/prejudices. It is also true that using community as resource is a very challenging task but a skilled teacher can do this.

We can utilize community as a learning resource in following manner:

Guidance Services: Community members can give guidance services to learners. Older members of community, expert of different area can help learners by their valuable guidance. In our schools we always ignore guidance part. Though as per guidelines of a professional person, guidance cell is essential in every educational institution but it is the ground reality that most of the schools are not fulfilling this norm. In such condition guidance service may be given by the community members.

Lecture of Guests: In the schools, experts of different area can be invited for delivering lectures and presentation. These guests may be expert of any area as social worker, mathematician, doctor, scientist, social scientist, sport person etc. As example- an educational institute may invite a sport person to give lecture on importance of sports and games in their daily life or a doctor to give a lecture to teenage learners on physical and emotional changes in adolescence. With the collaboration of a local organization or group an educational institution may provide additional learning experiences in the school premises such as; a scientific institution can help the school develop a robotics program or in making of low budget household equipments. Like this, learners are getting information within the school and community resources and authorities are being used to enhance the learning experiences of learners.

Community Participation: In this approach,learners would learn, at least in part, by actively participating in their community. For example, learners may undertake a research project on any local problem with NGO; participate in an internship program at a local level and can get some experience and recognition, write an article, or produce a documentary on particular topic. As such learners are learning within as well as outside of school premises, and such participatory community-based-learning experiences would be connected in some way to the school's academic program.

Citizen Action: Learners not only learn from and in their community, but they also apply what they are learning from this resource. Learners can influence,

change, or return to the community in some meaningful way. For example, learners may volunteer for a local NGO and can create a multimedia presentation, citizen-action campaign or short documentary intended to raise awareness in their community about any social event/cause. In this scenario, the audience and potential beneficiaries of a learner's learning products would extend beyond teachers, mentors and other learners to include community organizations and the general public.

Instructional Connections: In this form of community-based teaching and learning, a teacher makes clear and purposeful relationship between the content which has been taught in the classroom and local issues and contexts. For example, the workings of a democratic political system may be described in terms of a local political process. Also in this scenario, learners may be educated within the school campus, but community-related connections are being used to enhance learner understanding or engagement in the learning process.

Libraries: Public, private or community library may be used by the learners. In this condition those reading material which are not available in school library can be utilized by the learners in community or public library.

Nature Centres: Many of nature centres offer homeschooling classes and resources, as well as apprenticeship opportunities. Nature centres can be utilized as learning resource like this.

Museums & Historical Sites: Learners can visit a local museum for some content. Some museums also offer online resources and materials for curious learners. Learners also may be benefitted by this. For example a small group of learners experiments with an interactive museum exhibit. They talk about what they see and what they know, to relate it their classroom experience.

Any historical site represents a living history for the learners. These sites provide living history experiences and volunteer opportunities through a range of national, state and local resources, including historic palaces, homes, religious places, historical sculptures and battlefields.

Art Centres: Many community art centres offer classes for young ones, youth and adults in handicrafts, drawing, art history and visual and performing arts etc., and are often accommodate homeschooling groups also, which is beneficial for learners.

Volunteering: Through volunteering, community can play a significant role as a resource centre. Learners can learn so many things by volunteering in community celebrations. They can learn basic human values like, tolerance, fraternity, healthy competition, cooperation, sympathy, empathy, helping others etc. Learners can also participate in real world activities, skill and knowledge building.

Learners can also visit science centres, aquaria, botanical gardens and zoos and can use these things as resources.

Activity 1

Identify the resources from your community which you can use in your teaching subject. Use any one such resource and prepare a report based on learners' feedback.

11.7   IMPROVISED RESOURCES

Improvised resources are very important and every teacher should be equipped with this. Often, language teachers complain, what they can use in the classroom as resources. There is a very limited scope of using the resource in classroom teaching. In such condition they can use improvised resources during their class. Meaning of improvisation is the ability to take existing pieces and put them together in a new combination for a purpose.

Improvisation is an element of creativity and resourcefulness. In improvisation we use local resources in our immediate environment to build, construct, mould or make instructional teaching-learning materials that can assist in the smooth dissemination and transfer of knowledge from teachers to learners.

Tikon (2006) has defined it as "***an act of using alternative resources to facilitate instructions for teaching wherever there is lack or specific first-hand teaching aids***."

In present scenario improvisation has become crucial in teaching-learning process because the economic situation makes the cost of facilities and equipment very high amidst decreasing or near lack of purchasing power. Improvisation reveals that there are possibilities of alternatives to teaching and learning aids. It should therefore meet specific teaching and learning situation.

Improvisation can be thought of as an "on the spot" or "off the cuff" spontaneous activity. The skills of improvisation can apply to many different abilities or forms of communication and expression across all artistic, scientific, physical, cognitive, academic and non-academic disciplines.

In order to effectively produce instructional materials from locally sourced materials, the teacher must have adequate skills which are basic. They also must include the knowledge of the basic principles and elements of design. An improviser is a resourceful, creative, and innovative both in thoughts and results.

11.7.1   Role of a Teacher

A teacher can use following skills and things as resource material in classroom:

- Different writing style (Pen lettering skill, Calligraphy, Free-hand writing)

- Lettering and Painting

- Use of different colours in graphics

- Modelling technique

- Blackboard and chalk

- Craft work

- Blank World & India map

- Textbooks (Course book and secondary books)

- Mathematical Tables/log book

- Cardboards

- Newspaper

- Cell phones

School teachers should make more effort for acquiring knowledge, expertise on various ways by which they can develop improvised resources where the readymade resources are not available.

A teacher can get expertise in preparing these resources by seminars, workshops and other training programs. Such type of programs should be attended by teachers on a regular time interval and they should also practice this acquired knowledge and should try to get mastery in that. For example a teacher can use plastic bottles as beakers and funnel or a used light bulb can be improvised for a round bottom flask

11.7.2   Advantages of Improvised Resources

➢   Improvised resources are cheaper to produce or buy because the raw materials are locally sourced.

➢   Very low cost improvised resources make teaching and learning process easier for the teacher and learners both.

➢   Improvised resources motivate learners through the participatory activities during construction.

➢   Improvised resources encourage class participation since majority of the raw materials can be sourced by the learners themselves.

➢   Improvised resources also arouse the interests of the learners because they are made from raw materials they see daily in their immediate environment

➢   Improvised resources can be used to teach large classes.

Check Your Progress

5. Mark these statements as yes or no:

    a) Lettering and painting also can be used as improvised
        resources.   Yes/No

    b) Improvised resources are very costly to produce or buy.   Yes/No

    c) Improvised resources can be used to teach large
        classes.   Yes/No

11.8   ICT AND MULTIMEDIA AS LEARNING RESOURCES

Information Communication Technologies (ICTs) and various other means of multimedia are affecting our educational system and now these are becoming popular means for obtaining information. Use of ICT includes a creative multimedia component as a central part in teaching and learning According to **Primary School Curriculum, (1999, p.29),** "*Technological skills are increasingly important for advancement in education, work, and leisure. The curriculum integrates ICT into the teaching and learning process and provides children with opportunities to use modern technology to enhance their learning in all subjects.*"

Visual and audio-visual materials make ideas concrete and provide the learners with specific models that help them acquire the intended attitudes and emotions which result in the development of new styles of reasoning and conduct. These new styles of reasoning open up possibilities for new exploration and activities by the learner (Andambi and Kariuki, 2013).

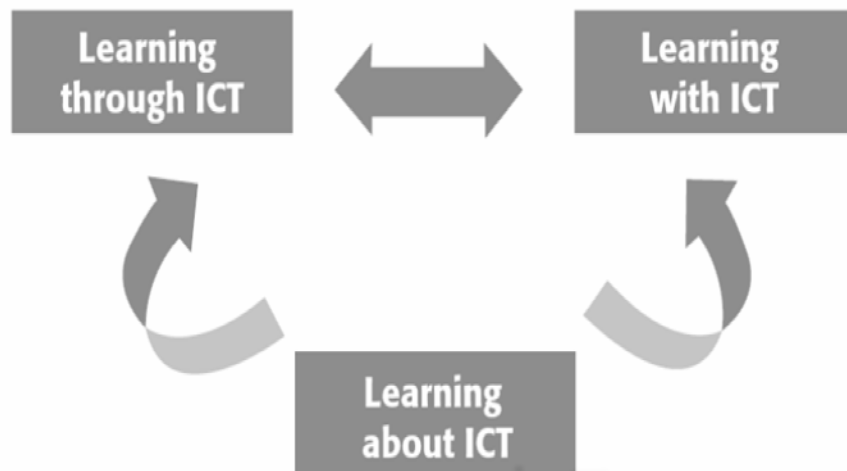Using ICT in teaching and learning may be approached in three ways:

Figure 11.3: Use of ICT in Teaching and Learning

ICT is an electronic means which is used for capturing, processing, storing, communicating information.In teaching and learning we use ICT in three manners. First one is the use of ICT as an object of study; second is the use of ICT as aspect of discipline or profession and third is the use of ICT as medium for teaching and learning. As an object ICT refers to learning about ICT, which enables learners to use ICT in their daily life. As aspect of discipline or profession ICT refers to the development of ICT skills for professional or vocational purposes. As a medium ICT focuses on the use of it for the enhancement of the teaching and learning process.

