CENTRE FOR DISTANCE & ONLINE EDUCATION

UNIVERSITY OF JAMMU

JAMMU

SELF LEARNING MATERIAL

M.A. EDUCATION

SEMESTER-IV

Subject : Pedagogy of Education | **Unit : I – IV**

Course No. : 402 | **Lesson No. : 1 –10**

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SEMESTER IV

Syllabus for the Examination to be held in May 2025, 2026 and 2027

Course No. PSEDTC402 | **Title: Pedagogy of Education**
Credits : 4

Maximum Marks:	**100**
Minor Test-I :	**10**
Minor Test-II :	**10**
Internal Assessment Assignment	**10**
Major Test :	**70**

Learning Outcomes:

1. Students will understand the concept of Padagogies and its significance in the context of the latest trends in the field of teaching and learning.
2. Students will familiarized with the principles, maxims of successful teaching and the different methods of teaching.
3. Students will understand the need and importance of vaious devices of teaching and the role of audio-visual aids in the development of teaching-learning process.
4. Students will be able to point out and illustrate the difference between teaching and learning and their relationship between the two.
5. Students will be acquainted with the different levels of teaching lerning process and will be able to organize teaching at these levels.

Course Contents :

Unit-I

1. Meaning and Scope of Pedagogies of Education, Components of teaching, Teaching as Science and Art, Phases of Teaching, Relationship between Teaching and Lerning, Variables of Teaching.

Behavioral objectives :

- Meaning and importance of behavioral objectives, writing behavioral objectives for different subjects, difference between educational and instructional objectives. Bloom tTaxonomy and its new version.

Principales and Maxims of successful Teaching

Unit II

Organizing Teaching at:

- Memory level, understanding level and reflective level

Methods of Teaching:

Meaning, importance, procedure, advantages and limitations of (a) inductive method (b) deductive method (c) Analytic, and (e) Synthetic method. (f) Brainstorming Individualized and Cooperative Teaching and Learning

- Concept and Significance of Individualized and Cooperative Teaching-Language Laboratory, Tutorials, Keller's Plan (PSI), Learner Controlled Instructions (LIC), Computer Supported Collaborative Learning (CSCL)

Unit III

Devices of Teaching:

- Teaching devices: Oral communication, exposition, explanation, narration, description, illustrations, questioning, homework, textwork, textbooks and reference books
- Fixing devices: Drill, review, recapitulation and reptitive.

Practive Teaching aids:

- Communication Media: Concept, types and functions of audio, visual and audio-visual media.
- Audio: Radio, Tape-recorder.
- Visual: Projected aids, Overhead projector, and Slide projector.
- Non-projected aids: Charts, Display boards, Models, Posters, Maps, Diagrams, Flash cards.
- Audio-visual: Films, Television, Video projection and Satellite instruction.

Unit IV

Lesson Planning:

- Meaning, importance and Criteria of an Effective lesson Plan.
- Approaches in Lesson Planning- Herbartian, and RCEM Approaches. Difference between different Approaches.

Evalution in Teaching:

- Concept of evaluation, relationship between Teaching and Evaluation. Types of Evaluation (formative and Summative)
- Method of Evaluation through Essay type, Objective Type and Oral Method. Comparativemerits and demerits of different methods of evaluation.

Mode of Transaction: ***Lecture-cum-discussion method, Project Method, Practical.***

Note for paper setting:

There shall be two tests & one Assignment as part of Minor Evaluation & one major test at the end

of semester in each semester. The students shall be continuously evaluated during the conduct of each course the basis of their performance as follows:

Thory	Syllabus to be covered in the examination	Time allotted for the examination	% weightage (marks)
Minor Test-I	Unit I & Unit II	Sixty Minutes	10 Marks
Minor Test-II	Unit III & Unit IV	Sixty Minutes	10 Marks
IAA			10 Mark (two questions of 5 marks each)
Major Test	Unit I to IV	Three Hours	70 Marks

Essential Reading

Principles, Method and Techniques of Teaching, Vikas Publishing House, Pvt. Ltd.

Essestials of Educational Technology Teaching and Learning Vikas Publishing House Pvt. Ltd, New Delhi

Bigge, M.L. Learning Theories for Teachers, UBS, New Delhi

Suggested Readings:

Champion Lectures on Teaching English in India, Oxford University Press.

Dececco, J.P. & Crawford, W.R. the Psychology of Learning and Instruction, New Delhi Prentice Hall of India Pvt. Ltd, 1977

Fleming, C.M. Teaching, Methuen and Co. Ltd. 1958.

Gage, N.L. The Scientific Basis of Art of Teaching, London Teachers College Press, Columbia University 1978

Kochar, S.K. Methods and Techniques of Teaching Sterling Publishers (P) Ltd., 1981 Shambri & other Teaching of English, Longmans.

Prerna clerke Teaching and Learning: The Culture of Pedagogy sage publication, 2001.

Sharma R.A. Managing Teaching Activities, Surya Publications, 2003.

Skinner B.F. The Technology of Teaching. Appleton Century Crafts. New York, 1968

Tara Chand Principles of Teaching, Anmol Publications 1990.

Valdman, Abert Trends in Language Teaching, McGraw Hill; K.C. 1966.

Vedanyagam, E.G. Teaching Technology for College Teachers, Sterling Publishers Pvt. Ltd., New Delhi 1998.

Note for Paper Setters (Major Test):

The question paper will contain long and short answer-type questions. There will be eight long answer-type questions (two questions from each unit with internal choice) and the candidates will be required to answer one question from each unit. Each long answer type question will carry 15 marks. Question No. 1 will be compulsory and shall have 04 short answer type questions (100 words per question). Short answer type questions will be from all the units. Each short answer type question will carry 2.5 marks.

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LESSON : 1

PEDAGOGY OF EDUCATION

STRUCTURE

1.1 INTRODUCTION

Before we plunge into the concept and meaning of pedagogy of education, let us first understand the meaning of pedagogy. What is pedagogy? The dictionary meaning is very simple as "the art of science or profession of teaching". The word originates from Greek, where 'Paid' means 'child' and 'agogus' means 'leader'. Pedagogy, is generally understood as the theory and practice of learning as it is basic approach to teaching. This process of teaching influences and get influenced by the social, political and psychological development of the learners. John Heinrich Pestalozzi is known as the Father of Pedagogy due to his immense role and contributions for establishing the scientific base of the teaching-learning process. He focused on developing the holistic potential of children through sensory activities rather than merely imparting bookish knowledge. His works inspired the emergence of kindergarten system, Montessori education and other progressive philosophies. He also emphasized on hands-on learning, Inquiry-based instruction which is still remains highly relevant.

