B.ED. PART-I (SEM.-I) **PAPER-III**

Teaching-Learning Process

UNIT-A

LESSON NO :

UNIT-A

1.1 : Teaching: Concept, Nature, characteristics, Principles of teaching, maxims of teaching.

1.2 : Learning-Concept of Learning, Learning process, relationship between Teaching and Learning.

1.3 : Behaviourism, Cognitivism and constructivism in relation to Teacher and learner

1.4 : Teaching for academic learning: objectives, flexible and creative planning using taxonomies, planning from a constructivist perspective, integrated and thematic planning.

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Teaching: Concept, Nature, characteristics, Principles of teaching, maxims of teaching,

Structure

1.1.1 Objectives

After going through this lesson students will be able to-

1. understand the concept and nature of teaching
2. explain the characteristics of teaching.
3. understand and describe the principles of teaching
4. discuss the principles of teaching based on the principles of learning
5. implement the maxims of teaching in daily classromm teaching.
6. understand the importance of principles of teaching learning process for teachers.

1.1.2 Introduction

Teaching-learning process has occupied an important place in the field of education. It is not a new concept as claimed by some educationists rather it is as old as man. Of course it has undergone many changes with the passage of time.

Teaching and learning are two aspects of educational process, but both are closely related. We cannot divorce one from the other. The main objective of teaching is to

facilitate learning. Wherever there is teaching, learning will be there. Hence the concept of teaching is incomplete without learning. Before we discuss the teaching-learning process, its nature and implications we shall have to study what is teaching and what is learning?

1.1.3 Concept and nature of Teaching

Teaching as understood by a layman, is the fact of imparting instruction to the learners in the classroom situation. If we observe the traditional class room teaching, we find that either the teacher is providing information to students, or one of the students is reading from a text book while the other students are silently following him in their own text books. This traditional concept of teaching is not acceptable to the modern educators as their researches in teaching are based on the principles of psychology of learning and teaching. So, the old concept of teaching has been completely discarded by the present day educators.

Teaching as giving information and imparting knowledge shows the relationship between the child and the subject and this aspect has been overemphasised in our schools today. Now, teaching is not merely imparting knowledge to students, nor is it merely giving advice. Some people think that teaching is passing to the class one's own experiences. But this does not give a complete picture of the process. While imparting knowledge , a teacher should keep in mind the child as well as the orderly presentation of the subject-matter. **S.S. Chauhan states "Teaching is to cause the child to learn and acquire the desired knowledge skills and also desirable ways of living in the society . The main aim of teaching to help the child to respond to his environment in an effective way."**

1.1.3.1 Definitions of Teaching

Burton has given a very precise but comprehensive definition of teaching as "teaching is the stimulation, guidance, direction and encouragement of learning." This definition has four aspects **(i) *Stimulation :*** it refers to motivation in the learner in such a way that he will be creating an urge to learn. It is setting the stage for the learner in such a way that he will be stimulated to learn, he will want to learn, (ii) ***Guidance :*** it means to guide the learner to develop his capacities, capabilities, skills, attitude and knowledge to the maximum for adequate adjustment in the external environment. Guidance is a co-operative enterprise, **(iii) *Direction :*** means that teaching is a goal-directed activity which leads to pre-determined behaviour. It also means the activities of the learner in teaching are directed and controlled in relation to the economy of time and efficiency of learning. **(iv) *Encouragement for learning :*** Is to encourage and inspire the learner to acquire maximum learning. Teaching may consist of a description of those acts which teachers demonstrate and which reflects their commitment to a particular physiology of education. Some of the explanation of teaching as given by S.S. Chauhan are as follows :

1. Teaching is communication between two or more persons who influence each other by their ideas and learn something in the process of interaction.
2. Teaching is to fill in the mind of the learner with information and knowledge of fact for future use.
3. Teaching is a process in which learner, teacher, curriculum and other variables are organised and used in a systematic way to attain some determined goals.
4. Teaching is to cause motivation for learning.

B.O. Smith (1961) suggests a definition of teaching as a "system of actions intended to produce learning. ' According to him 'Learning does not necessarily issue from teaching that teaching is one thing and learning quite another.' On the other hand, Clarke has given a definition of teaching activities that are designed and performed to produce change in student behaviour. **N.L. Gage (1969)** considers that the process of teaching and learning must be adapted to each other and we should conceive teaching learning as a process for effective learning. Knowledge will not be imparted unless the students are prepared to receive it. In other words, there can be no teaching when there is no learning. So it can be said that teaching is causing to learn. It is helping the child to learn, to establish his relationship with the subject or the environment.

These definitions indicate that learning is essential for teaching whereas learning is an important concept that should be considered for effective teaching. **Thomas Green** has given different viewpoints regarding teaching in his book entitled. "**Activities of Teaching**". He writes that there is no learning without teaching and teaching may be without learning. He further says, "**teacher designs teaching to induce learning**. But every student is not able to learn. On the other hand, learning is the change in behaviour through situations and activities. The purpose of teaching is to create appropriate situations which facilitate learning in its broadest sense,. Thus, no learning is possible without teaching and all teaching may not result in learning.

1.1.3.2 Different views about teaching

The approach to understand the nature of teaching would be through understanding the implications of education. The educator, the educand and subject-matter constitute the three elements in education. It is through teaching that the educator or the teacher brings about a harmonious relationship among the three. The teacher should know himself, his students as well as his subject. He must understand the capacities, limitations and individual differences among his students.

Teaching "is a matter of helping the child to respond to his environment in an effective manner." The ability of making an effective response to the environment that a child acquires, suggests that teaching is helping a child to adjust to his

environment, which is constantly changing and growing in complexity. We help the child to make a successful adjustment with the environment by giving him knowledge, changing his attitude and strengthening his skills. Sometimes, we provide him that type of environment which is best suited for his social development and for living a useful and adjusted life. **Yoakum** and **Simpson** have rightly remarked that "teaching is the means whereby society trains the young in a selected environment as quickly as possible, to adjust themselves to the world in which they live."

Another viewpoint is that teaching is also guidance. Children must be guided to learn the **right thing** in the r**ight manner** and at the **right time**. It is through guidance that right attitudes of mind and habits, right knowledge and methods of critical thinking and evaluation will be acquired by pupils. According to Pincent, guidance is what distinguishes really effective and intellectually stimulating teaching from mere routine instruction. It has the effect of turning the learner's mental gaze to the light instead of keeping it for every one towards the shadow.'

According to **Ryburn**, a well known educationist, "teaching also includes the **training of emotions of the child.** We usually give more emphasis on the cognitive or intellectual aspect of education, ignoring the effective aspects." But if we want that our children should do the right thing : they must have right feelings. Teaching is one of the names of giving right feeling to children. Children should be provided appropriate outlets of their emotions and means of disciplining and sublimating them through play, games, drama, painting and drawing.

Mursell, in his famous **book "Successful Teaching"** writes that teaching is not much the direction or the guidance, he defines teaching as the organisation of learning. Organisation of learning implies that all the elements of the situation have to be brought into relationship and built into an intelligible whole. The teacher pupil activities which are varied and complex have to be harmonised. These activities include learners and their individual differences, the methods of teaching, the material to be taught, classroom conditions, teaching devices, aids and the like.

1.1.3.3 Characteristics of Teaching

The following points highlights the characteristics of teaching :

1. Teaching is a matter of drawing out rather than a matter of putting in anything from outside.
2. Teaching is to help the child to adjust himself to his environment in an effective manner.
3. Teaching facilitates and promotes learning.
4. Teaching helps the children to develop emotional stability.
5. Teaching prepares the children for life.
6. Good teaching is giving guidance.
7. Teaching is tri-polar process comprising the teacher, the pupils and

the subject-matter.

8. Teaching is an interaction between the teacher and the pupils.
9. Teaching is sympathetic and kind.
10. Teaching proves to be a source of creativeness and recreation.
11. Good teaching is planned and systematic.

1.1.4 Teaching principles based on learning principles

Good teaching is characterized by the observances of certain basic principles. Like an artist a teacher must know certain principles which help him to acquire proficiency in his profession. These principles of teaching are mostly based on the principles of learning. According to Yoakum and Simpson following are some of the important principles of teaching which are based on the psychology of learning :

1. Good teaching involves skill in guiding learning : Teaching is neither merely a process of imparting knowledge to students nor of curbing undesirable traits and tendencies. In the process of teaching, knowledge is imparted and undesirable traits and tendencies are curbed, but good teaching consist of primarily guiding and directing the pupil and encouraging him towards efforts in learning. This guidance is given by suggestion rather than by command and by the creation of situations which naturally lead to desired types of activity. Good teaching opens up fields for investigation, it introduces new materials, it suggests methods or procedure and it aids the individual to estimate his progress.

2. Good teaching is provide in kind and sympathetic way : Good teaching cannot take place in a situation that lacks kindness and sympathy with the interests and need of pupils. The good teacher is well disposed towards his pupils. He knows that they are immature and that they need his sympathy and help. Therefore, he attempts to create an atmosphere with his sympathy and help. Therefore, he attempts to create an atmosphere in his school which will seem homelike and pleasant, he knows that children must play as well as work; he realizes that his attitude and his personality will effect the pupils temperaments in various ways. He seeks, therefore, to understand each child and to develop the teaching situation as that children will feel that the school is a good place and that the teacher is a kindly person who knows all about children.

3. Good teaching is well planned : The good teacher has thought out his problem carefully and in advance. If a teacher is directing an activity, he has a general view of the activity ahead. The order and sequence of events is clearly depicted in mind and provisions have been thought out for the management of the whole situation. At the same time, his plan is flexible enough so that it may be changed as the need arises.

4. Good teaching is cooperative and suggestive : One who aspires to be a good teacher knows suggestion rather than direction. The teacher leads by virtue of his

demonstrated power in leadership. But it does not mean that pupils do not respect his authority and that at items he does not need to insist on courtesy, honesty, responsibility, perservance and the like; it means that on the whole, the good teacher, secures the operation of these traits through the creation of situations in which they naturally develop.

5. Good teaching is democratic : Good teaching attempts to create democratic environment in which the right of individuals are respected. In this environment, the teacher thinks that each individual is entitled to equal rights with every individual in the class and that he is subject to the same rules with respect to members equally as other pupils. Democracy, here demands responsibility of its social for services to the group welfare. It means that giving of services, as well as, the receiving rights and privileges.

6. Good teaching is stimulating : The good teacher stimulates, through his personality and his activities, the personalities of the pupils. The school environment is a selected environment and the activities are directed. It means that the good teacher stimulated through teaching, through suggestion of new activities through criticism and even direct suggestions.

7. Good teaching takes into account the past experiences of the children : A good teacher recognizes that education is in its best sense or recognising experience. It is necessary, therefore, in proposing any new activity, to take into account the interests, attitudes, skills and habits of children. There are general mode of procedures and activities which enable the teacher to avoid errors in the new activities and which ensure that the results of new experience will be achieved most effectively.

8. Good teaching is progressive : A good teacher is highly concerned with the progress of children in the achievement of attitudes and interests, ideas and information, skills and abilities and the development of thought and action which leads towards desirable social goals. Progress is aimed towards an improved way of life for all the people living in a democracy. The teacher must take progress in methods and techniques of accomplishing the social goals of education. He must in skill and technique, as well as in the improvement of goals. When teaching improves steadily, it is progressive.

9. Good teaching diagnoses difficulties : It is true that diagnosis of difficulties in reading, spelling, writing, language and arithmetic is rather more advanced than that in social studies, literature and other fields, but good teachers are much sensitive to the needs of individuals than ever before. There is much hope for increasing skill on the part of the teachers is discovering and remedying the learning difficulties of children.

10. Good teaching is remedial : Good teaching must provide remedies for individual, as well as for group difficulties. Remedial work is particularly important in subjects where skills are involved in which the failure to master one step prevents

making progress in the next. Numerous case studies of children related to reading and language indicate that much retardation in learning could be prevented if teachers diagnose difficulties and apply remedial procedures when the need arises.

11. Good teaching liberates the learner : The idea of good teaching is to develop initiative independence in thought and method or procedure, self-reliance and confidence among pupils, so that eventually they could be able to attack problems independently and work out solutions. Independent habits of study and achievement in work among pupils testify to good teaching. This type of teaching which dictates the child's every move and which make provision for a gradual diminishing of guidance is not desirable, as good teaching liberates the mind through the development of sound habits of thought and action and the abilities needed in effective work. The ideal of good teacher is to liberate the child from teaching.

1.1.4.1 Teaching principles based on Hilgard's learning principles

Burton has prepared a list of learner's characteristics considering Hilgard's learning principles and determined learning situation for developing these characteristics. These learning situations are termed as Burton's principles of teaching. A list of these principles based on Hilgard's learning principles is as follows:

Learner's Characteristics		Principles of teaching	
A.	Intelligence	1.	Bright students can learn things in a better way but cannot dull students.
B.	Motivation	2.	A motivated pupil learns more readily than one who is not motivated.
		3.	The excessive motivation may be less effective than moderate motivation for learning discrimination.
		4.	Learning through reward of success motive is more effective than punishment.
		5.	Learning under intrinsic motivation is preferable to learning under extrinsic motivation.
C.	Aspiration Level	6.	Learners requires practice in fixing realistic goals for themselves. These goals should not be too high or too low.
		7.	Tolerance for failure is best taught by giving a backlog of success.
D.	Learner's attitude	8.	The personal history of teacher may hamper or enhance learner's ability to learn.
		9.	Active participation of learner is more effective than passive reception.