ICT and multimedia tools can be divided in three categories: Input source, Output source and others. In input tools visualise/document camera, computers, tablet, application software can be included. In output sources projector, interactive whiteboard, monitor, TV can be included and in others we can include digital camera, switcher, digital recorder etc.

Keeping in the mind the key role of ICT and multimedia in the education UNESCO developed the *UNESCO Training Guide on ICT Multimedia Integration for Teaching and Learning* to help educators and trainers for teacher training workshop on the application of these resources so that teachers can use ICT in their classes, easily and effectively.

11.8.1 Advantages of Using ICT and Multimedia

In the classroom ICT is very much important by providing the opportunities to teachers and learners in operating, manipulating, storing, distributing and retrieving the information. Also ICT and multimedia are also very useful for open and distance learning. They promote learners towards independent and active learning. The most important feature of ICT is its flexibility. With the help of ICT and multimedia teachers and learners can learn after/outside school hours. There is a

growing body of evidence that use of ICT in the classroom can enhance learning (Meiers, 2009). Computer-based multimedia learning environments - consisting of images, text and sound - offer a potentially powerful setting for improving learner understanding.There is certainly no lack of vision within educational communities concerning the central role and importance of ICT in the educational contexts of the future (Wood, 1993).

➢ ICT tools can promote active learning by enabling the learner to find, manage, evaluate and use information retrieved from CD-ROMs and websites. Even learner can also discuss his/her result and share them with others using presentation and authoring software.

➢ By using digital cameras on field trips learners can capture images of events for project work and for active engagement in the wider environment.

➢ Content-rich software, that offers tutorials, simulations, and practice problems can be used effectively for the reinforcement or the revision of concepts.

➢ Multimedia tools enable children to record and chart their own learning progression

➢ The combined range of ICT tools enables the teacher to maintain a useful electronic anecdotal record of each learner.

➢ ICT extends the child's immediate learning environment, offering opportunities to push learning beyond the confines of the classroom.

➢ ICT such as e-mail and video-conferencing, offer children opportunities to exchange information about their own local environment with others. It also facilitates authentic learning by offering opportunities for children to experience the outside world within their own classroom.

➢ Internet may offer a suitable site for publishing learners' work on the school website, for viewing by parents and collaborating schools

➢ ICT offers the opportunities to learners to develop social skills through turn taking, sharing resources, and helping other children in combined project work. Combined classroom-based projects which use technology as e-mail, chat, video-conferencing etc. can be used by the learners to support each-other.

➢ ICT can support the learners' appropriation of new knowledge by offering him/her a range of tools related to knowledge representation like concept mapping software, presentation software and database software, which support learners in structuring their learning for later retrieval and application. Content-free software like databases, spreadsheets, and micro worlds offer children opportunities to interpret and manipulate data representations.

➢ Internet provides a number of authentic learning resources to teachers and learners. It helps learners in questioning, analyzing, to investigating and in thinking critically. Critical use of the Internet facility as an information resource is helpful in development of learners' capability to search for, manage, evaluate, use, apply and create information.

ICT and multimedia is not only beneficial for learners but also for teachers too. For teachers it makes the difference and can contribute significantly in these three components of the continuum:

➢ ICTs and properly developed multimedia materials can increase teachers' initial preparation by providing good training materials, facilitating simulations, capturing and analyzing practice teaching, bringing into the training institution world experience, familiarizing trainees with sources of materials and support, and training potential teachers in the use of technologies for teaching/learning.

➢ ICTs open a world of lifelong upgrading and professional development for teachers by providing courses at a distance, asynchronous learning, and training on demand. ICTs' advantages include ease of revision and introduction of new courses in response to emerging demands.

➢ ICTs break the professional isolation from which many teachers suffer. With ICTs, they can connect easily with headquarters, with colleagues and mentors, with universities and centres of expertise, and with sources of teaching materials.

11.8.2 Factors Affecting the Use of ICT and Multimedia

Although ICT and multimedia are very good resources for learning but most of schools and teachers are not using these tools to enhance the learning. These causes are as follows;

• Unavailability of infrastructural facilities

• Inadequate training or Lack of training

• Inadequate capital on the part of the individual

• Lack of time to spend on technology

• Cost of technology

• Negative perception of older people for multimedia and ICT

• Lack of power supply

• Lack of perceived economic or other benefits

• Lack of understanding of the value or possible benefits of multimedia facilities.

• Wrong choice of software or software inadequacy.

Check Your Progress

6. Fill in the blanks:

a) ICT is an electronic means which is used for …………….., processing, ……………..,communicating information.

b) Computer-based multimedia learning environments - consisting of images, ………. and ……………..

11.9 CRITERIA FOR SELECTING AND INTEGRATING RESOURCES IN TEACHING-LEARNING

The selection and integration of teaching-learning resources is a central part of the process of learning activity. Selection of these resources is as important as content selection is important. It is the duty of teachers to ensure that the teaching-

learning resources, what they are going to present in the classroom, are appropriate for the learners and these are going to positively affect the growth and development of the learners. All learners have their own unique characterises. They come to school with their unique ability and way of learning. So as a teacher you have to be prepared and equipped to cater a vast array of individual needs of learners.Only the selection of these resources is not important but integration and use of these materials is as much important.

Before the selection and integration of teaching-learning resources teacher should ensure the objective of the curriculum/content and expected outcomes. As per objectives the learning resources should be selected.The certain criteria according to which the teaching-learning material should be selected are as follows:

- Teaching-learning resources should **directly focus on ideas** and essentials questions of the content/curriculum. Teacher should make it sure that the selected resources are presenting correct concept and picture of the curriculum.

- Now these days fostering creativity amongst the learners is lacking on part of teaching-learning process. The teaching-learning materials **should make the learners thoughtful, reflective** and it should build high level of skills among them.

- Resources should be **related to learners' knowledge and needs**.

- Teaching-learning resources should gear **as per the different abilities, requirement and area of the interest** of the learners. It should support the inclusive curriculum.

- These materials should **also incorporate outside experiences** in which family and society involvement must be reflected.

- **User friendliness** is also required. These resources should be well organized and teacher friendly, so teachers can use these materials and handle these materials very easily.

- Teaching-learning materials should encourage interdisciplinary connection. In this condition learners can correlate it with other subjects and in broader sense learners will be able to apply it not only in the class room condition but also in real world.

- If it is possible teaching-learning resources **should be related to all learning domains** of the learner (cognitive, affective and psychomotor). It should be also related to different levels of these domains.

- **Flexibility** is also an important characteristic of good teaching-learning resource. So during the selection procedure it is important that choice of resource by the teacher should be flexible.

- During the selection of teaching –learning material teachers should keep in mind the family background and living environment of the learners.

- According to demand of the time multimedia materials such as television, computer, games, internet, audio materials should be selected.

- These resources **must motivate the learners** and teachers to inspect their own attitudes and behaviour and to understand their responsibilities and rights.

- Resources should be **according to the age of the learners** for whom they are selected. If it will be as per their age it can directly affect their physical, cognitive, social, emotional and cultural development.

- Teaching-learning resources should be such that it can provide the way to find, present, use and evaluate the information and develop the critical capacities to make discerning choices.

- Teaching-learning materials should include valid and mixed assessments as; conventional and performance based.

- Physical quality of the resources should be good. Those resources which are in good condition, a teacher should select and use only those materials in learning activity.

- Teaching-learning resources should be grammatically correct. Language clearness is also one essential aspect of resources.

- Teaching-learning resources should not be offensive.

- The teaching material should not be controversial as related to race, religion, drug misuse, violence, crime, sexual activity, nudity, cruelty, suicide and objectionable phenomena

Integration means combination, so combining the selected resources according to learning activity is integration. In teaching-learning activity integration of resources is as important as selection is. The successful integration of resources in the teaching-learning process will depend on effective planning of teacher.

For the integration of resources these points are important:

➢ Teacher should do the lesson planning first and fix the place for certain resource. In the absence of planning, the resources can't be meaningful.

➢ Teacher should have expertise on the particular teaching-learning resources which s/he is going to use during teaching-learning activity.

➢ Teacher should remove the ambiguity from the resources.

➢ If teacher is using any online method as resource there should be filtration for few sites. Teacher should try to block access of inappropriate sites. Even s/he should also use such type of tools by which s/he can track individual usage.

➢ To make learners enactive in the classroom there should not be any boredom. So teacher should integrate/arrange resources in such manner that the class is not dull.

➢ Before using the particular resource if it is necessary the documenting, editing should be done by the teacher. Manipulation should be done by the teacher.