1.2 Learning Objectives

The objectives of this lesson would be:

- To acquaint the students about the concept of pedagogy.
- To enable them to understand how pedagogy of education is helpful in teaching-learning process.
- To apprise the students about the significance and scope of the pedagogy.
- To familiarize the students about the components of teaching and phases of teaching.
- To introduce the students about teaching variables and relationship between teaching and learning.

1.3 Meaning of Pedagogics of Education:

Pedagogy in the context of education is understood as a academic discipline where knowledge and skills are studied. Due to different social, political and cultural contexts both the theory and practice of pedagogy vary greatly. In the field of education, pedagogy encompasses the overall framework, principles, methods and best practices of teaching. It involves curriculum design, content delivery techniques, classroom management strategies and assessment methodologies that are utilized to impart education effectively. The aim of pedagogy is to develop a comprehensive understanding of how students learn based on their individual needs, interests, prior experiences and developmental stages. It focuses on identifying the best possible ways and means of enabling learning for students of all ages and capabilities. Pedagogy as a discipline aims to establish research-based standards for teaching that helps students to achieve learning outcomes in a meaningful and engaging manner. Pedagogy is based on the idea that how training and lessons are carried out and it should depend on how learner learns. It is influenced by educational psychology and the philosophy of education.

Importance of Pedagogy:

(i) Improves attributes of teaching: The quality of education can show a drastic improvement, if a well-planned and organised pedagogy is implemented in the classroom. This will help the students to understand thoroughly the learning material and thereby improving their learning outcomes.

(ii) **Enhances cooperative learning:** Pedagogy encourages the learner to work together for the accomplishment of the task and allow them to learn together, ifthe pedagogy is properly implemented.

(iii) Eliminates monotonous learning: Without keeping in mind the child psychology, Pedagogy is incomplete. It assists the learners to analyse, think creatively and evaluate themselves.

(iv) Follow their own ways of learning: By keeping in mind the child psychology, pedagogy caters to the learning abilities of different students. Students can follow their own ways of learning.

(v) **Convenient learning approach for all:** Students with different abilities needed different ways of learning. Applying pedagogy learning can be the best for every student.

(vi) **Improves teacher-students communication:** The teacher understands the students in a better way and focus on the student's weaknesses and guide them accordingly.

(vii) **Pedagogy helps to learn more effectively** – By following the learner-centred approach, Pedagogy helps the learners to learn, grasp and understand more effectively.

(viii) **Voice of the learner-** The needs, requirements and abilities of different learners is the foremost priority of the pedagogy.

(ix) **Role of the teachers** – Pedagogy helps the teacher to select the methods and strategies best for his teaching according to the needs and requirement of the learner. Consequently, it helps to enhance the learner's outcome.

(x) **Knowledge and understanding of the teac**her – Pedagogy assists the teacher to understand the learner first and then planned and disseminate the content part accordingly.

SCOPE OF PEDAGOGICS OF EDUCATION

Pedagogy is a broad field that encompasses a wide range of educational approaches and contexts, including:

1. **Learning Theories**: Pedagogy involves understanding learning theories, educational theories, instructional methods and assessment strategies.
2. **Curriculum Development:** It involves the design, implementation and evaluation of curricula to ensure they are effective and relevant.
3. **Instructional Design:** Pedagogy focuses on how the content is presented, how the activities are designed for the learners of different age groups. Learning experiences are structured to promote student engagement and learning.
4. **Assessment:** It encompasses various assessment methods, including formative and summative assessment to monitor the performance and progress of the student. By providing feedback and after making necessary changes in instruction, emphasis is laid on the outcome.
5. **Educational theories and philosophies:** Pedagogy delves into various educational theories and philosophies such as constructivism, behaviourism and humanism to understand how individuals learn and how we can facilitate that learning.
6. **Diverse Subject Areas:** Pedagogy is relevant to all subjects, including language arts, mathematics, science, social studies and specialized fields.
7. **Different Age Groups:** Pedagogy addresses the needs of learner at various developmental stages,

from early childhood education to higher education and adult learning.

8. **Teacher Education:** Pedagogy also plays a pivotal role in teacher education by equipping the teachers with the knowledge, skills and dispositions which are essential for creating effective learning environment.
9. **Educational Technology:** Pedagogy explores how technology can be incorporated in teaching-learning process in order to enhance the performance and progress of the learners. E.g. Online Platforms, interactive tools and multimedia resources.
10. **Learner Centred Approach:** Pedagogy highlights the importance of understanding the diverse needs of the learner and initiatives are being taken accordingly in order to fulfil the diverse needs, interests and learning styles of individual students.
11. **Inclusive Education:** Pedagogy plays a crucial role in including all the students in the mainstream by promoting inclusive and equitable learning environment for all students.

In this way, pedagogy covers a wide range of areas aiming to create effective and engaging learning experiences for students.

Components of Teaching

In simple terms teaching means group of activities taken to assist the learner to grasp or acquire some knowledge, skill, attitude or interest. In simple terms, we can say that it is a profession or occupation of a group known as teachers who undertake activities to help the students to acquire knowledge.

Definitions:

According to B.O Smith, "Teaching is a system of activities and actions to produce learning outcomes."

Clarke defined it as activities which are designed and performed to bring change in pupil's behaviour.

According to Edmund Amidon, "Teaching as an interactive process which primarily talks about classroom interaction between teacher and pupil occur during definable activities.

Teaching is a tri-polar process and triadic relation which involves the resources (human and non-human), a set of designed and manipulated strategies & tactics and conducive environment in order to bring change in the behaviour of the students. Human resource includes- teachers, staff, administrator etc. while non-human resource includes Infrastructure.

Components

Effective teaching involves several key components that collectively enhance the learning experience and outline a teacher's responsibilities. These components are divided into four domains:

1. **Planning and Preparation:** It is the first and foremost component of effective teaching. Planning is the process of developing figuration of a lesson (Steps, Methods and Material needed for teaching). Developing learning objectives and designing engaging activities are essential for assessing student's understanding.
2. **Professionalism and Collaboration:** Effective teaching engages students in quality learning which leads to improved student's outcome. It is effective when it supports collaboration, uses models of effective teaching, offers feedback and reflection. Teacher- family communication also increases student's engagement and participation which improves the student's outcome.
3. **Learning Environment:** A motivating and supportive classroom culture fosters positive relationship with students. It affirms student's strength and maximizes their learning.
4. **Teacher Expectations:** In teaching, effective teacher identifies and addresses the implicit biases and maintain high expectations for every student. Students tend to achieve higher academic outcomes when teachers have high expectations for students.
5. **Instructional Delivery:** In effective teaching, teacher uses multiple instructional practices and strategies to achieve their educational objectives. They also vary their approaches to meet different students need.
6. **Assessment and Feedback:** It is an inevitable component of teaching. Positive and timely feedback helps the students to improve their weak areas as feedback is positively associated with student's motivation and achievements. Whereas feedback to teachers, help them to regulate their teaching-learning strategies.