E.	Learning condition	10. Meaningful material and meaningful tasks are learned more quickly than non-sense materials. 11. Practice and repetition are much more useful for permanent learning. 12. Knowledge of correct answers and results aid learning and function as feed-back to the learner. 13. If learner himself discovers relationships between new and old tasks, the transfer of learning will be better. 14. The retention can be encouraged by spaced or distributed recalls of learnt material.

1.1.4.2 Teaching principles based on learning principles of T.R. McConnell

Burton (1958) used McConnell's learning principles to develop his own position in his paper entitled, "Basic principles in a Good Teaching-learning Situation." He has prepared a list of learner's abilities on the basis of McConnell's learning principles. The learner's characteristics and teaching principles have been summarized in the following table :

Learner's characteristics	Teaching principles
1. The learner is a living organism a unitary integrated whole.	1. The learning experiences should be provided for natural integration of feeling doing and thinking aspects.
2. The learner always seeks to maintain equilibrium or balance by satisfying his needs.	2. The learning experiences should be provided in meeting the needs of the learner.
3. The learner is a goal seeking organism to satisfy his needs.	3. The setting of learning should be purposive or goal oriented. An appropriate guidance may be given to a learner to achieve his goal.
4. The learner is an active and exploring individual.	4. The learning situation should provide freedom to develop creative contributions.
5. Notable differences exist between individual in speed of learning.	5. Different types of learning experiences should be provided for satisfying the needs of each and every learner.
6. The learner is a social being who brings with him a personality and a set of values. He needs a social	6. The family background and individuality of the learner should be taken into account while

environment.

7. A learner may be quite immature so he needs guidance.

8. The learner is a social animal, and seek activities, involving other persons or group work.

establishing learning experience for him.

7. Learners need sympathetic guidance while building at awareness and personality development.

8. The whole range of classroom interaction should be cooperative group process to develop the socializaed personality.

Burton concluded that these eight 'learners characteristics' are basic for designing learning situation or developing principles of teaching.
(By courtesy R.A. Sharma : Technology of teaching)

1.1.5 Principles of Teaching :

Teaching is a relationship which is established among three focal points in education- the teacher, the taught and the subject matter to be taught. Teaching is a complex art of guiding students through a variety of selected experiences towards the attainment of desired teaching-learning goals.

As defined by Ned. A. Flanders : Teaching is an interaction process. Interaction means participation of both teacher and students and both are benefited by this. The interaction takes place for achieving desired objectives.

A very motivating definition of teaching given by Albert Einstein is, “The supreme art of teaching is to awaken joy in creative expression and knowledge”.

Teaching stimulates the child. It is always task oriented. Teaching is encouraging, expressing, balancing and harmonizing learning.

Swami-Vivekananda (1863-1902) describes the role of a Teacher in teaching as, “The true teacher is he who can immediately come down to the level of the student”.

Principles of teaching enable the teachers to make the teaching-learning process challenging as well as inspirational and effective. For effective and successful teaching teacher should came down to the level of his students so as to raise their level of learning. To achieve this objective various educationists & psychologists propounded certain principles of teaching. These principles can be categorised in two major categories:

1.**1.5.1 General Principles**

1.1.5.2 Psychological Principles

Some of them are discussed in this chapter as follows :

1.1.5.1 General Principles

1. Principle of Definite goals and objectives
2. Principle of Child-centredness
3. Principle of Individual differences
4. Principle of Activity
5. Principle of Co-operation
6. Princple of progressivism.

1.1.5.2 Psychological Principles

1. Principle of motivation
2. Principle of relating to life
3. Principle of Active participation of students
4. Principle of Planning
5. Principle of Effective Strategies
6. Principle of Flexibility
7. Principle of Association
8. Principle of sympathy
9. Principle of creativity
10. Principle of Readiness
11. Principle of Creating Congenial Environment
12. Principle of Reinforcement

1. Principle of Definite Goals and Objectives : Goals and Objectives of teaching-learning must be clear to the teachers and students as they keep them on track.

2. Principle of Child-Centredness : Now a days child is the centre of entire teaching-learning process. Therefore, it is very much essential that teaching styles and strategies should cater to the needs, aptitudes, interests and abilities of the students.

3. Principle of individual differences: Teacher should deal by keeping into consideration the indivdual differences of the students so as to satisfy them by using different methods and strategies of teaching.

4. Principle of Activity : Any process that is not based upon the student activity is not in accordance with sound educational theories and practices. So the main principle of teaching is to keep children active throughout the teaching-learning sessions.

5. Principle of Co-operation : Classroom environment becomes lively when the teacher and students work in cooperation with each other throughout the teaching-learning process, when participants have common interests they cooperate.

6. Principles of progressive: Teaching should be progressive. A teacher should grow in skills and teachnniques for accomplishing the social geals of education and for the progress of children in achievement, attitude and interest etc.

1.1.5.2. Psychological Principles

1. Principle of Motivation : Motivation arouses the interests of children and once they become interested/activated they are willing to concentrate on work.

2. Principle of Relating to Life : Teaching can never be performed in a vacuum. It is always in social context. In the teaching of all the school subjects, examples from everyday life should be given to the students so that they can realize the importance of the subject.

3. Principle of Active Participation of Students : According to this principle students should actively participate in all the stages and steps of teaching-learning process. They should not behave like passive listeners. They must be involved in every activity in the class.

4. Principle of Planning : Teaching should always be planned. If includes preparation of lesson plans, provision of teaching aids, determination of aims and

objectives & selection of teaching strategies & styles to be adopted during the development of lesson. Planning opens the doors for success.

5. Principle of effective strategies : A teaching strategy is a generalized plan for a lesson which includes structure, desired learning behavior in terms of objectives of instruction and an outline of planned tactics necessary to implement the strategy. So teacher should select effectives strategies to make teaching effective & purposeful.

6. Principle of Flexibility : Teaching is a complex task as it deals with the human behaviour which in turn is also complex. So the possibilities of alteration in planned strategies cannot be ruled out. Therefore a teacher should be resourceful enough for adopting himself and his teaching according to the need of the teaching-learning environment.

7. Principle of Association : Teacher should associate the new learning with what the students already know. It makes teaching effective and learning of students easy. Ideas and things which a teacher want to go together should be associated with each other.

8. Principle of Sympathy: Theacher should have sympathetic attitude towards students. He/She should be affections and try to understand each and every student so that students should not be afraid of him/her

9. Priciples of creativity: Teaher should discourage rote learning and should foster creativity among the students and encourage them to the maximum.

10. Principle of Readiness : Teachers must develop readiness among students for learning. The child must be made ready to learn only then he can learn otherwise not.

11. Principle of creating congenial environment : The physical as well as social environment of the class room plays a vital role in motivating the learners. The infrastructure of the class discipline, attitude of the teacher towards students are certain factors which affect the environment of the classroom. Therefore, proper light, seating arrangement, discipline and sympathetic behaviour of the teacher are some of the factors that make the class environment congenial for learners' as well as learning.

12. Principle of Reinforcement : Students should be given immediate feedback and timely positive reinforcement. It will help to sustain the interest of the students in the subject and also keep the students motivated and active through the teaching-learning process.

In nutshell we can say that the above mentioned principles of teaching are helpful in effective teaching and are also key factors to induce learning in the learner. Keeping into consideration these principles the teacher can plan his/her teaching in a effective manner.

1.1.6 Maxims of Teaching :

The experts of the field, the teachers and the educators by virtue of their experience of actual classroom teaching have evolved some simple tricks of profession or notions or working ways useful in enabling the students to grasp the subject-matter in an easy & simple way. These are known as, "maxims of teaching". They make learning effective, inspirational, interesting and meaningful, they keep the students attentive. An effective teacher is quiet familiar with them. These are as follows :

1. Proceed From Known to Unknown : The most natural and simple way of teaching a lesson is to proceed from something that the students already know to those facts which they do not know. The teacher is to proceed step by step to connect the new matter to the old one. Because new knowledge cannot be grasped in a vacuum.

2. Proceed from Simple to Complex : The simple task or topic must be taught first and the complex one can follow later on. The word simple and complex are to be seen from the point of view of the child not that of an adult. A teacher should present the simple and important points first, after that he/she should discuss the detailed information with the students.

3. Proceed from indefinite to definite : Ideas of children in the initial stages are indefinite, incoherent and very vague. These ideas are to be made definite, clear, precise and systematic. For making ideas clear a teacher must made use of actual objects, diagrams and pictures. Every possible effort should be made to make the lesson interesting to the children.

4. Proceed from concrete to the abstract : Children in the beginning cannot think in abstractions. Small children learn first from things which they can see and handle. Very young pupils learn counting with the help of pebbles etc. A child understands an aeroplane with the help of a model. "Things first and words after" is the common saying".

5. Proceed from particular to general : Before giving principles and rules particular examples should be presented. As a matter of fact a study of particular facts should lead the children themselves to frame general rules. The rules of arithmetic, grammer and almost of all sciences are based on the principle of proceeding from particular instances to general rules.

6. Proceed from psychological to logical : Logical approach is concerned with the arrangement of the subject-matter; whereas psychological approach looks at the child's interests, needs, mental make up and reactions. Through psychological approach, we proceed from the concrete to the abstract, from simple to complex, and from known to unknown. We start reading by teaching the child to read a whole sentence, as for him the unit is the sentence, not the word or the letter as it is for the adult. This is psychological approach.

7. Proceed from near to far : A child learns well in the surroundings in which he resides. So he should be first acquainted with his immediate environment. Gradually he may be taught about things which are far from his immediate environment.

8. Proceed from whole to parts : Whole is more meaningful to the child them the parts of the whole. Whole approach of learning is better than the 'part' learning, because the material to be learnt makes sense in whole method. The learner is able to see a relationship between the central idea of the material to be learned.

9. Proceed from inductive to deductive : This maxim incorporates almost all the maxims discussed above. In the inductive approach, we start from particular examples and establish general rules through the active participation of the learners, whereas in deductive approach, we assume a definition, a general rule or formula and apply it to particular examples. Let us discuss one example to make this more clear. "The farmers in India are very poor" is a general statement in the deductive type of reasoning. The inductive will follow thus : Ram is a farmer. He is very poor. In the same way. Sharan is a farmer. He is very poor. In this way from several such examples it will be evident that farmers are poor. Thus we derive generalizations. Both of the approaches i.e. deductive and inductive have their own importance. However in general, inductive approach is considered a better one.

In the nutshell we can say that by and large all the above mentioned maxims are interrelated. Different maxims suit different situations and different children. It is therefore, inevitable that a teacher should made judicious use of these maxims for making his/her teaching effective.

1.1.7 Importance of Teaching-Learning Process

The knowledge about teaching-learning process is very important both for in service and pre-service teachers. Students as well as teachers need it in preparing lesson. An in-service teacher plans teaching activities which will be helpful in achieving objectives by creating appropriate learning situations. The teacher-educator can

make use of his concept to **develop skills of teaching** among his pupil-teachers. Learning can be made more effective by motivating the pupils with the personal involvement of the teacher in the subject as well as the readiness on the part of pupils. **Retention** of students may be improved by different methods of learning; e.g. part vs. whole learning or spaced vs. distributed learning. Similarly transfer of learning can be improved by using the theory of generalization of experience and that of identical elements. It can be developed more effective by improving perception and intellectual organization of the learner.

1.1.8 Conclusion

Teaching-learning process is an important part of the educational process both teaching and learning are inter-related. Teaching is establishing a harmonious relationship among teacher, pupil and subject, it is giving useful information; it is causing the child to learn; it is the stimulation and direction of learning, it is helping the child make effective adjustment; it is guiding pupil activity and it is training of his emotions.

Learning is a complex process. It is modification of behaviour; it is adjustment to environment; it is cumulative; improvement and involves acquisition of new experiences. It is also the development of knowledge, skills and attitudes. So learning is acquiring changes in behaviour as a result of experiences. The teaching principles are based on the principles and factors of learning.

Good teaching involves skills in guiding learning; it is kindly and sympathetic it is cooperative and suggessive. Good teaching is democrative, progressive and stimulating. It takes into account the experiences, it diagnoses academic difficulties and is remedial, it liberates the learner from right teaching.

1.1.9 SUGGESTED QUESTIONS

1. "Teaching is the stimulation, guidance, direction and encouragement on learning". Discuss and illustrate.
2. Discuss teaching and learning as natural and normal activities of life.
3. Why is the study of teaching so highly important and necessary? Illustrate.
4. What are the Principles of teaching? Discuss them in detail.
5. Explain maxims of Teaching in detail.

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LESSON NO. 1.2

LEARNING : CONCEPT OF LEARNING, LEARNING PROCESS, RELATIONSHIP BETWEEN TEACHING AND LEARNING

Structure of the Lesson :

1.2.1 Objectives :

After going through this lesson students will be able to :

i. understand the concept of learning.

ii. enlist and describe the characteristics of learning.

iii. describe learning process.

iv. understand and apply the knowledge of principles of teaching in the real classrooms.

v. apply the maxims of teaching to their own teaching.

vi. understand the relationship between teaching and learning.