➢ Teacher is the best resource so if there is any lack of any resource, teacher should try to fill it by his/her efficiency.

Check Your Progress

Note: a) Write your answers in the space given below:
     b) Compare your answers with those given at the end of the Unit.

7. Discuss any four criteria to select teaching and learning resource, which are most important according to you.

....

....

....

11.10   LET US SUM UP

Unit explains the concept and meaning of learning resources as a tool to help a teacher in facilitating learning and developing a conducive learning environment. How learners' immediate environment is important for learning and how it can be used as a resource, it has been discussed in details. Unit suggests ways and means to develop and utilize classroom as a learning resource. Use of community members, community organizations and community events as resource is also appreciated in the unit as it brings learner and community to close to each other and facilitates learning. Teacher should try to develop and use improvised apparatus to support learning. Unit also highlighted use of ICT and multimedia resource in teaching-learning. Unit ends with the suggestions to teacher for selecting an appropriate resource and also to integrate it in teaching-learning process.

11.11   UNIT END EXERCISES

1)   What are teaching-learning resources? Why these resources are important for learning?

2)   How can you convert environment of your classroom into a resource for your learners?

3)   Analyze the role of community as resource.

4)   Define improvised resources? Explain advantages of improvised resources.

5)   Discuss the advantages of ICT and multimedia as learning resource?

6)   Describe the importance of role of teacher for integration of teaching-learning resources.

11.12   REFERENCES AND SUGGESTED READINGS

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11.13   ANSWERS TO CHECK YOUR PROGRESS

1. Teaching-learning resources are those resources what teachers use to assist learners to meet the expectations for learning defined by curriculum.

2. There are three major types of teaching learning resources:

    (a) Audio teaching learning resources (b) Visual teaching learning resources (c) Audio-Visual teaching learning resources.

3. A. True   B. True   C. False

4. Answer based on your experience and perception.

5. A. Yes   B. No   C. Yes

6. Capturing, storing., Text and sound

7. Teaching-learning resources should directly focus on ideas and essentials questions of the content/curriculum (ii) These resources should be attractive (iii)As per demand of the time multimedia materials as television, computer, games, internet, audio materials should be selected(iv) Teaching-learning resources should not be offensive

UNIT 12 MANAGING CLASSROOM TEACHING-LEARNING

Structure

12.1 INTRODUCTION

Management of a classroom is a broader concept. It includes those external factors which take place out of the classroom but have a strong bearing on the learner's behaviour in a classroom. Though we shall discuss all the factors related to the management of a classroom, our emphasis will remain on the internal factors which take place in a classroom while transacting curriculum.

We know that you have already been managing your classroom for quite sometime. Management of a classroom demands that the teacher be resourceful enough and this can be achieved through a deliberate attempt only. The discussion in this unit will enable you to have a fair understanding of the principles and practices of classroom management.

12.2 OBJECTIVES

After going through this unit you should be able to:

*   explain the concept of classroom management;

*   discuss the principles of classroom management;

*   explain the factors influencing classroom management;

*   use various measures to deal with behavioural problems of learners; and

*   explain the importance and procedure to make use of classroom time for optimum learning.

12.3 MANAGEMENT AND INSTRUCTION

The teacher is often considered to be a manager of the teaching-learning process. S/He makes efforts to organize teaching learning resources. The main objective of managing instruction is to create a conducive classroom environment so that learners learn and grow in more productive ways. We, therefore, must learn how to create conditions in a classroom wherein the learners find it desirable to learn. Management and instruction are closely related in theory and practice. Good classroom managers are often good instructors. They structure classroom environment so as to maximize learner's instructional opportunities.

12.3.1 Classroom Management: The Concept

You have already studied in Block 2 and 3 that instructions included a number of activities to be performed by the teacher. These activities include motivating the learners, explaining the concepts, managing a classroom, assigning and checking the home-work, interacting with the learners (questioning, probing, commenting, evaluating etc.). McNell and Wiles (1990) stated that the teacher's personal style is reflected in the teaching related activities. Similarly, the teacher's verbal fluency, intellectual competence, enthusiasm, humour, etc., determine the quality of instruction.

Managing a classroom is an integral part of the teaching-learning process. Effective management of a classroom shows the concern of a teacher for the instructional process. It is dependent on his efficiency to do the tasks more effectively. Therefore, classroom management, both as a process and as an approach, has a great impact on learners' learning. It increases learning efficiency of the learners. Thus classroom management has a closer relation with learners' accomplishment of learning objectives (Christian, 1991).

Managing a classroom has always been a major concern of the teachers. It involves more than one skill of the teacher such as creating a teaching-learning environment, maintaining learners' involvement in teaching-learning activities, establishing effective discipline and ensuring desired learning outcomes by the learners. Here we want to highlight that classroom management and classroom discipline are not mutually exclusive. We should not take classroom management in its narrow sense. Management is a broader concept and is generally directed towards effective teaching and learning. Discipline is a concept used in the context of teacher's response to learners' misbehaviour. The ultimate objective is to help learners acquire maximum knowledge, attitude and skills. Although both the

expressions are interrelated, the discussion in this unit focuses more on the larger content of teacher effectiveness (McNell and Wiles, 1990). This however does not mean that we are undermining the importance of discipline. Discipline is a serious problem that teachers face. It is very crucial at the secondary/senior secondary school level. Order and control should not be viewed as the ultimate goal of effective classroom management.

Classroom management refers to the shaping of learning environment in classroom. Like teaching and learning, classroom management is a complex activity. So there is no single clear-cut management procedure accepted by all. Shaping of environment takes place gradually in response to the teacher's behaviour. You might have observed that a class that is active and attentive with one teacher can be noisy or even difficult to control for another. The skillful teacher keeps his class attentive to what is being taught and involves the learners in productive activities.

Classroom management has been defined as provisions and procedures necessary to establish and maintain an environment in a classroom in which instruction and learning can occur. You should remember that primary goal of effective classroom management is not the reduction of misbehaviour or even the creation of an orderly environment. Although they are related issues, effective classroom management and establishment of order are not synonymous (Hofmeister and Lubke, 1990). Promoting learner learning is the primary goal of effective classroom management. The research in this area clearly suggests that effective strategies to promote learning can facilitate order. So the primary emphasis in effective classroom management is on the creation of a learning environment and hence on increasing appropriate behaviour in learners (Hafmeister&Lubke, 1990). Teachers' organizational and instructional skills influence learning.

Researchers have found that classroom management is correlated with learners' achievement in elementary as well as secondary schools. They have provided evidence that the teachers who are effective in promoting learner's achievement generally have a better classroom and fewer learner behaviour problems.

To conclude, we have discussed in this section, that managing a classroom is an act or better skill, an art of the judicious use of various means to achieve pre-decided objectives. IT also involves the ability of the teacher to manage various skills so that the quality of teaching-learning process is maintained and it ultimately results in maximum output in terms of learners' performance (Christian 1991). Classroom management depends upon establishing positive teacher-learner and peer relationships that help meet learners' psychological needs. Learners learn more effectively in an environment that meets their basic personal and psychological needs.

12.3.2 Understanding Learners' Needs

Teaching is objective-centered. In planning teaching and training tasks, the needs of learners are considered as basic inputs. The needs of the learners are an important factor in managing a classroom. Every learner attends a class with certain expectations in mind. If his expectations are not taken care of by the teacher, he, consciously or unconsciously, becomes inattentive and hence either disturbs other learners or misbehaves with the teacher. An effective teacher, therefore, manages his/her instructions in such a way that every learner gets the teacher's personal attention. In other words, in order to manage classroom

instruction the teacher should cater to the learners' need (both academic and personal) which have an impact on learner learning. For example, the teacher should repeat the concepts being discussed more frequently for the low ability learner group.

The needs that influence the learner's behaviour in the classroom by and large are psychological in nature. You as a teacher should remember that the needs of the learners reveal themselves in some form or the other. One learner, say Anjali, does not take part in any conversation or discussions in the classroom. She does not ask question or seek clarifications for her doubts. The teacher has to make attempts to satisfy her needs through appropriate motivation and reinforcement. The teacher should involve her in instructional tasks and assess her understanding. You as a teacher should realize that the learners want freedom from discrimination in the class. The learner should not be discriminated on the basis of caste, colour sex and economic status. In order to know your learners better, you can conduct a quick assessment by reviewing information available in the school's office. This is important so you can contact parents if need be and organize out of class activities. You may collect information about the learners' previous knowledge or performance through various tests that can be used for this purpose. You may determine the range of ability of your learners (e.g. reading level) so that the home work, you give them is according to their ability levels.

In addition to the information regularly maintained in school record, you may like to extract rather some personal information about your learners. For example, their attitude towards school and career, need for achievement, ability to make decisions, will for self-improvement, etc., make it necessary for you to adopt specific strategies to manage instruction. Such information may also help you discover your learners' interests which can enable you to teach your subject more effectively. The more important point here is that the learners will be amazed to learn that you know so much about them and their lives.