Teaching as Science and Art: -

Teaching is aimed to bring changes in the behaviour of pupils. These changes takes place through-

a) teaching them how to perform a task or do a activity.

b) Enabling the learner to understand and form their own system of beliefs.

On the basis of above, we can comprehend that teaching is both an art and science.

Teaching as an Art: - It is a professional activity comprising of teacher, student and conducive environment which resulted in the development of the student. In teaching, the teacher uses their art which includes practice, strategies etc to understand the content and it is purely an outcome of the teacher's effort. The teaching is highly dominated by communication skill communication makes the teaching reality and a success. It is also an interactive process carried out for attaining objectives. The way the teacher organises his or her teaching process for attaining the educational objectives is totally an art.

Teaching as a Science: - Teaching is led by scientific observation and analysis. Through observation and

analysis one can easily assess what is going in teaching- through teacher behaviour, Pupil- teacher interaction. Analysis helps the teacher to bring the changes in the behaviour of the pupils. Such analysis and assessment may provide essential feedback for bringing desirable improvement in the process. Teaching is a specialised task, which me choose of set of components skills in a systematic and organised manner.

1.4 Check Your Progress-1

1. What do you mean by Pedagogics of education?

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   …….....

2. Highlight the significance of Pedagogics of Education.

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1.5 Variables of Teaching

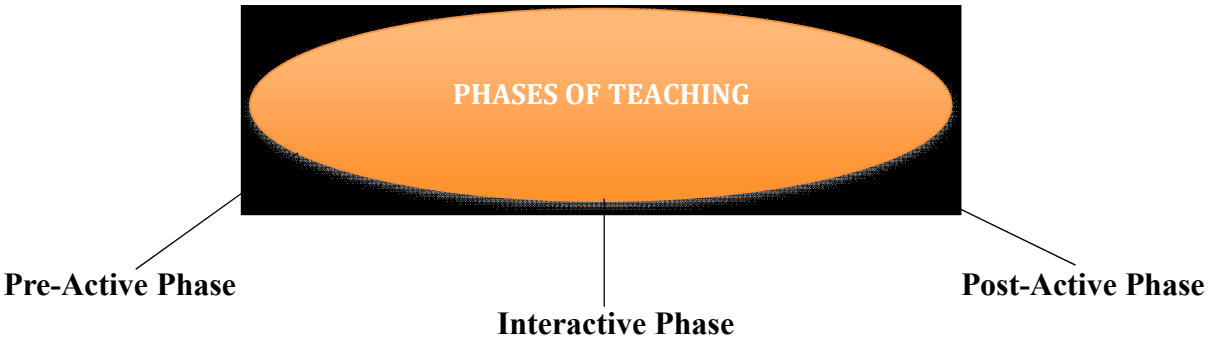
The process of teaching comprises of a set of variables involving teacher, pupils, content, methods and involvement related variables. In teaching task, following are the different types of variables—

1. Independent variable
2. Dependent variable
3. Intervening or mediating variables.

In the task of teaching, students act as dependent variable because it is the student who is subjected to change and development through the endeavours of the teacher and teaching process. The teacher has to play the role of independent variable because he is responsible for the functioning or behaviour of the dependent variable i.e. students. Students are quite dependent on teacher for bringing desirable changes in their behaviour. Teacher has to plan, organize, lead and control the process of teaching so that desirable outcomes may be properly attained. The intervening variables as it sounds do not exist for creating interference or obstacle in the functioning of patent or dependent variable. Rather they help in the smooth functioning of these variables for the achievement of the desired teaching goals. The contents of teaching, methods and techniques of teaching, tactics and strategies of teaching, management of instructional material and teaching environment etc are all known as intervening variables. Appropriate learning conditions or situations are created by these variables, which are responsible for bringing desirable interaction between the teacher and the students by producing proper teaching environment, teaching material and facilities.

Phases of Teaching

In teaching task, a teacher has to include a number of activities or operations which needs sequenced planning and mindful implementation. In performing so, sequential and organised steps are required to proceed the teaching. In general, following three phases are used for carrying out the various operations of a teaching task in a systematic way: -



1. **Pre-Active Phase:** It is the foremost step of teaching, in which the teacher carried out his planning for teaching act. A good planning helps the teacher to disseminate the knowledge in a smooth, functionable and successful manner. It involves two major steps namely: -

   a) Setting up of goals or objectives.

   b) Find out the various means and strategies to achieve the pre-planned objectives.

In pre-active phase, a teacher has to outline every minute details of his expedition that he wants to execute in the classroom along with his students.

2. **Interactive Phase:** What has been planned or decided at the planning stage, in the second phase, the teacher is concerned with the implementation. In this stage of teaching, success or failure depends upon the degree and quality of classroom interaction between teacher and pupils. This phase included three major activities:

a) Perception **b)** Diagnosis **c)** Reaction Process

Perception: - In this activity, the teacher is concerned with the perception of the classroom climate, class group (abilities, behaviour, personality characteristics, IQ of the students etc.). Accordingly, the teacher tries to pre- plan for teaching in order to seek desirable interaction in the teaching learning process.

Diagnosis: - A proper diagnosis of the abilities and the behaviour of both students and the teacher is very essential for the appropriate interaction. Therefore, teacher tries to assist and find out the achievement level of his students on the basis of their abilities, academic background, intelligence, interest and aptitude.

Reaction process: - Action- Reaction plays a pivotal role in the classroom interaction. Right decision

regarding the selection and use of stimuli, reinforcement and feedback, development of suitable strategies suiting the needs of the students, teaching objectives, teaching environment is very essential on the part of teacher for action reaction process. Proper ways of reacting and responding to the various stimuli and techniques presented to them by the teacher are learnt by the students.