1.2.2 Introduction :

Teaching and learning are interlinked. We cannot think of teaching without learning. A teacher undertakes several activities in the class-room towards developing pupils' learning. Teaching is a task of a teacher which is performed for the development of a child. Teaching is that process which induces learning in the learner. Learning is one of the key concepts in psychology. It is something very natural in every organism's life. It is a key process responsible for child's growth and development. It is a very complex process and understanding of this process is very essential for a teacher. In this chapter we will discuss the concept of Learning, its characterices, process and its relationship with teaching along with maxims & principles of teaching.

1.2.3 Concept of Learning :

Learning plays very important role in determining the behaviour of an individual. Learning occupies central place in the field of education. It is through learning that man brings so much changes in his instincts that it becomes difficult to recognise them. The knowledge or awareness of nature, factors, methods & laws of learning helps in giving thorough & proper education.

To learn means "to gain knowledge through experience" but one of the meaning of "experience" is to perceive directly with the senses". But knowledge is defined as learning and as familiarity or understanding gained through experience so

learning is defined as acquired knowledge. Acquisition refers to changes in possession (to have some property). At one time, the organism did not "possess" a given bit of knowledge, at later time, it did. Something happen to the organism to change its state of knowledge & this something is called learning. Learning means to bring changes in the behavior of the organism.

1.2.3.1 Meaning and definitions of Learning :

It is difficult to give a universally acceptable definition of learning because various psychologists attempt to define the term from different angles. Learning in psychology has the status of construct. Construct means an idea or an image that cannot be directly observed like electrons or genes but which is inferred from the behavior of the organism. Melvin H. Marx defines learning as "Learning is a relatively enduring change in behaviour which is a function of prior behaviour (usually called practice).

This definition emphasizes four attributes (qualities) of learning as a process - (1) The first is that learning is a permanent change in behaviour. It does not include change due, to illness, fatigue, maturation (2) Second is that learning is not directly observable but manifests in the activities of the individual. (3) The third attribute of learning is that it results in some change of enduring nature. (4) Fourth is that learning depends on practice & experience.

According to Gates – Learning is modification of behaviour through experience and training.

According to Skinner – Learning includes acquisition and retention.

There are certain terms which are confused with learning such as instincts, imprinting and maturation.

1. Learning & Instincts : If we examine the behaviour of an organism we find that some behaviour of the organism is reflexive or inborn as for example we

breathe, our heart pumps, (papillary constriction of eye to light) etc. All these activities take place without the benefit of learning.

2. Maturation vs. Learning : Maturation means physiological development of the child. Maturation and learning are closely related, for learning a definite level of maturation is essential. Training without attaining a definite level of maturation does not yield good results. The learning & training should start when a child reaches an appropriate level of maturation, which implies concept of readiness for an activity.

3. Fatigue and Habituation vs. Learning : When a motor act (means manual work) is repeated in rapid succession, there is often a loss in efficiency-it becomes slower & weaker in amplitude until eventually the subject may refuse to perform it. We can say that response has suffered fatigue and recovery from the fatigue occurs over a rest time. It is not learning because fatigue is not to induce enduring & relatively permanent changes in behaviour.

Similarly presenting a stimulus produces a perceptual reaction. If the stimulus is repeated over and over in a monotonous series, the reaction aroused by each presentation becomes weaker & weaker, eventually declining to an almost undetectable level. Subjects (organisms) are said to be habituated. Habituation displays many similarities to laws of learning but it is not learning.

4. Imprinting : means impression – i.e. mark made by pressing. Another term confused with learning is imprinting. At a certain crucial time, sometime after emerging from their cells, new born ducklings follow the mother soon after hatching perhaps on account of the stimulation provided by her movement & the noise she makes.

Imprinting thus represents an inborn perceptual process independent of any training or experience. It depends upon an instinctive & inborn – species – specific behavior mechanism rather than the experience & training.

1.2.3.2 Nature of Learning

Learning is the focus of all educational programmes. The main aim of education is to produce desirable changes in the behaviour of the children. Educators are interested mainly in the promotion of the learning process. One of the most important characteristics of human beings is their capacity to learn. Our personality..... our habits, skills, knowledge, attitudes, interests, our character.... is largely the result of learning. So we can say that learning plays a very important role as determining the behaviour of an individual.

It is very difficult to give a universally acceptable definition of learning because various theories developed by psychologists attempt to define the term learning from different angles. But most of them agrees that learning is a process of modifications. An infant is quite helpless at birth, but slowly he learns to adapt himself to the environment around him as he has the ability to profit by experience as well as by maturation. He has to learn to make his responses more suited to the environment. Hence we may call learning as "the process of acquiring the appropriate response." A man learns because he has to make adjustment in the changing environment.

Learning implies cumulative improvement. The nature of improvement can be clearly seen by the changes which take place while learning is in progress. It is growth through experiences. According to Skinner, "learning profiting by experience, learning is not merely the acquisition of facts and skills though mechanized procedures such as repetitive practice. In learning, the learner learns to organise and evaluate the learning materials, endows them with many meaning and inter-pretations becomes conscious of working goals."

1.2.3.3 Definitions of Learning

Learning can be defined in a number of ways. From one point of view, it is a process of adjustment. Again, learning is modification of behaviour through experience, and not mere addition of experience. Some define learning as the process of making suitable responses in order to satisfy one's needs. Learning is also defined as acquisition of knowledge, skill and attitudes. **Skinner** includes in learning both the acquisition and retention. **Hilgard** has defined learning as "the process by which activity originates or changed through reaching to an encountered situation provided that the characteristics of the change in activity cannot be explained on the basis of native responses, maturation or temporary states of organism like fatigue or effect of drugs.

Kingsley and **Gary** emphasises the act of adjustment to environment in the process of learning. According to them, learning "is a process by which an organism, is satisfying its motivation, adapts or adjusts to situation which modify its behaviour in order to overcome obstacles or barriers.

A more comprehensive definition of learning is given by **Crow** and Crow. According to them "learning is the acquisition of habits, knowledge and attitude. It involves new ways of doing things and it operates in an individual's attempt to overcome obstacles or to adjust to new situations." This definition represents progressive change in behaviour as the individual reacts to a situation or situations in an effort to adopt his behaviour effectively the demands made upon him it enables him to satisfy interests or to attain goals.

Learning is a complex process. Learning is acquiring changes in behaviour as a result of experience. "Learning is the process by which as organism, as a result of an interaction in a situation, acquires a new mode of behaviour, which tends to persist and effect the general behavioural pattern of the organism, to some degree." This definition suggests that learning takes place when an organism reacts in a situation. Learning consists of acquiring the new modes of behaviour of adjustment. Such a change in behaviour is retained by the organism to some degree, and is utilised in other situations to some extent.

Recently some advances have been made in the field of learning. Special techniques have been designed to arrange "contingencies of reinforcement" the relations which prevails between behaviour in one hand and the consequences of that behaviour on the other. According to recent improvements in the conditions which control behaviour law of effect has been taken seriously; it means effects do occur and they occur under conditions which are optional for producing the changes called learning.

1.2.3.4 Characteristics of Learning :

1. **Progressive Change in Behaviour :** Learning brings progressive change in behavior as the individual reacts to the situation and i.e. why learning is known as improvement.

2. **Learning is Motivated by Adjustment :** The individual has to adjust to new environment.

3. **Learning is universal in Nature :** All animals learn Man is a rational animal & he learns more.

4. **Learning is never Ending Growth :** We always inspire to learn more & more. One achievement leads to further incentive, pursuit & effort.

5. **Learning is Continuous** and not restricted to childhood period but it goes with life & ends with death.

6. **Learning Is goal-oriented or purposive :** When the purpose or goal is more clear, the learning becomes meaningful and effective to the learner.

7. **Learning is Active :** Learning largely depends upon the activities of the learner. It is said that no learning can take place where there is no self-activity.

8. **Learning is aroused by individual & social needs :** Learning depends upon individual - his needs, interests, problems aspirations & needs of the society. It means that learning is affected by social environment. No learning can take place in the absence of environment.

9. **Learning is transferable :** Transfer occurs when there is similarity of contents, techniques & ideals & attitudes. Transfer leads to economy in learning as it takes place from one field of study to another and from one classroom situation to life situation.

10. **Learning is a Process & not a Product :** Learning is a process and not a product.

(a) **Motive/need :** First of all motive/need arises. Motive is force which compells the individual to behave or react to particular task.

(b) **Goal :** If motive is there the goal is set by the teacher.

(c) **Adjustment :** then adjustment on the part of child begins.

(d) **Changes :** then changes in the behaviour of the child takes place.

(e) Fixation or Stabilisation : Later on these changes in the behaviour of the learner are stabilized.

1.2.3.5 Types of Learning :

Psychologists as well as educationists have classified learning in various ways.

One of the classification is as follows :

Classification of learning w.r.t. behaviour.

1. **Cognitive Learning :** related to knowledge & thinking.
2. **Affective Learning :** related to feelings.
3. **Conative/Psychomotor Learning :** related to physical activities.

1.2.4 Learning Process :

In general learning process includes the following :

(i) Acquisition of new experiences.

(ii) Retention of old experiences in the form of impressions, or skills.

(iii) Development and modification of experience.

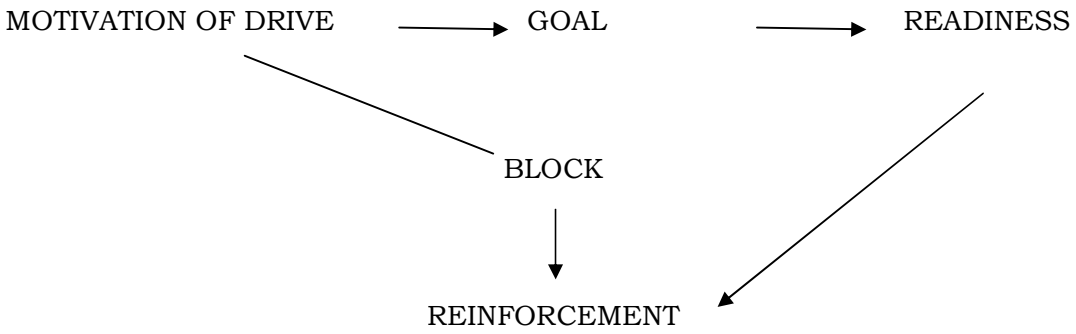
(iv) Creation of new experiences.

(v) Synthesis & organization of old & the new experiences leads to the formation of a new pattern i.e. called learning. Learning is a process not a product. It involves following steps :

(1) Motive/need (2) Goal (3) Adjustment (4) Changes (5) Fixation or Stabilization. (already discussed in characteristics)

Another pattern of Learning Process :

Learning takes place as a result of the total individual's attempt to satisfy the multiple motives and purposes which affect him. It includes the following steps.



1. Motivation or Drive : An individual has many needs and purpose. He cannot satisfy all his needs and desires. Only those having stronger motives will have the priority to be attended to. His direction of learning will be towards those purposes for which he has strong motives in relation to the nature of the situations in which he finds himself.

2. Goal : The behavior of the individual is oriented towards a goal. Even at an early age. If a child is in need of water, his behavior will be towards that situation which will satisfy his thirst. In educational settings goals sets by teacher.

3. Readiness : Readiness is an important factor to learn but many other factors like psysiological, psychological and experiential background also affect the learning process of the individual. If one is ready to learn, only then he will try tolerance.

4. Block : It is hindrance in performing any activity. Block leads to reinforcement. If any individual gets through the block, he will reach to the last

stage of learning process. The following example will clarify the each step of learning process.

A child feels hungry. He looks here and there to find something to eat. Feeling of hunger is his motive or drive. He finds some bananas lying on the shelf. He cannot reach to them because of the high height of the shelf. He will try again and again to reach up to that level. He will pick up a stool and will try to get bananas by standing over it. He will learn to get things which are very high by using stool or table or chair etc. If he could have bananas without any block or difficulty, new learning would not have taken place.

Short in Text Questions :

1. Enlist various principles of teaching.

2. What is the role of maxims of teaching in teaching learning process.

1.2.5 NATURE AND IMPLICATIONS OF TEACHING-LEARNING PROCESS

Need of relating teaching to learning

William H. Button (1958) has made an attempt to investigate the relationship between teaching and learning giving the following reasons :

1. Teaching can be made effective by relating it to learning.
2. Teaching objectives can be identified in behavioural terms and appropriate learning situations may be created to realize these objectives.
3. The appropriate learning conditions or structuring may be generated for effective learning.
4. The effective teaching aids may be selected for creating learning situations.
5. The teaching strategies and tactics may be selected to achieve the optimal objective or learning.
6. The concept of relationship of teaching and learning will be an aid to understand the nature of teaching, and teaching theory may thus be evolved.
7. The knowledge of the relationship will be helpful for teacher-educators to produce effective teachers.

1.2.6 Relationship between Teaching and Learning :

There Is a close relationship between teaching and learning. We cannot think of teaching without learning. Teachers teach and learners learn. There is no need for teachers when there are no learners. In a school small children (learners) cannot learn without teachers. Learning is basically depends on teaching. The teachers and the learners especially at the school stage must be in face to face contact with each other and both should understand each other. Teaching learning process is an interactive process. The modern education lays equal emphasis on the active participation of the learners in the teaching learning process.