Check Your Progress

Note: a) Write your answers in the space given below:
    b) Compare your answers with those given at the end of the Unit.

1.   Differentiate between classroom management and classroom discipline?

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Level of anxiety has a direct effect on the learners' learning. Some learners find, for example, evaluation and the possibility of failure so disturbing, that their ability to learn is impaired, but for others, evaluation anxiety serves as a challenge or a greater stimulus to make them work harder. The teacher has to understand the level and type of anxiety that can help learners perform. You can better serve the learners by adopting instruction and provide assistant in a variety of appropriate ways. You should have the power to establish a non-threatening and supportive classroom climate to satisfy the learners' needs.

12.3.3 Principles of Classroom Management

The principles of classroom management are linked with an effective instructional process. The instructional process is based on the teacher's personal efforts and the objectives that he and his learners are supposed to achieve. The principles of classroom management reflect the concern of the teacher for his teaching task. If the teacher evinces a strong concern for his teaching and also for his learners, the teacher will prove to be a successful manager. According to Christian (1991), there are some major principles of classroom management. These are:

i) **Principle of Clarity and Mastery over content:** The first principle of managing classroom instruction is the teachers' command over the subject(s) s/he is dealing with. S/he should have a thorough knowledge of the school curriculum and his/her subject. Thorough knowledge implies mastery in one's subject which helps a teacher teach effectively in a classroom. The depth and grasp over the subject helps a teacher in two ways.

   * The learners are greatly influenced by a well-read knowledgeable and learned teacher. You might still be remembering the talented teachers you came across during your learner life.

   * Thorough knowledge can help you properly conceptualize the content to be covered in your lesson. The process of conceptualization helps you arrange instructional tasks in the most appropriate order according to the needs and mental abilities of the learners. This helps the teacher manage his/her instruction effectively.

ii) **Principle of involvement:** The teacher can use principle to make the teaching-learning process more participatory. Active involvement of the learners in instructional tasks is a condition of learning. The skills of questioning, receiving and providing feedback, etc. can make teaching and learning a two-way process. Interactive teaching and learning is possible only when the teacher has thoughtfully planned his teaching activities.

   If the learners are actively engaged in learning tasks in a classroom, they not only achieve mastery learning but also create minimum problems for the teacher. And moreover, the learners' energy is channelized for productive work.

iii) **Principle of democratic behaviour:** Democracy is a way of life, a way of working together to achieve the common goal. The teacher provides equal opportunity to every learner to participate in teaching-learning activities. This behaviour of the teacher develops a healthy positive attitude among the learners for learning. The learners learn how to find a solution in classroom through understanding of each others's views.

Democratic teachers solicit opinion about learning tasks, try to achieve group consensus about what to do and how to do, and also some choice in working arrangements. Authoritarian teachers are also efficient in achieving the goals, but their learners become tense and generally develop negative attitudes towards their teachers.

The democratic climate in the classroom allows the learners to take initiative about the instructional process and this ensures effective use of class time. No learner feels neglected in the classroom.

iv) **Principle of teacher's behaviour:** While presenting a lesson, the teacher's behaviour should display various positive attributes: confidence, determination, will-power, etc. This indirectly creates a learning environment in the classroom and thus helps manage a classroom with desired and expected learning behaviour. Positive attributes in the teacher's behaviour help develop a desirable behaviour in the learners as well. This is because learners always observe and analyze their teachers' behaviour and compare it with what he/she professes. You, as a teacher, should, therefore, be conscious that your behaviour in the classroom is being minutely observed by your learners. Your behaviour should not directly or indirectly have any negative impact on your learners.

v) **Principle of self control:** The teacher has to be firm and consistent in classroom behaviour. If he/she has strong conviction and has a deep commitment to the tasks assigned to him/her, he/she will be able to manage instruction effectively. The self-control of a teacher should enable him/her to control his/her behaviour. This will encourage learners to develop self-control in their behaviour. Through these means the teacher can lead his learners towards growth and development of internal control, self-discipline, positive attitude and work through various learning activities in the classroom.

vi) **Principle of flexibility:** The principle of flexibility is not opposed to the principle of the self-control. The teacher should display flexibility in his/her behaviour and accommodate the learners' ideas, plans and observations from time to time. Depending upon the requirement of the prevailing situation, the teacher should be able to make necessary changes in his/her behaviour and in the teaching-learning activities. This will help him/her evolve alternative strategies and use them to achieve the curricular objectives. By giving due importance to the ideas and observations of the learners, you too can make your teaching more learner-oriented and hence more productive.

vii) **Principle of personal attributes:** The personal attributes of the teacher such as warmth, sympathy, empathy, etc., have a strong bearing on learners' behaviour in the classroom. The teacher's caretaking behaviour, harmony and respect for one another, show dignity of work, bring peace and self-discipline, and indirectly control the undesirable behaviour of the learners. The teacher plays an important role in determining the kind of psycho-social climate that prevails in the classroom. The behaviour of the learners can be modified/controlled in every consistent ways through leadership displayed by the teacher. Researchers have found a positive relationship among academic achievement, class environment and the interpersonal relations in a classroom.

Effective teacher accept the feelings of their learners, and are sympathetic to their problems, both academic and personal. The teacher can be a good friend of the learners. He/she can interact with the learners on a level which is satisfying to both parties and help them in achieving their objectives.

The personal attributes of the teacher influences the feelings, interests, values, attitudes, moods and temperament of the learners. The learners should not perceive the teacher as an unsympathetic adult who does not treat them as responsible individuals, who would not listen to their opinion, and who does not want to understand them or use their suggestions appropriately.

Learners respond and perform well when the teacher is supportive and helpful through-out the sequence of learning experiences. The learners' motivation is often positively affected by the teacher's sincere enthusiasm. In order to guide the learner's development a teacher should be able to carefully assess the learning atmosphere in the classroom and modify his/her teaching accordingly.

Check Your Progress

Note: a) Write your answers in the space given below:
    b) Compare your answers with those given at the end of the Unit.

Given below are a few classroom situations wherein a teacher faces problems of management. Name the principle(s) of classroom management he should adhere to in order to overcome the problems.

2.   Learners exhibit undesirable behaviour towards the teacher in the classroom.

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3.   Learners in the classroom fail to understand the subject matter presented by the teacher.

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4.   Learners' do not express concern for their fellow learners.

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12.4   MANAGING A CLASSROOM

Managing a class and instruction is almost the sole responsibility of the teacher. It has been proved by successful teachers that ninety-five percent of all learners can master the expected skills and knowledge if learning conditions are adequately supportive. In this sub-section we will examine some factors that influence management of a classroom. You are expected to adopt these measures to ensure mastery learning and growth in your learners.

12.4.1   Factors Influencing Classroom Management

Substantial research has been conducted to study the factors which influence effective classroom management. Various researchers have made insightful observations in this regard. Some of the important factors are as follows:-

i)   **Effective Instructions:** Effective instructions support a teacher's efforts to promote both learning and discipline (order) in the classroom. Doyle (1986)

suggested that effective classroom management is facilitated, if the learners are actively and successfully engaged in instructional activities. Therefore, well-planned instruction with appropriate pacing, guided practice, attention to individual learners, effective and immediate feedback, etc., can help teachers manage a classroom and thereby ensure desired learning. On the contrary, instructional weaknesses can create disorder in a classroom and make teaching much less effective.

ii) **Setting and implementing rules:** Crocker and Brooker (1986) observe that classroom instruction should be undertaken in a business-like manner, that is, the teacher should try to achieve maximum learning within minimum time and without task disruption. Teachers, who set clear-cut goals for instructions and show a degree of commitment to achieve those goals, can manage their instructional activities more effectively. The teacher, therefore, must demonstrate the willingness and an ability to act when the rules are broken. For example, the learners should be told to raise their hands before talking or asking questions. After raising their hands the learners should wait for their turn to come for answering questions or participating in discussions. The processing of setting and implementation rules has instructional as well as management value. The learners learn procedures for ensuring that their participation is effective and they accept the social setting. The rules should be introduced in the same manner in which any academic concept is introduced. The rationale for implementing the rules should be made clear and the process used to present the rules should promote both understanding of and respect for the rules. The learners need to know what will occur if they choose not to follow classroom rules and procedures.

iii) **Managing intervention:** The process of monitoring the learners' behaviour and intervening when necessary is clearly one of the most demanding requirements for effective classroom management. The need for intervention is reduced if the rules are classified and instructional activities are appropriately implemented. Typical misbehaviours such as inattentiveness, mild forms of verbal and physical aggression, failure to bring books and complete homework, etc., should be effectively intervened.

The teacher has to exercise increased vigilance to build credibility and enhance learners' learning. The teacher who, for example, initiates teaching and then, without completing what he has to say, turns to write on the blackboard invites challenges and reduces credibility. The teacher's physical movement in the classroom can create opportunities for monitoring learner behaviour and managing interventions. The teacher who spends virtually all the time in front of the class will not have the opportunity to observe what is really going on at each desk, nor will he or she be able to make the personal contact that build a productive relationship between the teacher and the learners. You will appreciate that the management is easier from the back than from the front of the class.