3. **Post-Active Phase: -** This phase of teaching is regarding the evaluation activities. Teacher can do it with number of ways like tests, quizzes, comments, observing students' behaviour, student's reaction to stimuli etc. For this purpose, the teacher needs to take right decision about the selection of appropriate evaluation devices. The result of a valuation may be used for bringing desirable improvement in the rules and activities of the teacher as well as students by providing accurate feedback.

All the above three- phases of teaching, although described separately but are closely interrelated, continuous cycle which influence and direct each other.

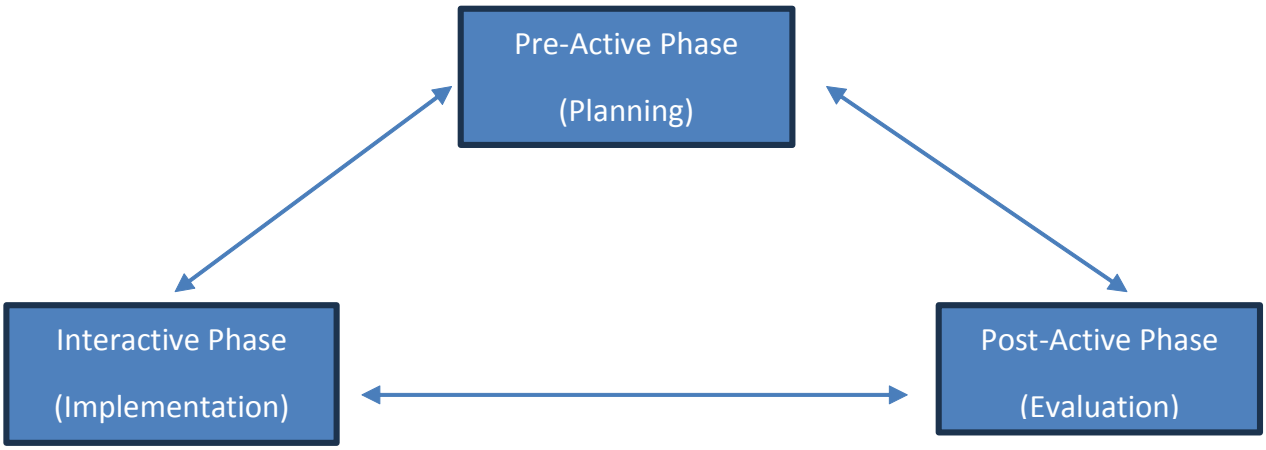


Fig. Interrelation among the Phases of Teaching

Relationship between teaching and learning:

The relationship between teaching and learning is symbiotic- highly interconnected which influence and support each other. They are like two sides of the same coin. The effective teaching and learning are the core of education as effective teaching directly leads to successful learning and vice versa. Following points highlight the relationship between teaching and learning: -

1. **Mutual dependence**: - Effective teaching promote learnings and effective learning improve teaching methods and strategies by providing feedback.
2. **Active vs passive: -** Teaching is active process of disseminating knowledge whereas learning can be active or passive depending upon the strategy of teaching.

3. **Impact on outcomes**: - the quality of teaching influences the outcome/ a result of the students.
4. **Complementary roles:** - Teaching is about sharing knowledge information and skills while learning is about receiving understanding and applying knowledge.
5. **Collaborative environment:** - learning is often successful in collaborative environment we are teaching posters interaction discussion etc. So, it reflects mutual dependence in a shared space.
6. **Adaptation and personalization:** - keeping in consideration the learner's style of learning abilities attitude and aptitude the teacher adopts their methods of teaching in a way that learner understand the flow of Information and structure of lessons.

1.6 Check Your Progress -2

1. Teaching is ……. as well as an …….
2. Three phases of teaching are ……., ……., …….
3. Three variables of teaching are ……., ……., …….

1.7 Let Us Sum Up

In the field of education, pedagogy encompasses the overall framework, principles, methods and best practices of teaching. It involves curriculum design, content delivery techniques, classroom management strategies and assessment methodologies that are utilized to impart education effectively. The aim of pedagogy is to develop a comprehensive understanding of how students learn based on their individual needs, interests, prior experiences and developmental stages. As a whole, teaching is aimed to bring changes in the behaviour of pupils. These changes occur through- a) teaching them how to do or perform a task or it to a situation or stimuli **(**b) Those things that make contribute towards and reaching their knowledge and formation of a system of beliefs. On the basis of this, we can comprehend that teaching is both an art and science. The relationship between teaching and learning is symbiotic- highly interconnected which influence and support each other. They are like two sides of the same coin. The effective teaching and learning are the core of education as effective teaching directly leads to successful learning and vice versa.

1.7 Keywords/ Glossary

a) Comprehend- To Understand

b) Variables- anything that changes (Changeable)

c) Pedagogy- art of teaching

d) Collaborative- An organized group of people who collaborate towards a particular goal

e) Encompasses- to include completely.

1.8 Self-Assessment Questions

1. Highlight the scope of Pedagogics of Education.
2. Discuss Teaching as Science and an art.
3. Describe the phases of teaching.

1.9 Suggested Readings

- Mangal & Mangal (2013), Essentials of Educational Technology – PHI Learning Private Limited, Delhi-110092.
- Mohanty, G. (2003), A textbook of General Psychology- Kalyani Publishers ISBN-81-272-1227-X.
- Baron, A.R., Psychology-Fifth Edition, Pearson-ISBN-978-81-775-8385-4.
- Mangal, S.K. (2007), Essentials of Educational Psychology, Prentice Hall of India ,New Delhi

LESSON : 2

BEHAVIOURAL OBJECTIVES

STRUCTURE

2.1 INTRODUCTION

Before disseminating the information and knowledge, the instructor has to set certain definite and specific objectives for the classroom period. Through these objectives which are known as instructional objectives, the instructor put their best efforts to bring desirable changes in the behaviour of the pupils. The changes in the behaviour of the student may be expected on the basis of instruction about a particular lesson, unit of a subject. Instructional objectives are description of behaviour which may be expected out of classroom learning.

The behavioural objectives is a clear, specific and measurable statement which is expected from the learner to achieve at the end of the lesson. Behavioural objectives provide a clear focus and create benchmark in teaching-learning process. It improves learning and performance as well as ensures efficient use of resources. It enhances engagement and motivation, which makes the objectives clearer and easier for the learner to understand the purpose of the task.

2.2 Learning Objectives

The objectives of this lesson would be:

- To acquaint the learner about the concept and meaning of Behavioural Objectives.
- To enable them to understand how behavioural objectives are important in achieving educational objectives.
- To apprise the students about writing behavioural objectives for different subjects.
- To familiarize the students about the difference between Educational Objectives and Instructional Objectives.