Teaching-learning process has four elements

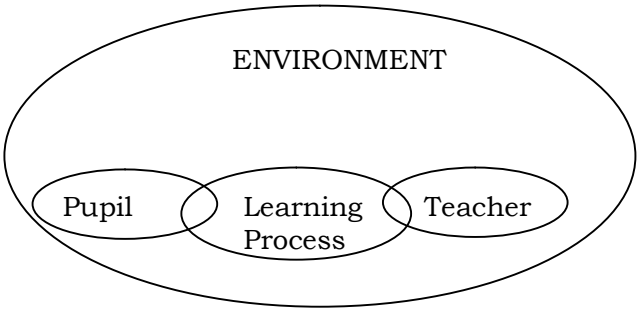
(i) Teacher

(ii) Student

(iii) Learning Process

(iv) Learning Situation

Teacher creates the learning situation for the student. The process is the interaction between the student and the teacher. Teaching and learning relationship/interaction may be



Learning process in the classro

Teaching-learning process is a means through which the teacher, the learner, the curriculum and other variables are organized in a systematic manner to attain pre-determined goals and objectives.

Teaching-learning process implies that all the various elements of the teaching-learning situation have to be brought into an intelligible whole. The teaching-learning activities which are varied and complex have to be harmonized. These elements and activities include learners and their individual differences, the methods of teaching, the material to be taught, classroom conditions, teaching devices and aids, questioning and answering, assignments, thinking, enjoying, creating, practical skills, discussions and many others.

Teaching-learning process is influenced by the totality of the situation. Teaching-learning is fruitful and permanent if the total situation is related to the life situations. Teachers can play an important role in facilitating learning when they take into account the needs of the learners.

Teaching-learning process is a means whereby society trains its young ones in a selected environment (usually the school) as quickly as possible to adjust themselves to the world in which they live. In primitive societies this adjustment meant conformity with things as they were. In advanced civilizations of the modern times, effort is made not only to adjust to things as they are but also to make an advance in the improvement of conditions of life by training the young in the modes of thinking and acting which will help to improve the conditions of living that surround them.

Teaching-learning process is as old as human beings on earth. It has been carried out not only by human beings but also by animals to teach their young ones to adjust themselves successfully with their environment. With the passage of time, it has undergone revolutionary changes.

If the teaching-learning process is effective, then the child is able to make the best use of the things in the world around him. If a child has not learnt the art of living harmoniously with others, he will find himself beset with more difficulties than the person who has learnt how to establish social relations with his fellows. So the acquisition of knowledge, skills and attitudes which enable us to adjust ourselves in an effective manner to the environment may be said to the aim of teaching-learning process.

1.2.7 Summary :

In this chapter we have discussed that teaching is that process which induces learning in the learner, and learning is that process which is responsible for child's growth, development and behavior formation. It is a life long process. In the process of teaching and learning the principles of teaching plays very important role. They enables the teachers to make teaching-learning process challenging as well as inspirational and effective. While teaching teacher should come down to the level of students. Actually a trained teacher knows that actual classroom involves some simple tricks of profession useful in enabling the students to grasp the subject matter in an easy & simple ways. So from this we can see that there is a close relationship between teaching and learning. We can't think teaching without learning. Teaching-learning process is an interactive process, where teacher and students interact with each other in an environment.

1.2.8 Key Concepts :

1. Learning – modification of behaviour through experience.

2. Teaching – encouraging, expressing, balancing and harmonizing learning.

1.2.9 Suggested Questions :

1. Define learning and discuss characteristics of learning in detail.

2. What do you understand by the term process of learning. Explain it.

1.2.10 Suggested Readings :

1. Elementary Educational Technology – by S.C. Aggarwal & S. Gupta
2. Technology of Teaching – R.A. Sharma
3. Teaching-Learning Process – Agyajit Singh & Richa Sharma
4. Educational Technology – T.R. Sharma
5. Educational Psychology – S.K. Mangal

1.2.11 Self-Check Exercise :

True/False :

1. Learning is modification of behavior through experience. (T/F)
2. Cognitive learning is related to feeling of the child. (T/F)
3. Learning is non-transferrable and passive. (T/F)
4. Teaching should be teacher-centered. (T/F)
5. Learning is aroused by social needs only. (T/F)
6. Affective learning involves activities related to physical drill and knowledge (T/F)

Ans : (1) True
(2) False
(3) False
(4) False
(5) False
(6) False

LESSON NO– 1.3 WRITTEN BY- Dr. Manju Sood

BEHAVIOURISM, COGNITIVISM AND CONSTRUCTIVISM IN RELATION TO TEACHER AND LEARNER.

STRUCTURE

1.3.1 OBJECTIVES

After going through this lesson students will be able to:–

1. Understand the meaning of behaviourism, cognitivism and constructivism.

2. Explain the concept of behaviourism, cognitivism and constructivism.
3. Name the pioneers of behaviourism, cognitivism and constructivism.
4. Explain the relationship of the concept of behaviourism, cognitivism and constructivism in relation to teaching and learning.
5. Apply the concept of behaviourism, cognitivism and constructivism in their classrooms to make teaching-learning process better.

1.3. 2 INTRODUCTION

The understanding of learning process is very important for a teacher as it helps a teacher to increase effectiveness of teaching and learning. Learning approaches provide a pedagogical basis for understanding how our students learn. As Mcleod notes, "Each theoretical perspective offers benefits to designers but the perspective offers benefits to designers but the perspectives must be taken into context depending upon the situation,performance goal(s) and learners. And since context in which learning takes place can be dynamic and multi-dimensional, some combination of the three learning approaches and perhaps others should be considered and incorporated into the instructional design process to provide optimal leaning." Behaviourism, cognitivism and constructivism are different approaches to understand the learning process.

1.3.3 Behaviourism-

Behaviourism is a theory of animal and human learning that only focuses on objectively observable and discounts mental activities.

1.3.3.1 Meaning and definition of behaviourism

With a view to understand the behavioral approach to learning, it is important to understand behaviour. By Behaviour, we mean an activity of an organism that can be observed and measured by another person or organism. Behaviour theorists define learning nothing more than a mechanical process of associating the stimulus with response for the acquisition of new behaviour, Such behavior is strengthened by the reinforcement.This approach emphasises that learning begins with natural responses (reflexes) and new behaviors result from the acquisition of new bonds of stimulus and response through experiences.According to B.F.Skinner, behaviourism is the philosophy behind the science of behavior.

1.3.3.2 Concept of behaviorism

The work of Ivan Pavlov (1849-1936)a Russian thinker and his famous experiment with the salivating dog became the starting point of behaviorism. Watson (1878-1958) and skinner (1904-1980) have given more stress on objectivity in behaviors. Skinner conducted his experiments on rats and pigeons. His approach is known as operant conditioning. An operant is a set of acts that are performed by an organism by doing something. Once a desirable response occurs in behavior, it is reinforced with a suitable reinforcer. Behaviorists view the learner as a passive person who responds to the stimuli. According to them the learner starts as a tabula rasa (which means clean state) and the behavior is shaped by the reinforcement. Positive as well as negative reinforcement increases the probability of the repetition of behaviour whereas the punishment decreases the chances of repetition of the behavior. Learning is therefore defined as a change in the behaviour of the learner which can be observed objectively.

Behaviorists focus on behaviour – environment relation and analyse overt and covert (i.e. private) beahviour as a function of the organism interacting with its environment. Behaviorists do not reject the study of covert or private events (e.g. dreaming) but rather reject the proposition that an autonomous casual entity inside the organism causes overt (e.g. walking, talking) or covert (e.g. dreaming, imagining)behaviour. Concept such as "mind" or "consciousness" are not used by behaviourists because such terms do not describe actual psychological events (such as imagining) but are used as explanatory entities hidden somewhere in the organism . By contrast, behaviourism treats private events as behaviour and analyses these in the same way as overt behavior. Behaviour refers to the concrete events of the organism, overt or private.

Experiments by behaviorists identify conditioning as a universal learning process. There are two different types of conditioning, each yielding a different behavioral pattern.

1 Classic conditioning 2 Behavioral or operant conditioning

1. Classic Conditioning:-

It occurs when a natural reflex responds to a stimulus. The most popular example is pavlov's observation that dogs salivate when they eat or even see food. Essentially, animals and people are biologically "wired" so that a certain stimulus will produce a specific response.

2 Behavioural Or Operant Conditioning–

It occurs when a response to a stimulus is reinforced. Basically, operant conditioning is a simple feedback system. If a reward or reinforcement follows the response to a stimulus, then the response become more probable in future. Leading behaviourist B.F. Skinner gave the following steps for the process of learning taking place.

- When a stimulus is provided, a response is generated to that stimulus.
- Consequence to the response is present.
- Type of consequence is present.
- Reinforcement could be provided which could be positive or negative.

Main characteristics of behavioristic approach in relation to learning:

1 Learning brings about changes in behaviour.

2 Learning is the result of continual interaction of the individual to the environment.

3 The behavioristic changes are objectively observable.

4 Chief emphasis of the behaviorists is on environment.

5 The behaviorists attach more importance to the environment than heredity.

6 Behaviour is understood by conditioning.

7 Conditioning is composed of stimulus – response links (S-R links).

8 An objective and scientific method can be used successfully to study the phenomenon of conditioning and behaviour.

9 The chief method of learning is conditioning.

10 Due to similarity, contrast or contiguity (closeness of occurrence in time or situation), one unit of knowledge gets associated with a new unit of knowledge.

1.3. 3.3 Implications of behaviorism to teaching and learning

Teacher designs the learning environment for the learners. Teacher also shapes child's behavior by positive or negative reinforcement. Teacher presents the information and the students demonstrate that they understood the material. Students are assessed primarily through tests. Learners are basically passive, just responding to stimuli.

Behaviourism has various implications when applied to the teaching and learning. The contribution of behaviorism to education can be explained as under:-

1 Behaviourism has greatly contributed to the psychology of learning and motivation. It has indicated the importance of motivation. The teacher can make his teaching effective only when learners are motivated.

2 It brought psychology out from the controversy of mentalistic approach to human behaviour.

3 It has impressed all areas of psychology as emotions and child behaviour. It has contributed to the understanding of the emotions of the child. This requires that the teacher himself should present a model of emotionally developed individual.

4 It has given a new methodology of teaching known as programmed learning which have been successfully used in many countries.

5 It lays emphasis on the importance of environment and its impact on human growth.

6 It believes that all behaviour is learned in the constant process of interaction with the environment. So theteacher must provide appropriate environment.

7 It has developed new methods and techniques of dealing with maladjusted in children.
Persival symonds has given the following implication of behaviourism for teaching and learning " The most potent reward (reinforcement) for classroom learning is the teachers acceptance what the pupil does and the way he does it because this acceptance becomes a guide in his future activities. This acceptance on the part of the teacher can take form of the tangible tokens, such as gold stars, honour's rolls and the like. But there is a tendency to short-circuit rewards so that a correct or right will do equally well"

8 The teacher should define learning objectives very specifically in terms of behaviour.

9 The order of arrangement of objectives should be graded i.e. simple to complex.

10 The technique or reinforcement and punishment can be employed by the teachers in the classroom to promote desirable behaviour and discourage unwanted behaviour of learners.

11 Success of outcome is easily measurable.

12 It guarantees specific kind of learning.

13 Behaviorism can be easily applied to learning.

14 Cuing responses to behaviour allows the learner to react in a predictable way under certain conditions.

Short –in-text questions.

1. What is behaviorism?
2. Write any five features of behaviorism?
3. Give any five implications of behaviorism in teaching and learning?

1.3.4 COGNITIVISM

Introduction

Three German psychologists- Max Wertheimer, Kurt Koffka and Wofgang Kohlar, being dissatisfied with atomistic and molecular approach to behaviour, were busy in developing a new approach to behaviour. They considered man's inner processes the proper subject for study. They assumed that our perception of the world is of meaningful wholes and that is different from and more than accumulation of sensations, images or ideas. They rejected the simple stimulus response (S-R) connections as the explanations of behaviour. They introduced the concept of organization between stimulus-response(S-R) approach developed by behaviourists and developed Gestalt Psychology. Gestalt psychologists believe that we learn, not by associating bits of experiences but by forming Gestalts, by seeing new patterns and by organizing them into a meaningful whole in the total situation. When we struggle with a problem, the solution may come to us all of a sudden. This quick change in our perception is called insight. They were opposed to the molecular and mechanistic approach to behaviour and thus criticized the usefulness of statistical analysis of behaviour. They argued that not all learning occurs through shaping and changing of behaviours. The main factor in cognitivism is the development of insight.

1.3.4.1 Meaning and definition

The word cognitivism has been desired from the word cognition. So lets us first understood cognition.

Cognition:-Cognition is primarily a mental process. It is an art by which the knower actually becomes the object known. It is impossible to know an object unless we have in a cognitive way the abractform of the object we know. Cognition refers to the mental process that the sensory input in various codes, it stores it in memory and retrieves it for later use. Perception imaging, remembering transforms and thinking are all terms that describe hypothetical stage of cognition (Neister, 1967). Cognition is the act of knowing. The analysis of the act and its components is the case of psychologists and educators attempt to understand the mind and its development. Cognition is the trouble some form to define in psychology because it has no clear referent; it is defined narrowly by some as merely awareness (e.g. Guilford,1937) and is defined by others as to include all higher mental processes (perception, thinking, attention, language, reasoning, problem-solving, creativity and memory.)