It should, however, be noted that too many interventions may not increase learner learning. They can become counter-productive. If intervention is likely to interrupt the flow of the lesson, it should be avoided.

iv) **Feedback on appropriate behaviour:** The learner expects to receive continuous feedback about whether his classroom behaviour is acceptable

or not. Success in learning should be praised by the teacher. You should, however, remember that the teacher should be judicious in his/her praise in the classroom. And praise should be linked with performance. The importance of feedback has been discussed in various units of the course.

v) **Class environment:** Classroom environment is also related to management. Many organizational factors such as direction, feedback, communication, interpersonal relations between the teacher and the learners, etc., create a proper climate for learning. The learners do not want to learn in a chaotic environment and the teacher who has to teach classes will have to work under strain. Poorly managed classes do not provide a pleasant supportive environment to teach or learn. A certain degree of calm, quiet and comfort is necessary for the teacher's as well as the learners' mental health.

12.4.2   Techniques of Classroom Management

Knowledge of principles and practices of teaching and learning is essential for the teachers. It includes the ability to plan lesson, organize and manage a classroom, and use teaching strategies to help the learners achieve terminal objectives. As you already know, proper management of a classroom means effective organization of teaching-learning activities for optimum output in terms of learner's learning and skill development. Like a manager of a business house, the teacher too has to manage classroom situations/conditions in such a way that they create a forceful (favorable) environment to motivate and direct learner's learning. The teacher, therefore, has to understand the impact of various classroom related intervening factors, learner's needs, attitude and behaviour, and the teacher's ability/ resourcefulness to communicate with the learners. The sum of these factors determines the effectiveness of management of instructional activities in the classroom. For this, the teacher has to introspect and ask himself/herself how much pain he/she is going to take in systematizing the teaching-learning activities. When we use the expression 'system' (you have already studied it in Unit 5, Block 2), we make sure that teaching-learning activities are properly planned and implemented. We have already emphasized that the teacher should have a positive attitude towards teaching-learning process. This is because what a teacher does and how he behaves has a strong bearing on his classroom management. Before we discuss specific techniques that the teacher can use to cope up with learner problems' it will be useful to provide some general information regarding a learner's problems at secondary/senior secondary level of school. Some learners at this level become disturbed and are difficult to control than learners at the kindergarden or primary level. Some learners drop out of school and those who continue their education become intellectual and socially more mature. At this level, the learners start assuming more responsibilities for their behaviour and hence for their studies at school. Many learners successfully learn basic skills and can manage much of their learning on their own. The teacher's primary concern at this stage is to motivate them to behave the way they should and are expected to. He should function as a manager of classroom instruction. With his ability, skills, experience and knowledge, he should be able to create an environment in which learners can acquire the required knowledge, skills and attitudes without any stress and strain.

In this section, you will study various management techniques for use in the classroom; the strength and weaknesses of each technique will also be discussed. We shall not prescribe any ready made formula for managing a classroom. Ultimately you should be able to design your own plans for classroom management

that best fit your instructional objectives and suit your learners. All resourceful teachers adjust their teaching methods for different kinds of group and try different systems of classroom management.

i)   **Behaviour modification technique:** The basic assumption behind this technique is that learner's behaviour is the direct result of teacher behaviour. It is the job of the teacher to identify desirable and undesirable classroom behaviours. The teacher has to ignore inappropriate /undesirable behaviour. According to the Skinner, the teacher can use reinforcement (you will recall that reinforcement is a condition of learning) to shape the desired behaviour. For example, if the learner demonstrates (verbal or non-verbal) desirable behaviour, it should be appropriately acknowledged and rewarded. In behaviour modification technique a more popular activity (such as playing or viewing of a TV programme) can be used to reinforce a less popular activity (such as learning mathematical concepts and procedures). In other words, popular activities can be used to bring about desirable changes in the learner behaviour. This will lead to effective management of instruction.

ii) **Learner responsibility:** Some teachers feel that the learners should be responsible for their behaviour. The teacher's job is to make the learners aware of the expectations and the consequences of their desirable and undesirable behaviours. This technique of managing a classroom advocates self-discipline among the learners. It is the responsibility of the teacher to enable learners to take up greater responsibility for their behaviour and develop a plan for modifying their unproductive behaviour. This implies that the teacher understands his/her learners' problems and can help them understand themselves better and work cooperatively with the teacher and their peers. You should know that the class can be managed better through open communication and cooperative attempts at solving problems. The learners need such teachers who can help them assume more responsibility for their studies; they need appropriate guidance aimed at improving their performance.

iii) **Group activities:** In order to manage their class, some teachers prefer to deal with a group of learners, rather than with an individual learner. They see the class as a group which is influenced by peers. The learners working together exhibit desired behaviour in order to gain group rewards. The learners compete with each other. The teacher's responsibility here is to give the learners some group activities and create a competitive environment in the class. The teacher can encourage desirable behaviour among learners through appropriate rewards/reinforcement.

iv) **Skill in maintaining learners' attention:** All effective teachers continuously monitor their learners for signs of inattention and are sensitive to their needs. The seating arrangement should be made in such a way that the teacher can see all the learners effortlessly. Besides, variation in voice, movement or pacing can be used to refocus their attention during teaching. We should guard against the tendency of creating a monotonous environment in the classroom. Sometimes, humour, should be used to break the monotony and to create a lively environment. It is all the more desirable to use humour if it has some pedagogic value.

Without going into details we would like to emphasis the importance of innovative methods of teaching and using audio-visual media in managing the class. Innovative method of teaching and learning ensure systematic teaching as well as active involvement of the learners in teaching-learning activities. They help the teacher in creating a favourable learning environment in the class. The concept of innovative methods includes the teacher's knowledge of the subject(s) being taught, readiness on the part of the learners to ensure effective communication with the teacher and use of audio-visual media. Classroom activities should be scheduled in such a way that they coincide with learners' readiness to pay attention to and participate in the instructional process. Active attention of all the learners is required when important information is delivered to them. For example, while teaching medieval history to grade X learners, we can use a film depicting the medieval period – the troops, patriotic songs of that period (to elicit an emotional response), dates of battles, names of military leaders, etc. Moreover, the use of such a film will generate interest and curiosity among learners and increase their eagerness to know more about Indian medieval history.

12.4.3   Practical Suggestions

Some researchers in classroom management have made some practical suggestions to help teachers organize and achieve effective teaching. Let us describe these in brief so that you may use them for better management of your class and thereby become a more effective teacher. Evertson and Emmer (1982) have listed the following characteristics of effective classroom mangers at junior high school level.

- The effective teachers describe the rules more completely and implement them more systematically. They are likely to be more explicit about desirable behaviour (the do's, not just the don'ts).

- They monitor their learners' compliance with rules more consistently, intervene to correct inappropriate behaviour more often and describe desirable behaviour more often when providing feedback.

- They present information clearly, give directions, state objectives and break down complex tasks or concepts into small and easily manageable parts. They are precise ad clear when they present information and give direction to their learners.

- They waste little time in getting organised or accomplishing transition between activities. They maximise learner attention and task engagement during activities by maintaining appropriate lessons and using various approches to manage instruction.

Kourilsky and Quaranta (1987) list some guidelines which promote positive environment in classroom. These are as under:

- The effective teachers provide a stimulating and appropriate learning environment which takes into account their (learners) personal interests and learning styles.

- They use a variety of instructional strategies in the classroom and use novelty to break the monotony.

- They allow the learners to generate the needed guidelines for proper classroom conduct, thus building the self-confidence and autonomy and increasing their awareness of personal responsibility for one's actions. They develop guidelines that enable the learners to become responsible for their work.

- They treat the learners with respect and kindness, express concern for their learner's welfare, and provide them opportunities for success in the classroom.

McNell and Wiles (1990) investigated the secrets of the successful management of classrooms. They made the following suggestions for teachers.

- Show a caring attitude towards your learners.

- Listen to the learners when they tell you their concerns and viewpoints.

- Use as many first names as you can.

- Try to be positive in your attitude and approach.

- Cultivate a friendly but respectful relationship with the learners.

- Know your learners properly.

- Be on time and start the class immediately. Have something for learners to do.

- Have a lesson plan and inform the learners the way the lesson will progress.

- Apply the rules consistently.

- Vary the types of classroom activities.

- Prepare assignments that are appropriate for your learners.

Check Your Progress

Note: a) Write your answers in the space given below:
   b) Compare your answers with those given at the end of the Unit.

5.   How do innovative methods of teaching help in better classroom management?

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12.5   MANAGING LEARNING IN INCLUSIVE CLASSROOM

These days focus is on making your classroom inclusive. You not only have to create your classroom inclusive but manage it effectively to provide equal opportunities for learning to all learners in your class. You may find learner with different disabilities, with different cultural and social backgrounds, learners from different castes, religion or language groups in the same class. It is your responsibility to manage such classroom effectively. Let us first try to understand the concept of an inclusive classroom.