2.3 Meaning and Importance of Behavioural Objectives

Meaning and Importance of Behavioural Objectives:

Meaning: - Behaviour objectives are measurable and observable goals that outline the desired actions or skills a person should demonstrate under specific conditions. They focus on how a task will be performed, not just what needs to be achieved. It is the outcome of learning which provides direction to learner and form the base for the evaluation of the students. Objectives may differ in several aspects. They may be general, specific, concrete, abstract, cognitive, affective or psychomotor.

- **Cognitive Objectives**- emphasizes mental outcome such as knowledge, understanding and thinking skills.
- **Affective objectives-** emphasizes on emotions and feelings such as interest, values, attitude, aptitude, appreciation etc.
- **Psychomotor objectives-** emphasizes motor skills and physical coordination.

The behaviour objectives are divided into 4 major components: -

a) The learner

b) The observable behaviour to be performed

c) The condition in which the behaviour should be performed

d) The standards for the minimal acceptable level of performance when performing the behaviour.

In Education, behaviour objectives are clear, measurable statements that describe specific behaviour that students demonstrate after instruction, serving as a guide for instruction and evaluation. They provide direction for teaching, help in designing learning activities and serve as basis for assessment of students

learning. For example- After instruction students will be able to draw a diagram of human heart and labelling all major parts of human heart.

Importance of Behaviour Objectives

1. **Clear Expectations**: - Behaviour Objectives ensure that but teachers and students understand what is expected of them.
2. **Focused Instructions**: - Behavioural Objectives help teachers plan and deliver instruction that is directly relevant to the learning material.
3. **Effective Evaluation**: - Behavioural Objectives provide effective and clear basis for assessment of students learning and determine whether the objectives have been achieved or not.
4. **Motivation**: - Behaviour Objectives help learners to understand what is expected of them. It can improve their motivation and make them focused achieve the desired outcomes.
5. **learners understand what is expected of them:** It helps the learner to understand what is expected from them to achieve at the end of the lesson and have a better understanding of where they are heading.
6. **Create benchmarks:** Behavioural objectives can enable educators and students to measure their progress toward the objective (formative assessment) and also assess when the learning objectives have been achieved (summative assessment).

Writing Behavioural Objectives for Different Subjects

The writing of educational or instructional objectives mainly depends upon two parts namely,

I) The modification part

II) The content part

The modification part refers to the changes in the behaviour that are designed to take place in the behaviour of the students through the related learning experience. Content part represents the syllabus in particular and to the curriculum in general to be covered by the related instruction. Consequently, objectives in behaviour terms always written in relation to the following three things:

1. The nature of the objective i.e. Knowledge application etc
2. The area or domain of the behaviour i.e. Cognitive effective etc
3. The specific content areas in which behavioural changes are planned to be brought I.e. Fundamental rights, means of irrigation, sources of energy etc.

There are several methods of writing behaviour objectives for different subjects like

1. **Robert Mager's approach**
2. **Robert Miler's approach**
3. **R.C.E.M approach**

For writing the instructional objectives belonging to all the three domains of behaviour - Cognitive, Affective and Psycho-motor, both Mager's and Miler's approach have remained unsuccessful. Mager's approach serves the purpose of cognitive and affective objectives while Millers scheme is meant for psycho motor objectives. None of these two approaches cover all the domains of human behaviour. Both these approaches laid emphasis on associated action verbs and totally ignored the mental abilities of the learner in the learning process. Because of these drawbacks, both of these approaches substituted by a more reasonable approach known as R.C.E.M approach developed by Regional College of Education, Mysore.

In the writing of instructional objectives R.C.E.M approach makes use of intellectual process or abilities in place of action verb. It is a modified form of the bloom's taxonomy. In place of Six categories given by bloom, there are four categories in R.C.E.M approach. R.C.E.M replaced the last three categories of Bloom's taxonomy- analysis, synthesis and evaluation by a common category i.e. creativity. Another difference lies in naming the Bloom's comprehension category as Understanding in the R.C.E.M approach. The four categories of R.C.E.M approach along with the associated mental processes or abilities are given in the table:

S.No.	Categories	Mental Abilities
01.	Knowledge	Recognise and Recall
02.	Understanding	Spotting relationship, cite examples, distinguish, classify, explain, verify and generalize
03.	Application	Figure out, formulate hypothesis, establish hypothesis, infer and predict
04.	Creativity	Analyse, synthesize, evaluate.

From the table, it is evident that the four categories of objectives have been divided into Seventeen mental processes or abilities. These 17 mental abilities are used for writing the objectives in behavioural terms for different subjects.

Writing Objectives in R.C.E.M approach:

The mechanism maybe sequenced in the following way-

1. At first, consider the initial behaviour of the learner.
2. Consider the elements of content, topic or the learning experience to be given to the learner.
3. Comprehend over the instructional or learning objectives.
4. Select the appropriate mental process or mental abilities for writing the objectives in question.
5. Always put efforts to make use of 17 statements of the R.C.E.M approach and analyse the initial behaviour of the learners and learning experience is given to them.

Illustration of the R.C.E.M approach for twriting objectives with example.

Subject- Social Studies

Topic/ sub unit: Duties of a citizen

1. learners are able to recall at least 5 duties of a citizen (knowledge).
2. Learners are able to discriminate between rights and duties (understanding).
3. Learners are able to infer about the duties of a citizen through their daily life activities (Application).
4. Students are able to evaluate the contribution of the society or education in acquainting them with the duties of a citizen (creativity).

In the light of above example, the teacher can plan their daily lessons in their respective teaching subjects in order to bring expected changes in the behaviour of the students.

Difference between Educational Objectives and Instructional Objectives

1. **Meaning-** Educational objectives are statements that describe what students will learn and be able to do by the end of course.

1. Meaning -Instructional objectives may be defined as 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 classroom interaction is over.

2. **Scope-** The scope of educational objectives is broad and comprehensive.

2. Scope- The scope of instructional objectives is quite narrow and specific.

3. **Outcomes**- the outcome of the educational objectives is the development of knowledge skills attitude and competencies to achieve desired learning goals.

3. Outcomes- outcome of instructional objectives are always stated in terms of expected desired

behaviour changes.

4. Educational objectives expresses hopes and values regarding the over-all educational experience.

4. Instruction objectives expresses the choices on learning based on strategies, lesson material and instructional activities.

5. **Representation**- Educational objectives represents the perspective on the course and its scope with allied subjects.