Cognitivism:-Cognitivism relates to group of learning theories which give importance to cognition (perception) in learning. According to cognitivism, teaching is a process of developingunderstanding or insight in the learner. Learning is the organization of precepts and purposes by the learner. Classroom experiences are related to the individual goals of students. They are encouraged to discover relationship so that they might use to create the consequences of their efforts. According to stavredes (2011),cognitivism refers to the study of mind and how it obtains, processes and stores information.

1.3.4.2 Concept of cognitivism in relation to teaching and learning:

Theoretical aspect:-

The concept of cognitivism has been given by Jean Piaget and Lev Vygostky.

Jean Piaget's theory of cognitive development:-

Jean Piaget, a swiss psychologist, argued that children do not acquire knowledge from facts communicated by other, nor through sensation and perception. He suggested that knowledge is the product of direct motor behaviour. Piaget assumed that all children pass through a series of universal stages in a fixed order leading to physical maturation.Their learning occurs as not only the quantity of information acquired at each stage increases, but the quality of knowledge and understanding grows well.

Lev Vygotsky's theory of conitive development:-

Vygotsky believed that children's thinking is affected by their social knowledge. The basic principles of Vygotsky's theory are:-

-Children construct their own knowledge.

-development cannot be separated from its social context.

-learning can lead to development.

-language plays a central role in mental development.

-Another aspect of vygotsky's theory is the idea that the potential for cognitive development is limited to a "zone of proximal development".

Cognitivism and learning:-

Cognitive approach to learning involves the ability to construct mental images, involving thought, reasoning, memory and language. An individual constructs images by observing the surroundings, understanding them and internalizing them in a mental process. In this theory, learners are active participants in their learning and the mind functions like a computer processor. Information comes in as input, the mind processes the information for the time being and the information is stored to be retrieved later.The child gains knowledge through a variety of experience. Cognitive activity consists of active process in perception, memory and reason. These involve class instruction, books, pictures and motion pictures.

Cognitivism is "the psychology of learning which emphasizes human cognition or intelligence as a special endowment enabling man to form hypothesis and develop intellectually." The underlying concept of cognitivism involves how we think and gain knowledge. Cognitivism involves examining learning, memory, problem-solving skills and intelligence. The term "cognition"(Latin cognoscere, "to know")refers to a faculty for the human like processing of information, applying knowledge and changing preferences. The concept of cognition is closely related to such abstract concepts as mind, reasoning, perception, intelligence and learning and many others that describe numerous capabilities of human mind and expected properties of artificial or synthetic intelligence. The term "cognition" is also used in wider sense to mean the act of knowing or knowledge and concepts within the group that culiminate in both- thought and action.

General features of cognitivism

1 Cognitivism is a comprehensive approach to learning. It attempts to deal with all types of learning from the simplest to the most complex, occurring in the organism.

2 Cognitivism involves behavioral and subjective data and uses behavioral data and subjective experiences of the learner to solve his problem.

3 Cognitivism uses the term like "believe" or "perceive". The empirical foundations of cognitivism include many matters where the perception or belief of the individual are incorrect yet where they are very compelling. The term "know" could be used for those beliefs of the person that rest on adequate evidence and on highly efficient construct systems. Cognitivism is not an approach basically in terms of what a person knows. But the individual responds or functions in terms of what he perceives or believes and the explanation of this functioning must be sought in terms of the factors and relations which govern such perception.

4 The fundamental interest of cognitivism is an interest in (A) perceptual or representation processes as the main functional unit in terms of which the psychological functioning proceeds and (b) in the background factors and processes that produce these perceptual or representational processes.

1.3.4.3 IMPLICATIONS OF COGNITIVISM

Cognition can be natural and artificial, conscious and not conscious; therefore they are analyzed from different perspectives and in different contexts. Cognition is an abstract property of a brain or of an abstract mind on sub symbolic and symbolic levels. In psychology and in artificial intelligence, it is used to refer to the mental functions, mental processes and stages of intelligent entities (human, human organization, highly autonomous robots). Cognitive skills include the objectives that deal with recall or recognition of the learnt materials and development of instinctual abilities and skills. The large portion of the educational objectives of the school of education covers only the cognitive skill. Development of cognitive skills (ability to

attend, perceive discover, recognize, imagine, judge, conceptualize, remember learn and to indulge in meaningful to the speech) and also to consequent growth in knowledge and adjustment to the environment. Cognitive development is influenced by nutritional, emotional and social factors of the learners. Cognitive strategies are used to help an individual achieve a particular goal (e.g. understanding a text). The objectives of cognitive strategies in instructional processes are to enable all students to become more strategic, self-reliant, flexible and productive in their learning endeavours. Cognitive strategies help a person process and manipulate information, examples including taking notes, asking questions or filling out a chart. Cognitive strategies tend to be very task specific that cognitive strategies are useful only when learning or performing certain tasks.

Cognitivists believe that learners develop learning through receiving; storing and retrieving develop learning through receiving, storing and retrieving information. With this idea, it is important for teachers to thoroughly analyze and consider the appropriate tasks needed in order for learners to effectively process the information received, when creating and implementing a learning environment.

1. The teacher can make use of cognitivism at various age levels in the following manner:

(A) The teacher should make use of cognitivism for children in 2-7 years by

- making use of concrete examples (e.g. mathematics using sticks a stoves).
- make directions explicit and precise, short instructions and using action.
- provide opportunity for student interactions.
- Give opportunity to children to do hands –on-practice.
-provide a wide range of experience (e.g., visit interesting places)

(B) For children aging between 7-11 years, the teacher should

- Continue to use concrete materials (e.g. use 3-D models).
- Give opportunities to engage students in practicing classroom skills.
- Presentations and readings are brief and well – organized.
- Use familiar examples that are related to children's experience.
- Present problem-solving that require logical and analytical thinking.

(C) For the students in age of 11 years and above, the teacher should:

- Continue to use concrete materials (use 3-d models).j
- Give opportunities for children to explore alternative answers and develop hypothesis.
- Give opportunities for children to solve problems and provide reasons scientifically.
- Do not concentrate on facts only but also teach broad concepts.

2. Assessment should be focused on the zone of proximal of a child.

3. Teachers should give exercise or task of varying difficulties to determine the level at which to begin instruction.

4. Use zone of proximal development in teaching.

5. Teaching should begin at lower limit, so that child can reach the goal with help.

6. Teachers offer help only when needed.

7. Give support and motivation for the children to try and apply the skills to achieve the goals.

8. Encourage help from skilled peers.

9. Monitor and encourage children's use of private speech.

10. Guide the children to apply their ideas in self-talking to the appropriate situation that needs a solution.

11. Give meaningful instructions.

12. Relate the lesson to the daily experiences.

13. Reduce memorizing.

14. Guide the children to apply knowledge in real situations.

15. Story making, telling, writing and listening, picture competition, writing involving imagination, assembling parts of some dismantled, object modeling, quiz, questioning, debates and elocutions contests, problem solving opportunities are the activities which can be utilized by teachers for cognitive development of learners.

16. Many information processing models of teaching and learning are based on the cognitive view of learning.

Short –in-text questions.

1. What is cognitivism?
2. Write any three features of cognitivism?
3. Why is cognitivism useful in teaching and learning process?

1.3.5 Constructivism

Introduction

Constructivism is a theory of knowledge of learning i.e. epistemology and a theory of learning. It is not a particular pedagogy. Constructivists believe that human beings are active information receivers. They use their existing experience to construct understanding that makes sense to them. Humans assimilate and accommodate new knowledge and build their own understanding. Knowledge is viewed as personal and subjective. Reality resides in the mind of each person. Learning takes place when individuals make use of their existing knowledge and experience. It is held by constructivists that learners need time to reflect on their experience in relation to what they already know. After some time, they reach consensus about what specific experience means to them.

1.3.5.1 Meaning and definition of Constructivism

Meaning:

Constructivism, in fact, is a theory based on observation and scientific study about how people learn. It says that people construct their own understanding and knowledge of the world, experiencing things and reflecting on those experiences. When one encounters something new, he/she has to reconcile it with his/her previous ideas and experience. It may result in changing what one believes or discarding the new information as irrelevant.

In other words, students learn by fitting new formation together with what they already know. Constructivist learning is based on students' active participation where they are constructing their own-knowledge by testing ideas and approaches based on their prior knowledge and experience applying these to new situations and integrating the new knowledge

gained with pre-existing intellectual constructs.Constructivism is an approach to teaching and learning based on the premise that cognition (learning) is the result of "mental construction".

Definition:

Constructivism is an epistemology, a learning or meaning making theory, which offers an explanation of the nature of knowledge and how human beings learn. It maintains that individuals create or construct their own new understanding or knowledge through the interactions of what they already know and believe and ideas, events and activities with which they come in contact (Cannella & Reiff,1944, Richardson, 1977).

1.3.5.2 Concept of Constructivism:

The constructivist approach has emerged from the theories of learning by psychologists - piaget, Dewey, Vygotsky and Bruner.

Piaget's concept of constructivism- The concept of constructivism was given by piaget in 1977 in his theory of cognitive development. He designed a proper framework to understand the structure, functioning and development of the cognitive network of the human mind. According to him, children are active thinkers who are constantly trying to construct more accurate or advanced understanding of the world around them. His theory says that children evolve through specific stages in which cognitive structures become progressively more complex. There are four levels of cognitive development sensorimotor, pre operational, concrete operational and formal operational. Learning occurs through adaptation to interactions with the environment. Disequilibrium gives rise to assimilation of a new experience which is added to existing knowledge, or accommodation which is modification of existing understanding to provide the new experience.

Dewey's concept of constructivism:-

Dewey (1916), an American philosopher and educator who established the experimental laboratory school at the University of Chicago, is regarded as the father of progressive education in America. This theory states that students learn by "Directed Living" with an emphasis on workshop type project so that learning is combined with concrete activity and practical relevance. He rejected the practice of rote learning.

Vygotsky's concept of constructivism-

Vygotsky (1978) is a Russian psychologist whose theory is that social interaction plays a fundamental role in the development of cognition. He believed that everything is learned at two levels. First through interaction with other, and then integrated into the individuals mental structure.

Bruner's concept of constructivism:-

Bruner's theory linked to child development research as he worked with children in a manner similar to piaget,

Bruner identified the following three stages of development

1. The enactive stage, in which the child understands the environment through physicalmanipulation and handling of objects-holding, moving, touching and biting.
2. The iconic stage, in which information is carried by imagery-visual memory is developed but the child still makes his her decisions on sensory impressions.
3. The symbolic stage, in which the child is able to convey meaning through symbols he/she understand and interpret idiomatic expressions (like 'too many cooks spoil the broth') and use formulas to solve problems.

Type of constructivism:

1. **Piaget's Cognitive Constructivism**

Jean piaget's work is the basis of cognitive constructivism which discusses the mechanism of accepting individual devices meaning. Teachers should facilitate cognitive change by presenting difficulties through specific tasks, which pose dilemmas to students.

2. **Social Constructivism:**

Social Constructivism has accepted that there are two parts of knowledge, individual and the society, which cannot be seen independently in any meaningful way. Social constructivism takes two approaches- situated cognition and socio-cultural cognition. Both of these forms highlight the importance of meaningful, integrated learning in the context of

environment. Situated cognition recognized that individual transforms knowledge in the context of social environment: both the individual and environment changes as a result of the interaction. The socio-cultural form of constructivism focuses on meaningful integrated learning.

Central notion of the constructivism :– As learners we construct our own understanding of the world around us based on experience as we live and grow. We select and transform information from past and current knowledge and experience into new personal knowledge and understanding.

Characteristics of constructist learning and teaching

Honebein (1996) describes seven goals for the design of constructivist learning environment

1 Provide experience with the knowledge construction process.
2 Provide experience in and appreciation for multiple perspectives.
3 Embed learning in realistic and relevant contexts.
4 Encourage ownership and voice in the learning process.
5 Embed learning in social experience
6 Encourage the use of multiple modes of representation.
7 Encourage self-awareness in the knowledge construction process.

Teacher and learner in relation to constuctivism:

(A) **Learner in relation to constructivism**

Nature of learner in relation to constructivism can be described as following:

1. **Learner as a unique individual:**

This theory considers learner as unique individual with unique needs and backgrounds. The learner is also seen as complex and multi dimension. Social constructivism also encourages, and rewards it as an integral part of learning process.

2. **Background and culture of the learner:**

History development and symbol systems, such as languages, logics and mathematical methods are inherited by learner as a member of a particular culture and these are learned throughout the learner's life. Social interaction of the learners with other members of the society is also important according with other members of the society is also important according to this theory. Young children develop their thinking abilities by interacting with other children, adults and the physical world.

3. **Involvement of the learner:**

As per theory of constructivism, the learner being actively involved in the learning process, construct their own understanding. In addition to simple reflection, they look for meaning and try to find out the full and complete information.

4. **Motivations for learning;**

This theory also considers the level and source of motivation for learner.

B) Teacher in relation to constructivism:

A facilitator, according to this theory, teacher as instructor has to play the role of facilitator

- Ask questions
- Supports from the back
- Provides guidelines and creates the environment for the learner to arrive at his own conclusions.
- Should be able to adopt the learning experience by using his or her own initiative in order to steer the learning experience to where the learners want to create value.
- Overall a facilitator (teacher) guides and makes the learner to learn at his own.

1.3.5.3 Implications of Constructivism

The approaches of constructivism can be applied to field of education. The following points will make it clear.