12.5.1 Inclusive Classroom: The Concept

What is an inclusive classroom? How is it different from other traditional classrooms? Answer to these questions will help you to decide your role in an inclusive classroom.

In narrow sense, an inclusive classroom is defined as a class where children with and without disability learn together. In broader perspective it has more comprehensive definition. Inclusive classroom is a class where children from all social, cultural, religious, economic background and abilities (including differently-abled learners) work together to create the knowledge with the help, guidance, support and encouragement of teachers. In a true inclusive classroom, views, ideas, experiences and values of every individual are valued in order to develop thoughtfulness, mutual respect and creation of knowledge.

It seems a quite impressive idea but many teachers are facing challenges in classroom management of such class. There are issues like lack of training, shortage of learning resources, infra-structure in the classroom and school, etc. which are still unresolved in many schools. Right to Education Acts, 2009 made it compulsory that all children should learn in an inclusive set-up and every classroom should be an inclusive classroom, but realities may be a different story. We have to work hard to make our classroom inclusive. Here are few simple strategies, which a teacher can use to make his/her classroom inclusive.

12.5.2 Strategies of Managing Inclusive Classroom

Know your Learner: The first strategy to manage an inclusive classroom effectively is to know your learners. You should be aware of abilities, needs (general as well as specific), background (linguistics, cultural, religious, etc.), strengths, weaknesses, interests of your learners. Your senior colleagues must have advised you sometimes to spend few classes in the starting of the session to know your learners. This will help you to manage your classroom effectively.

Know the Resources: A good teacher is well aware of resources needed for variety of learners and resources available the class as well as school. For example, if there are learners with visual-impairment, you need different kind of resources where as for learners with hearing impairment, resource may of different nature. Always try to use those resources which are in inter-changeable formats and focus on audio-visual aids.

Universal Design of Learning (UDL): it is advised that a teacher should plan the instructions by using Universal Design of Learning (UDL) principles for an inclusive classroom. UDL simply means a design which is easily interchangeable in different formats to suit different kind of learners. For example: if you are providing some printed resource or an image, it should be in those formats and fonts which are readable by screen reading software or can be transformed in Braille.

Collaborative and Cooperative Learning Strategies: in order to facilitate the learning together, you should use more collaborative and cooperative learning strategies. Group work facilitates more to all kind of learners as they learn from each other what they do not know.

Supportive Behaviour: In an inclusive classroom, teacher's behaviour, his/her language, selection of words to address the learners should be very supportive. You have to avoid those words which can hurt learners or are related to background, religion, caste, or disability. You should encourage all such learners who need more attention to be associated with their peers. Other learners in the classroom should also be trained to behave normally with learners with some difficulties.

Classroom Sitting: You have to design a supportive sitting arrangement keeping in mind the difficulties of learners, who needs special attention. Learners with locomotors disabilities or visually impairment, hearing impairment, etc., may need a suitable place to sit, you have to arrange it for them from starting.

Variety in Teaching Methods: You should adopt variety of teaching methods. Monotonous lecture method should be avoided. Using appropriate learning resources can help a lot. Encourage learners to identify locally available resources and use those in class frequently.

This will be discussed in details in the course BES 128: Creating an Inclusive School.

Activity 1

Analyze learners in your class and identify the strategies, which you can adopt to facilitate all learners in your class. Prepare a short report on it.

Check Your Progress

Note: a) Write your answers in the space given below:

b) Compare your answers with those given at the end of the Unit.

6. What strategies would you adopt to manage an inclusive classroom?

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12.6 MANAGING BEHAVIOURAL PROBLEMS IN CLASSROOM

Another very important aspect of classroom management is to manage the behavioural problems of learners, which a teacher often faces. Many times teachers complain that they spend a fare amount of time in resolving issues related to behavioural problems of learners. These problems may be of different reasons. Some may be related to personal behaviour of a learner, some may be related to his/her behaviour in group or behaviour towards a particular person or event or thing. If there is a counsellor in the school, teachers can refer every learner to him/her but in many Indian schools there is no such facility. In such schools, teachers have to manage the behavioural problems of learners in the classroom. There is a three-fold strategy to manage these problems, i.e. preventive measures, supportive measures and corrective measures. Let us discuss these one by one.

12.6.1 Preventive Measures

Prevention is an early measure through which many general problems can be avoided. In order to apply preventive measure, you have to play dual role, i.e. you have to create supportive environment to promote positive discipline in the school as well as identify and arrange the support system to prevent the learners from negative behaviour. Preventive measures are not only for specific learners rather they are for all. Here are few measures which can be adopted as preventive measures in a class:

Reinforcing and rewarding good behaviour

It is often said that punishment may stop a learner for doing wrong things but he/she will never learn what the right thing was. So it is better to identify in learners,

what is good? Support the good and reinforce their good behaviour and achievement through rewards.

Example

Rashmi, a secondary school teacher got a class about which she was told that it is a notorious class. She adopted an interesting strategy to promote positive behaviour. She put a glass-jar in the corner of the class and instructed learners to put their name in a slip and place it inside the jar whenever they have done something good according to class. At the end of the month, slips will be counted and whose name will appear in most slips for good behaviour, s/he will be rewarded.

Same strategy can be applied for class behaviour also in the school.

Effective Classroom Rules

Design, explain and implement the well-defined classroom rules. Consequences should also be explained if learners do not follow certain rules. Desired behaviour needs to spell out clearly so that while implementing, there should be no chance for biasness. Involve learners in developing as well implementing these rules, which will help you in developing a positive attitude towards the rules.

Non-verbal Communication

Non-verbal cues through body language of teachers also play an important role as preventive measure of behaviour management. Learners generally follow the body language of teachers when they communicate in classroom. What teachers like and what not, learners usually guess by observing the body language of teachers. Teachers should use effective non-verbal cues as well as there should not be any miscommunication in between his/her oral communication and communication through body language.

Cooperative Learning Strategies

Cooperative learning strategies are suggested to enhance the team-building and cooperative approach among learners. These strategies help learners in channelizing their energy in peer interaction and discussion. Development of social skills as well as positive leadership is also possible through these techniques.

Academic Support

Sometimes few learners in class need some extra support due to their inability to match the speed of rest of the class. If they do not get proper attention and support they try to create certain problems. As a teacher, it is your responsibility to identify such learners and their specific need as well provide them academic support. This will help them to focus more on academics and the probability of creating problems will decrease.

Parental involvement

Role of parents is equally important as preventive measure. It has been observed that sometimes, learners' problems are a reaction of the events/actions/situations they face at home. Continuous communication between parents and teacher is very important. Parents should be oriented beforehand about this. They should be encouraged to share everything about their child with teachers so that both can work together.

Activity 2

Organize a discussion with your colleagues at your school about preventive measures for behaviour management and develop a preventive plan.

12.6.2 Supportive Measures

Supportive measures are equally important for managing the behavioural problems of learners. These measures are different from preventive in the sense as these are used by teachers when they observe any behavioural problem is occurring in the class. Many times strategies may be same as preventive and supportive measure but their implementation and use is different due to nature of the event.

These measures are used by teachers to support the positive behaviour in the class. **Positive Behaviour Support (PBS)** is used as an alternative strategy to avoid punishment. PBS does not support the strategies like withholding reinforcement for the learners with an undesirable behaviour.

Following strategies can be adopted by a teacher as supportive measure while dealing with problematic behaviour of learners in the class:

Extinction and Redirection

If a teacher notices that the learners are showing some particular problematic behaviour for attention, teacher should try to avoid this behaviour. Such behaviours generally are not very serious and harmful. This avoidance is called Extinction. Sometimes, when a teacher observes something disturbing in learner's behaviour, s/he redirects it to some fruitful activities. For example, a learner is making some useless sounds in the class, teacher asked him to entertain the class by making funny sounds for 15 minutes.

Conflict Resolution Skills

When you notice a learner fall in some conflict and this conflict is the cause of his/her problematic behaviour you have to play attention there and suggest some conflict management skills. Better to use it as preventive mechanism and train your learners with some conflict resolution strategies.

Curricular Adaptation

Cause of problematic behaviour of learners may be the way curriculum is being transacted in the classroom. Some learners may not be comfortable with the teaching-learning strategies you are adopting or the activities which you have incorporated.

As supportive strategy, make provisions for choice of activities. Include activities which they can accomplish with the help of parents, peers or community members. Vary the pace of teaching. Analyze the task given to learners, is it of their interest? What is the difficulty level of the task? Are the resources available with them to accomplish the task? A better planning can minimize problem in your class.

Replacement Skills

Many times learners are not aware of various alternatives to solve a problem. They use the method selected or taught by the teachers and if they don't get desired success, it results in some problems. As a teacher, you need to motivate them for identifying and using alternative paths also but you have to keep an eye that the alternative path should be right one; continuous guidance and reinforcement can help a lot in it.