5. Representation- Instructional objectives represents the learner's ability by the end of the instruction.

6. **Goals**- Educational objectives are based on the long-range ultimate goal of teaching. It took years to achieve its ultimate aim.

6. Goals- instructional objectives goal is short term, definite and attenable with in the specified classroom resources by a subject teacher.

7. **Duration**- Educational objectives are pre-determined but its attainment is not possible in a fixed duration of classroom it took series of classes to achieve its objectives.

7. Duration-Instructional objectives are also pre-determined and are always planned in a such a manner that their accomplishment becomes quite possible through the usual classroom teaching for a fixed duration.

8. **Foundation**- Educational objectives serves foundation for curriculum, design teaching methods and assessment methods.

8. Foundation- Instructional objectives serves as foundation for definite, tangible and precise teaching. Effective instructional objectives are SMART (specific, measurable, achievable, relevant and time bound.

2.4 Check Your Progress-2

1. The writing of instructional objectives is mainly depending on …… part and ……. Part.

2. In Bloom taxonomy, behaviour is divided into ……. main domains.

3. The scope of educational objectives are ……. And ……. Whereas the scope of instructional objectives are …… and …….. .

2.5 Bloom Taxonomy and its new version, Principles and Maxims of Teaching

BLOOM TAXONOMY

Taxonomy means classification and Bloom's taxonomy presents a system of classification of the objectives which has been working on the assumption that the teaching-learning process may be considered as an

attempt to change the behaviour of the students on the basis of their learning experiences. Behaviour is divided into three domains: -

a) Cognitive Domain (Knowing)- presented by Bloom & his associates.

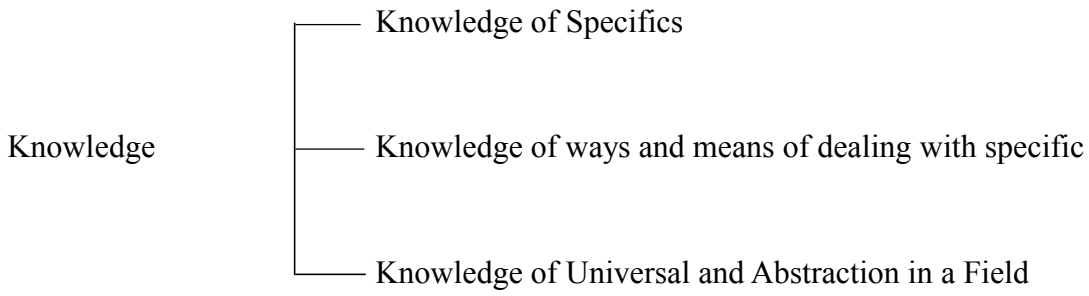
b) Affective Domain (Feeling) – presented by Krathwohl, Bloom &Masia.

c) Psychomotor (Doing) -presented by Harrow & Simpson.

Taxonomy of Objectives in the Cognitive Domain:

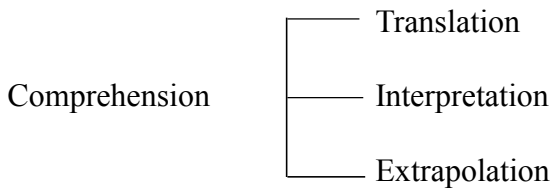
In Cognitive Domain-Bloom and his associates classified the objectives into six categories:

1. **Knowledge**



Knowledge is the lowest level of the cognitive domain's objective and is primarily concerned with the acquisition of knowledge based on scientific facts, methods, terminology, processes, principles, theories etc.

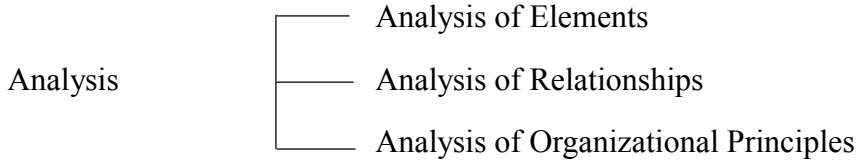
2. **Comprehension**



Comprehension is based upon knowledge. On the basis of knowledge, learner may be able to decode and brief the communicated knowledge in his own words, interpret and understand the use of knowledge.

3. **Application:** Knowledge is useful only when it is possible to be applied. When knowledge is properly grasped or understood then the application of ideas, principles or theory may be possible. Therefore, application involves both knowledge and comprehension.

4. **Analysis**



Analysis refers to understanding at higher level. It involves knowledge, comprehension and application. The student is required to acquire/ gain an insight (the necessary skills) in drawing inferences, comparison, differentiate etc.

5. **Synthesis**

Synthesis
- Production of unique Communication
- Production of Plan
- Derivation of a set of abstract relations

In this process, the learner is required to acquire necessary skills or abilities which help them to integrate the different elements of an idea concept or principle to produce a figure of wholeness.

6. **Evaluation**
- Judgement in terms of internal evidence
- Judgement in terms of external criteria

It is the far up level of objectives in the domain of cognition and includes all the five categories discuss above. In this, learner has to take decision about the quantitative as well as qualitative value of a particular idea, object, principle or theory.

Taxonomy of objectives in the affective domain

In the affective domain, the objectives are devised from the lowest to the highest level of functioning:

1. **Receiving-**
   i) awareness
   ii) willingness
   iii) controlled attention

For the development of certain ideas, values or interest it is inevitable that the learner must receive ideas or attend the events. For that awareness, willingness and controlled attention is very much required.

2. **Responding-**
   i) Acquiescence in responding
   ii) Willingness to responding
   iii) Satisfaction in response

After receiving the particular idea, concept or thing the learner must be made to respond in the active behaviour like obeying, discussing answering etc.

3. **Valuing-**

   i) acceptance of value

   ii) Preference of value

   iii) Commitment of value

This category is generally engaged with the inculcation of typical value patterns and attitude depending upon receiving and responding.

4. **Organising-**

   i) conceptualization of values

   ii) Organisation of value system

It deals with the construction of enduring values among the students by organising and synthesizing the different value patterns taken up by them from time to time.

5. **Characterization by Value complex**

   i) Generalized set

   ii) Characterization

It is a highest level and it involves all the above discussed categories and made the learners to take all the essentials of effective behaviour i.e. various interest, values, value complex or pattern etc.

Taxonomy of objectives in the psycho-motor domain

In this classification, the objectives are described under six different categories arranged from the lowest to the highest level of functioning:

1. Reflex movements:

It is a lowest level of psycho-motor behaviour and is controlled by the autonomous nervous system. e.g.- closing of eyelid, stretching of body etc. These are very essential for the development as well as the survival of human beings.