1. Learner should be made to learn by experimentation and not be told what is going to happen. They should be allowed to make their own inferences, discoveries and conclusions.
2. Teachers should help the students to learn new information by building upon knowledge the student's already have.
3. Teachers should constantly assess the knowledge gained by their students so as to ensure that student's perception of the new knowledge are what the teacher had intended.
4. Teachers should be aware that while students retrieve the new information to already existing knowledge, the students may make errors known as reconstruction errors. It means that students may fill the gaps of their understanding with logical though incorrect thoughts.
5. Teachers need to catch and try to correct reconstruct errors. In spite of teacher's efforts, some errors will continue to occur because of our innate retrieval limitations.
6. Teachers should engage with the students while they are completing activities, wondering aloud and posing questions to the students for promotion of reasoning.
7. Teachers also intervene when there are conflicts that arise, however, they simply facilitate the students' resolution and self-regulation, with-in emphasis on the conflict being the students' and they must figure things out for themselves.
8. Constructivism can enable teachers to encourage learners to conceive themselves as readers and writers. This can be done by teachers reading of a story followed by students writing enacting or drawing stories of their own.
9. The educator should try and encourage learners to discover principles by themselves and to develop the 'big picture'.

Short –in-text questions.

1. What do you mean by constructivism?
2. Write any five users of constructivist approach for teachers?
3. Explain how constructivism approach is related to learners?

1.3.6 Summary

The approaches to learning include behaviorism, cognitivism and constructivism which are related to the field of psychology and are utilized in the field of education to make learning effective.

Behaviorism approaches describe learning as modification of behavior based on the responses of individuals to a stimulus. Behaviorism can be applied to make teaching learning effective by making use of motivation, emotions, proper environment, reinforcement, defining and arranging learning objectives, and discourage unwanted behaviour. Congnition approach describes learning as the mental process that transforms sensory input in various codes, stores it in memory and retrieves it for later use. It enables teachers to know how learners think and gain knowledge and make teaching learning effective.

Constructivist approach considers that learners select and reform information from past and current knowledge and experience into new personal knowledge and understanding. It enables teachers to consider learners as active participants in learning process and himself as a facilitators of learning.

	Behaviourist	Cognitivist	Constructivism
Knowledge is	Passive largely automatic responses to external factors in the environment	Abstract symbolic representations in the mind of individuals Process	A constructed entity made byeach individual through the learning.
Learning is	A relative permanent change in behaviour	A change in a learner's understanding	Discovery and construction of meaning
Focus of learning is on	Association, operant behaviour conditioning	Increased meaning and; improved memorisation'	Problem-solving and Construction of meaning
Key learning concept	Reinforcement and programmed learning	Elaboration	Intrinsic motivation

Centred on	teacher	Learner	learner

1.3.7 Key Concepts

Behaviour:- An activity of an organism that can be observed and measured by another person or organism.

Behaviorism:- It is the philosophy behind the science of behavior.

Cognitism:- It refers to a faculty for the human like processing of information , applying knowledge and changing preferences.

Gestalt :- It means pattern ,shape, form or configuration.

Cognitivism:-Cognitivism is the psychology of learning which emphasizes cognition or intelligence as a special endowment enabling man to form hypothesis and develop intellectually.

Constructivism : Constructivism is an epistemology, a learning or meaning making theory, which maintains that individuals create or construct their own new understanding or knowledge through the understanding or knowledge of what they already know and believe.

Zone of proximal development :- It is the area of explorations for which the student is cognitively prepared ,but requires help and social interaction to fully develop.

1.3.8 Suggested Questions:

1 Explain in detail the concept of behaviourism.? How it is considered useful for increasing effectiveness of teaching –learning process in the classroom.

2 Explain in detail the concept of cognitivism? How will you make use of cognitivism to teach effectively in the classroom?

3 Write the meaning of constructivism? What arethe features of constructivism teaching and learning? Explain teacher and learner in relation to constructivism.

4 Give a comparative view of the concepts of behaviorism, cognitivism and constructivism.

1.3.9 Suggested Reading and Web Resources

Khan, S.H.(2015). Constructivism towards a paradigm shift in classroom teaching and learning. Edutracks.14(9), 21-25

Ramulu, Ch.A. (2015).Enhancement of student learning in biology using constructivism. Edutracks.14(9).20-22

Nair,S.S. and Chellamani ,K.(2015).integration of constructivism with digital portfolio.Edutracks. 12(1).16-17.

SriNivas, k. (2015).effectiveness of constructivist approach on the achievement in science of IX standard students.Edutracks .12(9).23-24

Singh,Agyajit (2010). Learner, learning and cognition. Patiala: Twenty first century publications.pp209-219.

Aggarwal,J.C.(2007). Essentials of Educational psychology.New Delhi: Vikas Pubishing house pvt. ltd. p.284

Chaube ,S.P.(2004).child psychology.Agra:Lakshmi Narayan Agarwal publications.

http://en.wikipedia.org/wiki/behaviouism

http://en.wikipedia.org/wiki/learning_theory_ (education)

www.hopkinsmedicine.org>--->student policies

http://www.slideshare.net/mobile/hamirahhamid/implication-of-cognitive-development-in-teaching-and-learning

www.chegg.com/homework-help/cognitivism-13

http://teachinglearningresource.poworks.com/w/page/31012664/cognitivism

1.3.10. Self -Check Exercise.

Fill in the blank using suitable words.

(1) B.F.Skinner proposed that …….is the philosophy behind the science of Behaviour.

(2) ---------- approach to learning involves the ability to construct mental images involving thought, reasoning, memory and language.

(3) Two types of conditioning in learning are ……..and ……

(4) As per constructivism, teacher has to play the role of a ……

(5) Development of insight is must for learning according to thelearning approach called as.....
…….

B.ED.-SEMESTER-I **PAPER III**

TEACHING –LEARNING PROCESS

LESSON NO- 1.4 **WRITTEN BY- Dr.ManjuSood**

TEACHING FOR ACADEMIC LEARNING : OBJECTIVES, FLEXIBLE AND CREATIVE LEARNING USING TAXONOMIES, PLANNING FROM A CONSTRUCTIVIST PERSPECTIVE, INTEGRATED AND THEMATIC PLANNING:

STRUCTURE

1.4.1Objectives of the lesson:

After going through the lesson, students will be able to

i) Know the importance of objectives in the teaching learning process.
ii) Frame the objectives for their lessons.

iii) Will be able to make their teaching and learning more effective.
iv) Understand different taxonomies of objectives
v) Will be able to plan lessons using different taxonomies suitable for their lessons.
vi) Will understand the lesson planning from constructivists' perspective.
vii) Will understand integrated and thematic planning.

1.4.2 Introduction:

To make students learn their academics, teachers need to make their instructional process effective. Effectiveness can be increased when the teacher, the learner, the curriculum and other variables are organised in a systematic manner to attain pre-determined goals and objectives. The planning is most important functions of a teacher. He has to utilize his imagination creativity and insight for planning. A teacher need to analyse the content, identify teaching objectives and write objectives in behavioural terms or specific terms. Taxonomies of objectives in different behavioural domains i.e. (Cognitive, Affective and Psychomotor) have been given .by Bloom and his associates(1956); Krathwohl, Bloom and Maria(1964); and Harrow(1972) and Simpson(1966) respectively. There are several methods for writing objectives in Behavioural terms including given by Robert Mager, Robert Miller and RCEM approach. Planning by a teacher using constructivist perspective emphasises active role of the learner in building understanding and making sense of information. Integrated and thematic planning is another way of planning whereby many areas of curriculum are integrated together around a theme.

1.4.3 OBJECTIVES:

1.4.3.1 Meaning, definition and concept of objectives:

Meaning:- The objective is a statement or a form of category which suggests any kind of change. The educational objectives are broad, phychological in nature. Educational objectives are the bases for the teaching activities teaching strategies and tactics and evaluation techniques.

The objective has the following characteristics.

1 It provides the directions to the activity which is designed for achieving an ultimate goal.
2 It helps for the planned change.
3 It provides the basis for organizing activities.

Definition :-"The educational objectives imply the changes that we try to produce in the child". " Educational objectives are not only goals towards which the curriculum is shaped and towards which instruction is guided, but they are also the goals, that provide the detailed specification for the construction and use of evaluation.

According to R.H.Davis," Learning objectives (instructional objectives) are the description of the behaviour accepted of a learner after instruction."

Concept:

An educational objective is a desired change in behaviour of the pupil that we try to bring about through the educational venture. The main purpose of determining educational objectives is to provide a basic platform for an educational system. They lay down fundamental guidelines of curriculum development and other activities in general.

The objectives are classified in two major categories:-

a) Educational objectives or General objectives.
b) Teaching or learning objectives or specific/instructional behavioural objectives.

At the time of imparting instruction i.e. teaching learning of a particular lesson, unit or submit of a subject, the teacher has to place before him some definite and very specific objectives within a specified classroom period and resources in hand. Through these specific classroom teaching-learning objectives, known as instructional objectives, a teacher tries to bring desired changes in the behaviour of his pupils. Instructional objectives are thus nothing, but description of pupil's terminal behaviour expected out of the on-going class room instructions.

1.4.3.2. Taxonomy of objectives:-

Teaching learning objectives are related to learning outcome or change of behaviour of learners. Behaviour is divided into three domains:- Congitive, Affective, Psychamotor.

B.S. Bloom has classified the objectives in three categories on the basis of the three domains of behaviour.

1 Cognitive objectives.
2 Affective objectives
3 Psychomotor objectives.

The classification of objectives is known as taxonomy also.

The taxonomy related to cognitive domain, has been presented by Bloom and his associates (1956); the second one related to affective domain by Krathwohl, Bloom and Masia (1964) and the third one related to psychomotor domain by Harrow(1972) and Simpson(1966).

1.4.3.2.(a) Taxonomy of Objectives in the Cognitive Domain:-

Bloom and his associates have classified the objectives related to cognitive domain(related to mental processes) into six categories arranged from the lowest to the highest level of functioning.

Let us try to elaborate the taxonomy of objectives of cognitive domain given by Bloom for its clarity and understanding.

1. **Knowledge:** Remembering or recognizing something without necessarily understanding, using, or changing it.

2. **Comprehension:** Understanding the material being communicated without necessarily relating it to anything else.
3. **Application:** Using a general concept to solve a particular problem.
4. **Analysis:** Breaking something down into parts. Analysis refers to an understanding at a higher level. It is a complex cognitive process that involves knowledge, comprehension as well as application of an idea, fact, principle or theory.
5. **Synthesis:** Creating something new by combining different ideas, objects, concepts or principles to produce an integrated picture.
6. **Evaluation:** Judging the value of materials or methods as they may be applied in a particular situation.

In this way, it can be concluded that by classifying the objectives of teaching a particular subject in the six categories discussed here, Bloom and his associates wished to make use of the contents and learning experiences of a topic/unit/subunit of a subject in such a way that results in the desired behavioural changes in one's cognitive domain.

1.4.3.2.(b) Taxonomy of Objectives in the Affective Domain

Taxonomy of objectives in the affective domain proposed by Krathwohl, Bloom and Maria (1964).

Let us try to try to elaborate further the classification shown in Table 3.2 for its clarity and understanding.

1. **Receiving:**- Being aware of or attending to something in the environment.
2. **Responding**:-Showing some new behaviour as a result of experience.
3. **Value:**- Showing some definite involvement or commitment.
4. **Organizing:**- Integrating a new value into one's general set of values, giving it some ranking among one's general priorities.
5. **Characterizing by a value or value complex affective domain**:- Acting consistently with a new value. At this stage,the learner is destined to imbibe typical characteristics of his individual character,i.e. lifestyle of his own.

1.4.3.2.(c) Taxonomy of objectives in the Psychomotor domain:-

It was Simpson (1966) who first presented the classification of objectives in psychomotor domain. Later it *got* modified by Harrow(1972). Those given by Harrow arebeing described in following pages under six different categories arranged from the lowest to the highest levels of functioning.

I. Reflex movements: Involuntary motor responses to various stimuli in the environment.

***2*. Basic fundamental movements.**

A child may be seen to demonstrate simple reflex movements in the form of kneeling, creeping, stumbling, walking, jumping, moving hands and neck etc. may be called basic fundamental movements.

3. Perceptual abilities: The development of motor abilities related to the phenomenonof perception belongs to this category of objectives.

4.**Physical abilities**: This category of objectives aims to develop the various physical abilities of the learners like tolerance to stand against weather, to do hard labour, to carry heavy load, to bend an article, or to demonstrate one's physical power in starting, stopping or running an object or machine.

5. Skilled movements: Skilled movements are those complex bodily movements which help in performing skilled tasks.

6. Non-discursive communication: This communication may range from a simple behaviour expressed through posing or facial expression to a complex behaviour performed through a highly sophisticated classical dance, sketching, painting or acting.

1.4.3.3. Writing Objectives in Behavioural Terms

It is essential to write the objectives in behavioural terms as the behavioural form of the objectives reveals the learning activities.

1.4.3.3.(a) Need for writing objectives in behavioural terms:-

- To determine and delimit teaching activities,
- to integrate teaching learning activities for effective learning outcome,
- to select appropriate teaching strategies and tactics for teaching ,
- and to make testing objective-centred.

1.4.3.3(b) Methods of writing objectives in behavioural terms

There are several methods of writing objectives in behavioural terms. In this text, we are going to discuss the following Approaches:

1.RobertMager's approach 2. Robert Miller's Approach 3. R.C.E.M. Approach

1. **Robert Mager's Approach:**-According to RobertMager (1962), instructional objectives are best described in terms of the terminal behaviour expected from the learners.