12.6.3 Corrective Measures

Corrective measures are required when a problematic behaviour is occurring frequently and preventive and supportive measures are giving desired results. It is always suggested that corrective measures are the last solution to handle any problematic behaviour. Implementation of corrective measures require the

involvement of parents and school administration as well but sometimes these may be misunderstood by parents or other community members, if they are not aware of the problem. Here are few strategies which teachers can use as corrective measures:

Making learners aware of the consequences

Often you observe few learners causing problems and no supportive strategy is working on them. In such situation, you need not lose your calm. It is better to talk to the learner and explain the possible consequences of his/her behaviour. You can involve their parents also while explain such consequences.

Removal from a situation

Sometimes you may observe that ignoring the problem, behaviour can increase its intensity. In such case, ignorance is not a solution. As a teacher you have to put him/her in a different situation, where either s/he can not get any benefit from the problematic behaviour and learn how to behave to fulfill his/her needs. Changing the place of sitting in the classroom, allocating or change in the responsibility assigned to him/her in the classroom, involving in some co-curricular activities or school activities may be a kind of solution.

Here are few corrective consequences, which have been suggested:

12.7   TIME MANAGEMENT

Time is important not only in teaching, but in life in general. Time in the classroom can be thought of as a valuable resource to effective learning. The teacher has limited time at his disposal and he has to achieve curricular objectives within his allotment time. Extra time spent on one subject means less time available for other subjects. As teachers we should, therefore, know the techniques of managing classroom time for productive teaching. Learner achievement is maximized when teachers allocate most classroom time to instructional activities that promote learner achievement. The teacher should use appropriate managerial and instructional strategies to support such achievements. In other words, the effective teacher ensures that learners are appropriately engaged in instructional activities for as much of the available time as possible. The amount of time that learners are engaged in instructional activities is positively associated with their academic achievement that is learning. The impact of effective use of time depends on the extent to which the individual teacher manages and uses the classroom time.

12.7.1   Use of Classroom Time

Researchers have concluded that the amount of information learnt is a function of time allowed or what is now called **opportunity to learn**. The opportunity to learn depends on the amount of time a learner spends on a particular subject. However, learning is influenced by other factors also such as ability of the learner (aptitude), quality of teaching (i.e. organisation, clarity and focus), etc. Research on effective use of time has generated several time management strategies (Hofmeister&Lubke, 1990; and Good &Brophy, 1987). Let us elaborate skills associated with the effective use of time. In the context of its use in a classroom, from the clarity point of view, time can be divided into six categories. These are:

- Available time

- Allocated time

- Engaged time

- Academic learning time

- Pacing (of curriculum and lesson) and

- Transition time

Let us briefly discuss each of these categories.

i)   **Available time:** This is the time available for all the activities in school. The available time is limited by the number of days in an academic year and number of hours (usually 6 hours a day) including interval time. But for minor variations, the available time in schools all over the country is the same. You, as a teacher, have to plan the available time in such a way that the academic goals of the curriculum are achieved. You should remember that a school is a place where learners get opportunities for overall development.

ii) **Allotted time:** Allotted time is the amount of time assigned for instruction in a content area. The teachers vary widely is how they use their allotted time. Some teachers, for example, use 40 minutes of a 45 minutes period to develop a concept, in other classes only 20 minutes will be used for developing a concept related to the subject matter. Teachers whose learners attain relatively poor achievement use more allotted class time for non-instructional activities. It has been observed that when teachers consciously and effectively devote more time to a topic or subject, learners have more opportunities to learn it.

The concept of allotted time sometimes appears as a vague concept to beginning teachers – until they start planning. The planning of allotted time provides them a form of classroom activities to follow as lessons are conducted. It enables the teacher to anticipate instructional needs so that appropriate material can be gathered, organized and used. Careful management of allotted time minimizes the complexity of classroom teaching. A number of external factors such as curriculum guide, tests, duration of the periods, etc., influence the way you can make use of your allotted time. After providing for these factors, the teacher has the freedom to decide how much time is to be devoted to certain topics and related activities. You can decide which topic should be given more time; and which topic can be dealt with, in brief only.

Let us now change our focus from time available to time used. How we use the time we have been allotted for instructional purposes is very important in teaching.

iii) **Engaged time:** Engaged time is the amount of time the learner is actively involved in learning tasks such as writing, listening and responding to the teacher's questions. Engaged time does not include classroom tasks such as disruptive talk with another learner, daydreaming, etc. Recent studies indicate that a learner's engaged time, or time on task, and academic learning time are more sensitive predictors of achievement than allotted time. In other words, quality of time used (how time is effectively and efficiently used) is more important than the quantity of time used (how much time is allotted). For example, reading aloud from the textbook by one learner while others listen or pretend to listen to the reader has low quality of time used compared to using the same amount of time for dictionary use wherein each learner picks up difficult words from the text and writes their meaning from the dictionary.

iv) **Academic learning time:** You will notice that we are becoming more and more precise in our discussion on time management. Academic learning time (ALT) is the amount of time a learner spends performing relevant academic

tasks with a high level of success, and where the tasks are directly relevant to an academic outcome. The concept of ALT represents a considerable refinement over engaged time. Procedural activities such as taking attendance, making an announcement, coping with classroom disruptions, dealing with off-task behaviours, etc., are not to be included in ALT.

In order to determine which institutional tasks are directly relevant to learning outcomes, we should study the relationship between the tasks and the test that would be used to measure a learner's achievement. Through this you can see the relationship between the academic learning time and achievement of the learners. As a teacher you should always try to increase ALT wherever you teach.

ALT varies widely from classroom to classroom and from teacher to teacher. Teachers too vary considerably in how successfully they translate allocated time into meaningful learning and thereby into ALT. Some teachers who allocate less time for a subject have considerably higher rates of ALT because they involve learners more in relevant tasks that allow them (i.e. the learners) to experience higher rates of success. In some classes, a large proportion of school time is lost in non-instructional activities such as lunch, recess, cleaning up, etc. Some teachers do not fully appreciate the value of allotted time; quite a few of them show no concern for effective time management. They do not seem to fully appreciate time either as a valuable resource or in terms of impact it can have on learner learning.

ALT is an important variable for teachers. **One,** it is an indication of whether the teacher is able to put his pedagogic activities together. **Second**, lack of time planning causes management problems. Classroom with high ratio of ALT face fewer management problems. Effective implementation of academic tasks help learners learn and channelise their energies into constructive work.

Available Time

Allotted Time

Engaged Time

ALT
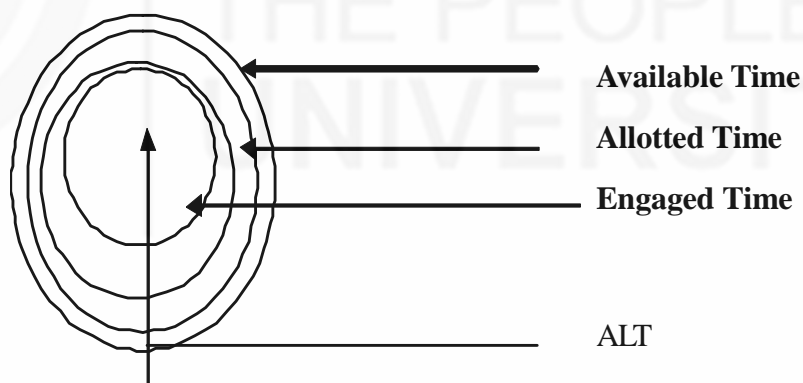
You should remember that ALT takes allotted time and engaged time into account. This statement should not confuse you. By this statement we mean that we have to make an optimum utilization of allotted time and engaged time for boosting actual learning by the learners. ALT suggests that the teacher must plan learners' actual learning time, keeping the overall allotted time available with him.

v) **Pacing curriculum and lesson:** You will be surprised to find out, how pacing is related to better time management. Curriculum pacing is concerned with the rate at which progress is made through the curriculum i.e. the rate at which you cover or complete the curriculum. Lesson pacing is concerned with the pace at which the teacher conducts or teaches individual lessons. Pacing is a very important variable for effective learning. Most learners learn

more when their lessons are conducted at a fast and active pace because a relatively fast pace stimulates their attentiveness and participation as more content has to be covered by the learners. The more the content the teacher covers, the more the learners seem to learn. Pacing relates directly to the learner's engaged time and success. Speeding up pace should not be used at the cost of low achievement rate. No one can be sure about the ideal pace for a particular lesson or a particular group of learners. The ideal pace would depend on the learners' abilities and developmental levels, nature of the subject matter, and of course, the teacher's instructional expertise. The ideal pace changes across classes. No two classes or even two sections of the same class may have the same ideal pace. Some teachers adjust the pace in such a way that they cover only half the syllabus in a year, others finish the entire syllabus in just six months; some teachers manage to cover the entire syllabus by spreading it almost evenly across each term. Pacing, like many other characteristics of effective instructions, has a positive effect on learner achievement. Less effective teachers catch up late and then provide too much material at one time and without any practice. They are in a great hurry to cover the syllabus during the last months of the session. Pacing of lessons keeps the learners engaged and increases his/her interest in learning. By implication, good pacing reduces learner misbehaviour in the class.

vi) **Transition time:** Teaching involves a number of related activities such as presentation of content, discussion, question, demonstration, practice (guided as well as independent) and so on. Considerably time is taken up in shifting from one activity to another. This shifting or change over from one activity to another is called **transition.** If these transitions are not managed properly, a lot of time will be wasted.