2. Basic fundamental movements:

Walking jumping creeping, kneeling, hands and neck etc are called basic fundamental movements. They are not innate or inborn but may be seen in child's movement from very early days of his life.

3. Perceptual abilities

The development of motor abilities is associated with perception. The learner derives useful meaning out of the exposure of their senses to various stimuli. Such behaviour is learned and required through experience and training.

4.Physical abilities

For the development of motor behaviour in an effective way, it is essential to develop the desirable physical abilities. If one has adequate stamina, he may go further for improving his psycho-motor behaviour.

5. Skilled movements

Scales movements are complex bodily movements and are acquired through sufficient drill or practice. e. g. Art of dancing, driving playing, swimming etc.

6. Non discursive communication

This category is the highest level of psycho-motor domain. The bodily movements are here by integrated with inner feelings, expressions and effective behaviour of the learner. e.g. facial expression, posing expression through sketching, painting and acting.

Principles of teaching

Teaching is a complex dedicated and skilled job. Primarily, the objective of teaching is to bring desirable changes or modification in the behaviour of students. General principles and psychological principles are established by the diligent efforts of the educationist, psychologists, research workers and teachers in order to make teaching effective, long lasting and productive.

A. General principles of teaching:

1.Principle of Definiteness of Goals or Objectives: -

In the process of teaching, definiteness of goal is very inevitable because it will keep the teacher on right track. All the aspects of the teaching are planned, executed and evaluated by the teacher in the light of stipulated objectives. Without definiteness of goals, teacher is like a paper which tosses here and there due to wind, same is the case with a person who does not know his destination.

2. Principle of planning: -

Through proper planning, desired objectives in teaching may be achieved easily and effectively. The teacher should plan and prepare his lesson before delivery. The methods, techniques and strategies of interaction

and evaluation should be well defined. As the success of teaching depends upon the quality of Pre planning.

3. Principle of flexibility: -

Teaching should be based on the principle of flexibility. It should not be rigid or stereotyped. Principal of flexibility enables the educator to tackle the aroused situation effectively. A teacher should be resourceful, original, imaginative, creative so that he or she can adapt himself/ herself as well as his/ her teaching according to the needs, demand and requirements of the students.

4. Principle of utilising past experience: -

The structure of new knowledge or learning can be built safely on the past experiences of the students. Therefore, teachers teaching should be associated with the already acquired knowledge and experiences.

5. Principle of child centredness: -

In all aspects of teaching, it is essential to adopt child centred approach because teaching is aimed to bring about desirable changes in the behaviour of the child. The planning, curriculum, methods of teaching, evaluation should be invariable centred around the child.

6. Principle of individual difference: -

No to individuals are alike. We all vary in terms of traits, abilities, capacities. Good teaching should make adequate provision for individual differences. The teaching which does not fulfils the requirement of the individual child, will not achieve goals of teaching. Therefore, by all means teaching should be based on individual differences.

7. Principle of Association: -

Teaching should be linked or associated with the actual life of the child otherwise teaching will be confined to classroom boundaries.

8. Principle of correlating with other subjects: - Teaching should be based on the principle of correlating one subject with other subjects. Teacher should make the child to understand how one subject is influencing the other.

B. Principles of Teaching based on Psychology (Psychological Principles)

Principles of teaching based on psychology are distinct from than the general ones. In order to make the teaching process more effective, directly or indirectly, it stimulates and influence the teaching process and make it more productive. Some of the important psychological principles are as follow:

1. Principle of Motivation and Interest: -

In teaching and learning, motivation and interest are core elements. These two elements energize and activate the law of learning and law of readiness to bring changes in the behaviour of the students as desired.

2. Principle of Repetition and Exercise: -

Proverb practice makes a man perfect applies well in the process of acquiring knowledge, attitude, interest and skills. The educator who understands the principle of repetition and exercise may successfully achieve the objectives of his teaching. As recapitulation, revision, practice and application helps in mastering the field in which the student wants to succeed.

3. Principle of Feedback and Reinforcement: -

The major goal of teaching and learning is the modification of behaviour which can be properly attained by the process of feedback and reinforcement. The principle of feedback and reinforcement may play wonder in making learning joyful, retained long and effective. For example- praise, grade, certification, token and other incentives motivate students do well in the class.

4.Principle of Encouraging Self-learning: -

Knowledge is endless and no one can get a fragment of this vast Ocean through spoon feeding so a good teacher is one who encourage the principle of self-learning. The teachers should develop the habit of self-study, independent work and self-learning among the students through encouragement.

5. Principle of Fostering Creativity and Self-Expression: -

A good teaching should be able to develop the aspect of creativity and self-expression. It should base on the originality, progressiveness, inventiveness of the students for creation and expression of self.

Maxims of Successful Teaching

Educationists and teachers have evolved certain working ways and notions which are helpful in the classroom teaching. They are quiet trust- worthy, universal and time- honoured. Some of the important ones are as follow:

1. From known to unknown: -

Wise teacher should always plan his or her teaching on the principle of known to unknown. As the unknown is always feared whereas known is trustworthy. Similarly, previous knowledge of a particular subject (known) forms the base to collect new information and explore the unknown.

2. From definite to indefinite: -

A good teacher needs to teach or lead always from definite to indefinite. Definite knowledge, facts or concepts may be easily approached for catching the indefinite ones. For example- Rules and Formulas of mathematics may help or student to learn the thousands of odd combinations.

3. From simple to complex: -

Teaching should be such that it must provide and appropriate learning order or sequence. For that, it is essential for teacher to proceed from simple to Complex ones. The understanding of simple ones not only aspire the students to grasp more but also encourage & equip them to understand and master the difficult and complex concepts in the process of learning.

4. From concrete to abstract: -

Abstract is perplexing which is difficult to understand as it is subjective. One may be easily bored, fatigued and confused to understand the abstract phenomena. Whereas, concrete is relatively simple understandable and objective. A good teacher proceeds from concrete to abstract because when knowledge or skill is supported with concrete examples, things or objects, it will provide maximum opportunities to the learner to acquire direct experience and enable Dam to understand abstract concepts at later stage.

5. From Particular to General: -

And effective teacher always proceeds his/ her teaching from particular to general. As generalized facts, principles or concepts are abstract in nature and should not be presented in the beginning of teaching. Therefore, teaching should always begin with particular facts, events and then convince the learner to generalize or conclude.