Mager's approach has adopted Bloom's taxonomy as a starting base for the writing of objectives.He used associated action verbs, which help in describing the outcomes of learning or the terminal behaviour of the learner in a well-defined way (observable and testable). A list of associated action verbs for cognitive and affective domain has been presented in Tables A and B.

TABLE –A: A list of associated action verbs for the cognitive domain

Objectives (based on Bloom's taxonomy)	Associated action verbs
Knowledge	Define, list, label, measure, name, recall, recognize, reproduce, select,

	state, write, underline, etc.
Comprehension	Change, classify, distinguish, explain, formulate, identify, illustrate indicate, interpret, justify, judge, name, represent, select, summarize, transform, translate, etc.
Application	Assess, change, choose, conduct, construct, compute, demonstrate, discover, explain, establish, find, generate, illustrate, modify, predict, perform, select, solve, use etc.
Analysis	Analyze, associate, compare, identify, justify, point out, resolve, select, differentiate, Argue, conclude, combine, derive, discuss, generalize, separate, etc.
Synthesis	Argue, conclude, combine, derive, discuss, generalize, integrate, organize, precise, prove, relate, restate, select, summarize, synthesize, etc.
Evaluation	Associate, choose, compare, criticize, conclude, defend) determine, evaluate, judge, identify, recognize, relate, select, summarize, support, verify, etc.

TABLE –B: A list of action verbs for affective domain

Objectives (based on Bloom's taxonomy)	Associated action verbs
Receiving	Ask, accept, attend, beware, catch, discover, experiment, identify, favour, follow, observe, prefer, perceive, receive, select, etc.
Responding	Answer, assist, complete, derive, discuss, develop, help, list, label, name, obey, present, practice, record, select, stage, write, etc.
Valuing	Accept, attain, complete, choose, decide, demonstrate, discriminate, develop, increase, indicate, influence, participate, prefer, recognize, etc.
Organizing	Add, associate, change, compare, complete, coordinate, correlate, determine, find, form, generalize, integrate, judge, project, prepare, relate, select, synthesize, organize, etc.
Characterizing	Demonstrate, develop, experiment, face, identify, judge, prove, revise, serve, solve, verify, .etc.

For the illustration of the use of Mager's approach in stating instructional objectives in behavioural terms (performance based), we can cite the following examples:

- **Knowledge objective**
  Students state or will state (behaviour) at last five (performance) fundamental rights out of the fundamental rights presented in the text (condition).

- **Skill objective**
  Using a pencil, coloured pencil and outline map of Haryana(conditions), each student marks or will mark (behaviour) all the districts of the state(performance).
- **Affective objective**
  Students describe or will describe (behaviour) the two advantages/values(performance) derived from a pollution-free environment during the visit to an ideal village(condition).

The objective can be written in behavioural terms by combining appropriate associated action verbs chosen from the list with the content.

2. **Miller's Approach :-**
   Robert Miller (1962), for meeting the requirement of writing psychomotor objectives, which was ignored by Mager, put forward his scheme based on skill analysis.Like Mager, he also tried to enlist associated action verbs for the psychomotor objectives. Which are provided in the Table based on the classification of psychomotor objectives pointed out by Harrow (1972).

TABLE :- ASSOCIATED ACTION VERBS FOR FOR PSYCHOMOTOR OBJECTIVES

Objectives (Based on Harrow's classification)	Associated action verbs
Reflex movements	Bite, harden, jerk, lengthen, loose stop, straighten, stretch, etc.
Basic fundamental movements	Befall, catch, creep, drink, hold, jump, kneel, move, reach, run, walk, etc.
Physical abilities	Begin, bear, bend, conduct, increase, lean, reform, smash, start, stop, etc.
Perceptual abilities	Balance, bend, catch, discover, eat, explore, and feed. identification by touching, seeing, smelling or hearing, memory tracing, smell, throw, write, etc.
Skilled movements	Dance, dig, dive, drive, knit, play the musical organs row, skate, shoot, swim, type, etc.
Non-discursive communication	Mimic, pose, sit, sketch, smile, stand. Tease, etc.

3 R.C.E.M. Approach

R.C.E.M. approach developed by Regional College of Education, Mysoredid the task of writing all instructional objectives belonging to all the three domains of behaviour which Mager’s and Miller’s approach could not.

This approach makes use of mental process or mental abilities in place of action verbs in the writing of instructional objectives. It makes use of its own taxonomy of objectives, known as R.C.E.M. taxonomy of objectives, a modified form of the Bloom's taxonomy.There are four categories in place of six given by Bloom. These objectives categories of R.C.E.M. approach, alongwith the associated mental processes or abilities, are given in Table.

TABLE :Objectives and mental processes in R.C.E.M. approach

Objectives	Mental Processes or Mental Abilities
1. Knowldege	1.1 Recognize 1.2 Recall
2.Understanding	2.1 Seeing relationship 2.2 Cite Example 2.3 Discriminate 2.4 Classify 2.5 Interpret 2.6 Verify 2.7 Generalize
3.Application	31 Reason out 3.2 Formulate hypothesis 3.3 Establish hypothesis 3.4 Infer 3.5 Predict
4.Creativity	4.1 Analyze 4.2 Synthesize 4.3 Evaluate

Theexamples statements for writing objectives in behavioural terms are as following:-

1.Knowledge objectives

1.1 The learner is able to recognize……

1.2 The learner is able to recall……

And statements can be written so one for all other objectives also.

1.4.3.4. Implementation of Objectives:-

1. Objectives provide confidence in the planning for instruction. It helps the teacher to know at the beginning what the student will be able to do at the end of the lesson.
2. Useful in performance assessment of the students:-
   Clear cut statements of objectives help in construction of test items and thereby assess students.
3. Useful for the students:-

Objectives pertain more to the students than teachers. If the student knows before-hand what he must learn in any given unit of instruction, he can better direct his own attention and efforts.

Therefore, Taxonomy of objectives is useful as under:

a) Tools of evaluation can become very objective.

b) It can be helpful in translating into practice the principle of comprehensiveness of evaluation by ensuring proper coverage of various aspects of pupils' growth:, cognitive, affective and psycho-

c) The evaluation may prove helpful in arriving at the meaningful synthesis of various dimensions of pupils' growth.

d) The logical nature of classification helps in identifying andgrading teaching-learning situations which can be an important source of selecting appropriate testing situation. The curriculum development and preparation of instructionalmaterial can profit from such a scheme of classification.

Short In text questions:-

1. In what ways, instructional objectives differ from the teaching aims and objectives?

2. Why we need to write instructional objectives in behavioural terms?

3. write instructional objectives for cognitive domain on any topic of your choice?

1.4.4. FLEXIBLE AND CREATIVE PLANNING USING TAXONOMIES.

1.4.4.1. MEANING, DEFINITION AND NEED OF LESSON PLANING.

a) Meaning of Lesson Planning

Every teacher who intends to teach something has to prepare an outline of his topic in written form or at his cognitive level which is known as lesson plane. A practical outline of a topic to be taught in the period is called the lesson plans.

b) Definition of Lesson Plan

According to N.L. Bossing, “Lesson plan is the title given to a statement of the achievement to be realised and the specific meaning by which these are to be attained as a result of the activities engaged during the period”.

According to Bining and Bining,“Daily lesson planning involves defining the objectives, selecting and arranging the subject-matter and determining the method and procedure”.

c) Need and importance of Lesson Plan

1 It provides the guideline to pupil-teachers during their teaching practices.

2 It provides awareness of teaching objectives and structure of content and teacher has to perform his activities in the direction to achieve the objectives.

3 The finalises sequence of content to be presented and the teaching activities are related to learning structures with the help of scientific lesson plan.

1.4.4.2 Planning Approaches using taxonomies.

There are various approaches used for lesson planning in which taxonomies discussed earlier are made use of.

1 Herbartian Approach to Lesson Planning.

2 Bloom's or Evaluation Approach to Lesson Planning , and

3 RCEM Approach to Lesson Planning.

The discussion of these approaches is given below.

1Herbertian approach:-It is one of the ancient but still used approach for training pre service teachers. Herbertian Approach to lesson planning has the following five steps:-

a) Preperation –
b) Presentation
c) Comparison and Abstraction
d) Generalization
e) Application

2 Outline of a lesson plan

An outline of the lesson plan based on these five steps is as given below:-

1 Subject, topic, class with section, period and date:- Teacher select the topic from the subject to be thought for his class.

2 General objectives of the teaching subject:- The teacher has to write general objectives of his subject considering the level of the students.

3 Specific objectives related to the topic:- The specific objective may be knowledge, skill and appreciation. These may be divided as per nature of topic and level of students and are written in behavioural terms.

4 Introduction:- The teacher introduces the topic by employing his insight and experiences for linking new knowledge with the previous knowledge of the students.

5 Statement of aim:- The teacher gives statement of the topic from the students by incorporating the students responses at the introduction stage.

6 Presentation including developing questions:- Presentation is done with developing questions which are arranged in a logical sequence.

7 Explanation:- Teacher need to explain where students are unable to answer developmental questions.

8 Black Board summary:- Black board summary is prepared by writing teaching points and explanations.

9 Review questions or recapturing questions:- To evaluate student learning, re-capitulatory questions are put.

10 Homework or assignment:- For practice , organisation and study of the topic by the students, teacher assigns some homework.

Advantages of Herbertian lesson planning:-

- Logical and Psychological
- Applicable to all school subjects.
- Useful for achieving cognitive objectives,
- Simple and easy approach.

Demerits of Herbertian lesson planning

- Teacher dominated
- Highly structured; no opportunity for creativity.
- Not useful for achieving affective and Psycho motor objectives.
- Specific objectives not in behavioural terms.

2 **Bloom's or Evaluation Approach to lesson planning.**

The Bloom's or evaluation approach to lesson planning makes the teaching and testing objective centred. It not only considers student's performance but also total behaviour change of the students. The following three steps are used in this approach.

a) Formulating education objectives.
b) Creating learning experiences.
c) Evaluating the change in behaviour.

a) Formulating Education Objectives:- For formulation of educational objectives according to Bloom's taxonomy(Refer to section 4.3.3. for details)
The objectives are to be identified and written in behavioural terms keeping in view the following subject:- the structure of the content, student level and need, social and economic conditions, practical and cultural needs of the students, student entering behaviour and their comprehension levels.

b) Creating Learning experiences:-The appropriate teaching strategies, teaching aid and tactics are selected for generating learning experiences as per suitability to achieve the objectives of teaching. The teaching activities are related to learning outcome. The following table shows the different objectives and learning experiences suitable for those:-

Teaching Objectives	Learning Experiences
Knowledge objective	Lecturing- Telling, show in, demonstration, chart, model text books, programmed instruction. Homework and assignments.
Understanding objectives	Questions-answer strategy, group discussion, Line drawing Map, models, text-books, Homework and assignments.
Application objectives	Project method, Tutorials, interaction strategy, Text-books. Homework and assignments.
Creativity	Problem-solving, method individual experimentations

objectives	seminar, workshops, etc.

c) Evaluating the change in behaviour:- The change in behaviour (Cognitive, affective, Psychomotor) are evaluated to take decision about the effectiveness of learning experiences. The following table shows the evaluation devices used for various learning objectives.

Learning Objectives	Evaluation Devices
Cognitive Objective	Oral, observation written essay and objective type tests and interview.
Affective Objective	Observation, Interest inventory attitude scale, value test, easy type test and situational test.
Psychomotor objective	Observation practical examination, student demonstration and interview.

Format of Bloom's lesson plan

Date…….

Class..…….

Period……..

Subject……

Topic……

Specific Objectives: (Refer to writing objectives in behavioural terms in Bloom's taxonomy) given under section 4.3.3.

Presentation : (Learning –Experiences)

Teacher Activities	Student's activities	Teaching method and aid	Objective
Teacher activities includes questioning, explanation and statements etc.	Student's activities include responses of the students and activities performed by them	It includes teaching aid and method (Questioning, Lecture, Presentation etc.) by the teacher.	It includes objectives like knowledge , comprehension skill etc.

Evaluatory questions: (Questions to evaluate student learning outcome).

Home work: Assignment based on the topic given or related in some manner is assigned.

Advantages of Bloom's Approach Lesson plan:

- Purposeful and objective oriented teaching.
- Psychological and scientific.
- Content analysis is done and objections are in behavioural terms.

- Teaching activities related to objectives.

Demerits of Bloom's approach:-

- Highly structured and mechanized approach.
- No scope for creativity and originality for teacher.
- Scope for influence of teacher's personal factors.

c) **RCEM Approach to lesson planning**

This approach of lesson planning is developed by the India in educationists are Mysor Regional College. It involves seventeen mental abilities or writing objectives in functional form.

The design of lesson plan according to this approach consists of three aspect:(1) Input,(2) Process and (3) output.

1 Input- It includes the identification of objectives. They are known as Expected Behavioural Outcomes (EBOs). These objectives are broadly classified into four categories- knowledge, understanding, application and creativity. These objectives are written in behavioural terms by employing seventeen mental abilities. The entering behaviours of learners are also identified.

2 Process- The teaching strategies and tactics are selected for achieving these objectives.

3 Output- The change of the behaviours is known as real learning outcomes (RLOs). The various measuring devices are employed for evaluating the RLOs. The measuring instruments are constructed on the basis of EBOs.