Management of transition time does not more than just save time. Learners are more likely to misbehave when there is a break in the continuity of a lesson. Management of transition is one of the most critical tasks to be managed by the teacher. The following are some management techniques for making transitions quick and smooth.

- The teacher should have materials ready and demonstrate confidence in closing one activity and initiating the next.

- The teacher should exercise greater vigilance during transitions.

- The learners should be so motivated that they cater the next activity with interest and expectation of success.

In this discussion we have highlighted the fact that the teacher should clearly mark the start of transition and minimize the loss of momentum during transitions. Learners should be given clear-cut direction about what they are supposed to do.

Pacing and transition time management contribute to greater instructional momentum. Both the teachers and the learners should feel a sense of movement during the lesson. Loss of momentum usually creates problems in instruction. A prolonged loss of momentum has a negative effect on learner achievement.

12.7.2 Practical Suggestions

The following practical suggestions can help you improve your time management skills. You should remember that these suggestions are only suggestions. You can

add some measures of time management based on your observations and experience. These suggestions are based on various principles of effective time management used by teachers (Lubke, 1990).

i)   Increasing allotted time

- Keep necessary material and equipment ready for use. Keep some extra activities for these learners who complete their tasks early. Similarly, keep necessary equipment such as projector, audio or video tape-recorder, extension cords, tests, audio-visual aids, etc., ready for use. The equipment should be easily accessible to the teacher or the learner as the case may be.

- Identify the learners who have completed and also those who have not completed their homework. Collect and correct their homework. If the learner has not completed the homework, give him a chance to complete. But before you ask him to do so, try to resolve his problem if he has any, for not completing the homework. Collection and checking of the homework should not take much time.

ii)   Increasing engaged time

- Prepare a schedule of class periods and make all the learners aware of it. It can be pasted on their diary or displayed at a place where they can easily notice it. Stick to the schedule.

- Welcome the learners and draw their attention to the lesson. Wait until all the learners are ready (physically and mentally) for the lesson and are willing to be engaged in pedagogic activities.

- Start interacting with the learners. Start your instructions with one or two questions and ask the class to respond. Then shift to brainstorming session.

- Use eye-contact and verbal/non-verbal communication to involve your learners in the teaching-learning process. Appreciate desirable/appreciate behaviour displayed by the learners.

- Remind them of the set of norms and rules of the class behaviour.

- Move around in the class and pay attention to those learners who have some problem(s) in learning or understanding the content.

- Focus learners' attention on the instructional tasks. Tell them about the reinforcement they are going to get after completion of the work. For example, say, "Once you complete your assignment, you can go for play".

- If the learners are waiting for your help and you are busy with other learners, ask them to go to the next question/problem if they are able to solve it, so that time is not wasted.

iii) Increasing academic learning time

- Try to link instructional task with actual life experience. For example, while talking about the social impact of television, you can ask the

following question. "What impact do the Zee TV programmes have on the members of family or your younger sister?"

- Make sure that the learners attend to your presentation. Strategies such as using of eye contact, giving directions, asking questions and assigning activities can be used.

- Watch for learner's behaviour and indicate their involvement in the lesson or instructional activities. Such behaviour includes listening, responding, reading, writing and participating in various tasks. Ask learners questions that confirm whether they have been involved in the instructional tasks. Wh-questions are to be constructed and asked quickly. Wh-Qs are questions which start with Wh-word viz, why, when, what where, how, who, whom and whose. These are also known as open-ended questions.

- Find out areas of learners' interest and build up instructional activities around those interests.

- Outline the steps of the lesson, pay special attention to the structure and sequence of learning experiences. To minimize errors, lessons should be planned in small steps. Learners should continue to practice till they master the skill or learning. You should use concepts, vocabulary, examples, expressions, etc., that are familiar to the learners. These devises should mach the level of understanding and the rate of learning of your learners.

- Use specific and concrete procedures.

iv) **Pacing curriculum and lesson**

- Prepare a yearly schedule and term schedule for covering the required curriculum.

- The amount of content to be taught should be according to the mental and maturity level of the learners. Include as much material as your learners can understand.

- Be judicious as far as possible in your pace of teaching. Comment on the responses of the learners quickly and move on to the next teaching point.

- Reduce the level of difficulty instead of slowing down your teaching pace.

v) **Decreasing transition time**

- Transition can involve a physical movement or a change in focus. Prepare learners in advance about upcoming transitions. Give verbal directions to them to facilitate transitions.

- Tell the learners clearly what is expected from them. They should be able to make transitions without explicit direction from the teacher. The procedure set for the learners who complete their work early, will reduce the amount of time they spend waiting for their classmates to finish the assignments allotted. Reinforce such learners who are fast in their work and help those who face some difficulty.

- Set rules for physical movement of the learners, movement within the classroom, out of the classroom and into the classroom. Consider the number of learners involved in transition, only one learner, a group of learners or the entire class. Decide whether the learners should move from one activity to another individually or in a group.

- Ensure the discipline during transition. The learners should respond to the directions given to them.

- Avoid irrelevant and too many instructions. Do not over-teach (too many instructions)

- Be prepared to manage two types of transition:

- Learner transition such as sharpening a pencil, going out for drinking of water etc., and

- Transition during teaching such as making material and equipment accessible to the learners, setting up an experiment, development of blackboard summary etc. accessible to the learners, attending to instructions from the Principal.

- Rationalize your use of not spending excessive time with any one learner. If there is some major problem with a learner, he can be given remedial treatment separately.

- Hint at the consequences of inappropriate movement by learners in the classroom.

Check Your Progress

Note: a) Write your answers in the space given below:
      b) Compare your answers with those given at the end of the Unit.

8. Distinguish between allotted time and academic learning time (ALT). How does ALT help a classroom teacher?

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....

....

9. What would you do when you shift one activity to the other in the classroom?

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12.8   LET US SUM UP

Management of classroom instruction is an important function of a teacher. The success or failure of instructional activity depends on classroom management. Classroom management means a judicious use of a variety of management techniques to achieve the pre-decided objectives. For effective classroom

management a teacher should know the principles of classroom management such as the principle of clarity and mastery over content, involvement, democratic behaviour, self-control flexibility, etc. The teacher should also take into account factors like instructional strengths, class environment etc., while managing the classroom. Techniques like behaviour modification, group activities, assignment learners' responsibility, etc., help a teacher to deal with classroom problem effectively. As teachers you have to develop a plan for preventive, supportive and corrective measure for management of behavioural problems of the learners. Better prevention reduces the problems but importance of corrective measures is also there in case of repetition of problem behaviour. Time constitutes an important component in classroom management. The teacher should plan classroom time in such a way that it facilitates learner learning and solve a number of managerial problems.

12.9   UNIT END EXERCISES

1.   While teaching your subject, you must have come across many classroom problems. Prepare a list of some important problems and describe how you managed them.

2.   Enlist the behaviour problems you came across and enlist the measures adopted by you in the category of preventive, supportive and corrective.

3.   What kind of problems you are facing in managing an inclusive classroom? How will you manage these problems to ensure maximum learning?

12.10   REFERENCES AND SUGGESTED READINGS

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12.11   ANSWERS TO CHECK YOUR PROGRESS

1.   Classroom management is a broad concept directed towards effective teaching and learning whereas class discipline is a concept used in the context of responding to learners' (mix) behaviour.

2.   Principle of teacher behaviour.

3.   Principle of clarity and mastery over content.

4.   Principle of personal attribute

5.   Innovative methods of teaching not only help in better classroom management but also facilitate learner learning. For example, a teacher introduces the project method of teaching in this teaching. Through this project method, learners get an opportunity to learn by themselves and remain engaged throughout the teaching-learning process. This helps the teacher manage learners and the teaching-learning in a better way.

6.   Answer on the basis of your experiences.

7.   Answer based on your observations and practices at your school.

8.   Allotted time is the time allotted to a teacher to transact teaching-learning activities. This time is generally the time of a class period which may be of 40 to 45 minutes. Academic Learning Time (ALT) is the time a learner uses for academic tasks which given rise to an academic outcome. The success of an instructional system depends to a large extent on the proper use of academic learning time.

9.   When a teacher shifts from one activity to another in the classroom, it is called 'transition', In order to manage transition; the teacher should do the following:

   •   keep materials ready;

   •   demonstrate confidence in closing one activity and initiating the next;

   •   exercise increased vigilance during transitions;

   •   motivate learners for the next task.