The chart below indicates three aspects: input, Process and output can be implemented in organising teaching.

Input Instruction Expected Behaviour Outcomes(EBOs)	Process Communication strategy learning experiences.		Output Evaluation Real Learning Outcomes(RLOs)
	Teacher Activities	Student Activities	
Knowledge objectives	Lecture demonstration chart maps. Explanation question answer methods.	Listening observation taking notes.	Review, questions define state, describe, name list.
Understanding objectives	Discussion, problem solving question-answer method demonstration.	Participation in group discussion listening observation initiation.	Inter practical, translate explain, discriminate problem solving.
Application Objectives	Group discussion laboratory work, questions-answer	Experiment, use of knowledge for his problems.	Practical test situational test essay type test,

	problem-solving.		observation.
Creativity Objectives	Individual work, group discussion problem-solving.	Analysis, synthesis elements establish new, relationship.	Essay type test oral test problem-solving situational test observation.

1.4.4.3 **IMPLICATIONS:-**

Use of lesson plan are as under:-

- Written form of lesson plan useful as guide for training pre-service teachers.
- Unwritten form of lesson plan useful, for effective teaching by in-service teachers.
- Scientific basis for measuring learning outcome.
- Theoretical knowledge of teaching concept can be applied to practice by effective lesson-plan.

Conclusion:- A lesson plan has many uses for pre service and in service teachers to teachers read to have knowledge of various types of lesson planning though various lesson plans have been given from time to time and still more are to come but a teacher cannot restrict himself strictly as per planning we cannot assume are students as machines. Therefore while planning a lesson, a teacher need to keep space for flexibility in his/her planning. Moreover, creativity on the part of teacher is required to keep the student's interest. Thus flexible and creative planning can make teaching a success.

Short In text questions:-

1. **Why teachers need to plan lesson for teaching in a class?**
2. **Write Outline of Herbertian Lesson Plan.**
3. **Explain the design of lesson plan as per R.C.E.M. approach.**

1.4.5 PLANNING FROM A CONSTRUCTIVIST PERSPECTIVE.

4.5.1 Meaningand concept:

a) What is Constructivism?

- A theory that believes that humans generate knowledge and understanding as a result of their ideas and experiences.

* Often called "Teaching for Understanding."

* Form of teaching that attempts to fill the gaps on cognitive outcomes for students that past educational methods have left out.

* Attempts to enhance higher order thinking, critical analysis, and problem-solving.

* Students are gained in meaningful interactions and control their own learning.

b) Concept:

Philosophyof Constructivist planning is that:-

- Knowledge is gained when:students engage in active learning.
- Learners make their own representations of actions.
- Students guide their own learning and meaning-making and share it with others.
- Learners try to make understanding even when they don't quite graspa concept.

Traditionally, it has been the responsibility of the teacher to do the most of the planning for instruction. Constructivism approach is one of the planning approach where planning is shared and negotiated. The teacher and students together make decisions. The constructivist approval of lesson planning focuses on learner's own understanding of the world around him based on the experience as he grows.

1.4.5.2 Points to be considered while planning from constructivist perspective:

While planning a lesson by constructivism, a teacher should keep in mind that:-

1. Every learner will construct his/her own reality which will not necessarily coincide with the reality of others.
2. Knowledge of meaning and understanding of the concept will by created by the individuals by means of their social interactions with their environment.
3. Effective and lasting learning taken place for the individual when engaged in a social activity with a range of others when in a social context and when new or repeated sensory input is related to pre-existing knowledge and understanding. The constructivist planning should include sustaining motivation to learners learning is strongly dependent on the learner's confidence in his potential for learning.
4. Constructivism learning operates under the notion that we must use both our first-hand experience and prior knowledge when exploring a new topic.
5 The teacher must act as a "guide on the side" to promote inquiry and exploring. Their lesson plan must be set up in a way to promote constructivism.

Requirement for planning a constructivist lesson.

Planning a constructivist lesson requires a teacher to define objectives, seating arrangement, arrange resources and activities during teaching and constructivism of test items to evaluate learning.

1.4.5.3. What does a Constructivist lesson plan look like?

There are various instructional models for developing lesson plan using constructivism. One of these is called "Five Es".

What do the "Five Es" stand for?

i) Engage
ii) Explore
iii) Explain

iv) Elaborate
v) Evaluate

1. Engage: This stage provides the opportunity for the teachers to discover what students know or what they think they know.
2. Explore: This stage provides a common set of experiences as well as a broad range of experiences. This stage allows students to compare what they think about with what they are actually observing.
3. Explain: This stage provids opportunities for students to connect their previous experiences and to begin to make conceptual sense of the main ideas within the unit of study.
4. Elaborate: In this stage students apply or extend the concepts in new situations and relate their previous experiences to new ones.
5. Evaluate: Evaluation of students' conceptual understanding and ability to use skills begins at the Engage stage and continues throughout the model.

Outline of teacher and student Behaviour with in the five Es Instructional Model.

The chart that follows outlines teacher and student behaviours within the 5 E model.

5Es	Suggested Activity	What the Teacher Does	What the Student Does
Engage	Demonstration Reading Free Write Analyze a Graphic Organizer KWL Brainstorming	Creates interest. Generates curiosity. Raises questions. Elicits responses that uncover what the students know or think about the concept/topic.	Asks questions such as, Why did this happen? What do I already know about this? What can I found out about this? Shows interest in the topic.
Explore	Perform an Investigation Read Authentic Resources to Collect Information Solve a Problem Construct a Model	Encourages the students to work together without direct instruction from the teacher. Observes and listens to the students as they interact. Asks probing questions to redirect the students' investigations when necessary. Provides time for students to puzzle through problems.	Thinks freely but within the limits of the activity. Tests predictions and hypotheses. Forms new predictions and hypotheses. Tries alternatives and discusses them with others. Records observations and ideas. Suspends judgement.
Explain	Student Analysis &Explanation	Encourages the students to explain concepts and definitions	Explains possible solutions or answers to others.

	Supporting Ideas with Evidence Structured Questioning Reading and Discussion Teacher Explanation Thinking Skill Activities: compare, classify, error analysis	in their own words. Asks for justification (evidence) and clarification from students. Formally provides definitions, explanations, and new labels. Uses students' previous experiences as basis for explaining concepts.	Listens officially to others' explanations. Questions others' explanations. Listens to and tries to comprehend explanations the teacher offers. Refers to previous activities. Uses recorded observations in explanations.
Extend	Problem Solving Decision Making Experimental Inquiry Think Skill Activities: compare, classify, apply	Expects the students to use formal labels, definitions, and explanations provided previously. Encourages the students to apply or extend the concepts and skills in new situations. Reminds the students of alternative explanations. Refers the students to existing data and evidence and asks, What do you already know? Why do you think…? Strategies from Explore apply here also.	Applies new labels, definitions, explanations, and skills in new, but similar situations. Uses previous information to ask questions, propose solutions, make decisions, and design experiments. Draws reasonable conclusions from evidence. Records observations and explanations. Checks for understandings among peers.
Evaluate	Any of the Above Develop a Scoring Tool or Rubric Test Performance Assessment Produce a Product Journal Entry Portfolio	Observes the students as they apply new concepts and skills. Assesses students' knowledge and/or skills. Looks for evidence that the students have changed their thinking or behaviours. Allows students to assess their own learning and group-process skills. Asks open-ended questions, such as: Why do you think…? What evidence do you have? What do you know about x?	Answers open-ended questions by using observations, evidence, and previously accepted explanations. Demonstrates an understanding or knowledge of the concept or skill. Evaluates his or her own progress and knowledge. Asks related questions that would encourage future investigations.

		How would you explain x?	

Short in-text questions:-

1.How constructivist view of lesson planning differs from traditional lesson planning?
2.Write three points about philosophy of constructivism.
3.Write do Five Es stand for in a constructivist lesson?

1.4.6. INTEGRATED AND THEMATIC PLANNING:

4.6.1 **Meaning:-** Integrated and thematic is a way of planning and teaching in which many areas of curriculum are connected together and integrated within a themes. In these tubes of planning for instruction, emphasis is given on choosing a specific theme for teaching one or many concepts. It is based on integrating various information and use it to demonstrate the topic. Pedagogy of thematic learning is based on its exploration of broad areas in one theme.

1.4.6.2. **Concept:-**

Basics of thematic and Integrated planning:- Thematic and integrated learning is based on Bruner's spiral curriculum approach and providing an effective environment in which pupils may use their skills which are developed in other areas of the curriculum. Thematic learning is based on the idea that knowledge acquisition is efficient among students when they learn in the context of a coherent and holistic way and when they can associate whatever they learn to their surrounding and real life examples. Thematic instruction seeks to put the cognitive skills such as reading, thinking, memorizing, and writing in the context of a real-life situation under the broad aim to allow creative exploration.

1.4.6.3 Steps of Integrated and Thematic Planning.

Under the thematic and integrated planning, organization of curriculum can be based on Macro or Micro theme depending upon the topic to be covered. Main steps of thematic and integrated planning include:-

i) Deciding a theme: Theme can be decided by teacher and sometimes by students and it can be a smaller concept (e.g. village, mother, climate etc.) to a large and integrated system(e.g. ecosystem, atmosphere etc.)
ii) Integration of theme with existing curriculum: Next step of thematic and integrated planning is designing the theme in an integrative ways to existing curriculum keeping the skill and content knowledge in mine.
iii) Designing Instructions and co-curricular plans: This step includes organizing other resources and extra-curricular activities for demonstrating the theme(e.g. field trip or visit to botanical garden).
iv) Group Activities and discussion. Group activities and discussion enable students to participate and reach on a sharedperspective of the theme. This also helps in creative exploration of the subject.

1.4.6.4. **Implications of thematic and integrated Planning:-**

Thematic and integrated planning is a powerful instructional method integrating various concepts in curriculum by daily life examples and experiences.

It is very useful as:-

i) It helps in promoting learning with understanding and discourages rote learning.

ii) It allows learning to be more natural and less fragmented than the way, where a school day is time is divided into different subject area.

iii) It allows literacy to grow progressively with vocabulary linked and with spelling and sentence writing being frequently, yet smoothly reinforced.

iv) It guides connected ideas to follow on easily.

v) It is useful for the students as it makes learning from, active, develops skills quickly, reinforcement from each other, more confident and better motivated.

vi) It is useful for the teachers as teachers find teaching more fun and find teaching less hard working.

Short in-text questions:-

1. **Write the meaning of integrated and thematic planning.**
2. **What are the basics integrated and thematic planning?**
3. **Write any three implications of integrated and thematic planning.**

1.4.7. SUMMARY:-

In this lesson we have learnt Objectives, Taxonomy of objectives (Bloom's, Meger's and Miller's), writing objectives in behavioural terms and importance of objectives. We have learnt various approaches(Herbertian approach, Bloom's approach and R.C.E.M. approach) to lesson planning and how to plan lessons accordingly we have also learnt planning a lesson from constructivist perspective. Another important approach i.e. Integrated and thematic approach to lesson planning have also covered in this lesson.

1.4.8. Key Concepts.

i) Instructional Objectives:- A group of statements formulated by a teacher for describing what the pupils are expected to do or will be able to do once the process of class room instruction is over.

ii) Taxonomy of objectives: Classification of objectives in terms of behavioural domins.

iii) Behavioural Domains: Beharvioural domains include three types of behaviour :Ognitive(Knowing),Affective(feeling) and Psychomotor(doing).

iv) Lesson Planning: Preparing before-hand a written scheme of teaching learning experiences in the class.

v)Constructivist perspective: A view point in which it is believed that knowledge is gained by learners by making their own understanding when they are engaged in active learning.

iv) Integrated and thematic planning:- Planning of lesson around a theme integrating various topics from the curriculum.

1.4.9. Suggested Questions.

1. What do you mean by instructional objects? What is meant by taxonomy of educational or instructional objectives? Describe the taxonomies of educational or instructional objectives in the cognitive and effective domain as given by Bloom and his associates.
2. What is meant by writing objectives in behavioral terms? What are important methods or approaches of writing objectives in such a way?
3. Discuss in detail the R.C.E.M. approach of writing objectives in behavioural terms. Illustrate with suitable examples in relation to the teaching of a subject of the school curriculum.
4. What is a lesson Plan? What kind of lesson plan can make teaching a success?
5. Elaborate Constructivist perspective of planning a lesson?
6. Describe integrate and thematic approval of teaching learning in detail?

1.4.10. Suggested Readings:-

i) www.itma.vt.edn/corses/humgic/lesson3/wrolfollow-objectives.pdf
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vi) Walia,J.S.(2012).Teaching Learning Process, Jalandhar, Ahim Paul Publishers.
vii) Sharma,R.A. “Advanced Educational Technology”. Meerut: Loyal Book Depot.
viii) http://www.slideshare.net/mlegan31/the-constructivism-approach-to-learning-reforming-the
ix) http://www.mcps.k12.md.us/curriculum/science/instr/5Esactivities.htm
x) http://cte.jhu.edu/techacademy/fellows/ullrich/webquest/ScienceLesson.html
xi) http://www.thirteen.org/edonline/concept2class/constructivism/demonstration1.html
xii) http://www.emints.org/tools/constructivistlesson-form2.pdf
xiii) http://www.miamisci.org/ph/lpintro5e.html