6. From whole to parts: -

Teaching should be begun with whole and then step by step it's various parts or constituents should be presented before the students. Whole is always more understandable, motivating and effective. For example- for teaching the parts of plants it is imperative for the teacher to show the whole plant and then discuss its parts one by one.

7. From Induction to Deduction: -

It is needless to mention that would teaching always proceed from induction to deduction. Induction is the process of proving one statement, fact or concept by arguing if it is true in this particular case, then it is applicable and true for all similar cases. Whereas, deduction is the result of induction. In deduction we placed the generalized facts then ask the students to verify it in particular case.

8. From psychological to logical: -

From the psychological point of view the curriculum, teaching strategies, aid material and teaching learning environment of the child should be according to their needs, interest and requirements. But it does not mean the teacher has to go unplanned. what is to be taught should be based on psychological principles but that should have also some logic. Therefore, a wise teacher believes in the integration of psychological and logical principles in his/ her teaching.

2.6 Check Your Progress-2

1. What do you understand by Behavioural Objectives?

   .....

   .....

   .....

2. Difference between Educational and Instructional Objectives.

   .....

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   .....

2.7 Let Us Sum Up

The behavioural objectives is a clear, specific and measurable statement which is expected from the learner to achieve at the end of the lesson. Behavioural objectives provide a clear focus and create benchmark in teaching-learning process. It improves learning and performance as well as ensures efficient use of resources. It enhances engagement and motivation, which makes the objectives clearer and easier for the learner to understand the purpose of the task. To understand the objectives in better way, Bloom and his associates provided the taxonomy of objectives. The objectives related to cognitive domain have been classified into six categories namely- knowledge, understanding, application, analysis, synthesis and evaluation. Taxonomy related to affective domain have been classified into five categories namely -Receiving, Responding, Valuing, organization and value complex. Similarly, the taxonomy related to Psycho-motor domain includes- reflex movements, basic movements, physical abilities, skilled movements, perceptual abilities.

As far as writing of behavioural objectives for different subjects, we can apply R.C.E.M approach where we can classify objectives into five categories namely- knowledge and understanding, skill, application, attitude, interest and appreciation objectives.

2.8 Keywords/Glossary

A) Cognitive- related to the part of mental functions

B) Formative Assessment – is ongoing feedback and evaluation during the learning process.

C) Summative Assessment- provides final evaluation of learning at the unit of a unit or course.

2.9 Self-Assessment Questions

1. How Behavioural Objectives are different from Instructional objectives?
2. What are important methods or approaches of writing behavioural objectives?
3. Discuss in detail the R.C.E.M approach of writing objectives in behavioural terms.
4. What are the different maxims of successful teaching?
5. Highlight the principles of successful teaching.

2.10 Suggested Readings

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LESSON : 3

Organizing Teaching

STRUCTURE

3.1 Introduction

Dear Learner,

The term teaching means all those activities which are conducted by the teacher in his teaching act in real teaching-learning process. The process of teaching task is carried out to achieve certain set desirable objectives. It is carried out by the teacher for students in a conducive teaching-learning environment. Teaching act requires a planned and organised sequential activity. The teacher used different methods of teaching to suit the needs, requirements and potential of the learner. In this chapter we shall discuss the teaching organizing at memory, understanding and reflective level as well as highlight the various teaching-learning methods.

3.2 Learning Objectives:

The learning objectives would be –

- To acquaint the students about teaching and learning at memory level.
- To acquaint the students about understanding level and reflective level.
- To enable them to understand different methods of teaching.
- To apprise the students about importance and procedures of different methods of teaching.
- To familiarize the students about advantages and limitation of various methods.

3.3 Organizing teaching

According to Biggi (1967), teaching can be carried out at various levels ranging from the least thoughtful to the most thoughtful behaviour or mode of action. Consequently, three levels of teaching-learning act have been identified by the psychologists and educationists, namely: -

A) memory level

B) understanding level

C) reflective level

Memory level lies at the bottom and involves least thoughtful behaviour whereas, reflective level at the top needing the involvement of higher cognitive abilities and the most thoughtful behaviour. The understanding level falls in between, requiring the involvement of the thoughtful behaviour in a moderate reasonable amount.

Memory Level: - Memory level falls at the bottom on a 3-point rating scale. Teaching at this level refers to the less involvement of the thoughtful behaviour. In such type, memory plays a key role. Here the educator provides the factual information and the student mug up facts without involving their thinking and reasoning power. They are least cared about understanding of the meaning and applications. Such type of teaching is restricted nearly to the grasping of the facts. The whole efforts revolve around the knowledge through rote learning. The role of the teacher is very dominant and authoritarian type at this level of teaching. Here the educator makes the pupil to listen and emphasize its repetition and drilling work. Learner has a passive role in this type of teaching. Here the learner makes minimum use of his thought processes and depend merely on the use of his capacity for memorization.

For example- multiplication tables; chemical symbols of elements; dates and sequence of the Historical events; words and phrases of the foreign languages; the names and numbers of the bones etc retain India memory and reproduce them when asked to do so.

Understanding Level: - understanding level of teaching represents relatively a high level of teaching in comparison to memory level. It involves the use of one's thought processes and cognitive abilities in the form of reasoning, thinking, imagination, comparison, application, analysis, imagination etc. At this level, teaching is structured in terms of planning sequential and has organised presentation and meaningful learning. Here teaching is linked with the already known knowledge of the learner at one hand and its utilisation for acquisition of new knowledge, facts and application to practical life. Here too, teacher plays a dominant role and is very attentive in presenting the content in order to attain the desired understanding objectives besides the knowledge objectives. Learner here remains active in acquiring the knowledge and act as well as interact as per the framework setup by the teachers for realising the objectives of teaching. Although purpose is involved at understanding level of teaching, yet the nature of motivation at this level of teaching is largely extrinsic as in the case of memory level. Teaching methods employed at the understanding level of teaching includes lecture method, demonstration, explanation, narration, inductive method followed by deductive Ayush for caring after objectives are used for carrying out the objectives at the understanding level.

For example: - seeing relationship between the facts and acquired generalized insight in the form of journalised rules, principles and theories. It gives greater transfer of training or learning from one situation to another.

Reflective level: - Teaching at reflective level is carried out at the most thoughtful modes of operation and it represents the highest level of teaching act. This level provides the quality teaching-learning experiences to the students for enhancing their intellectual abilities to the highest. As the term reflective stands for act of reflection consequently the act of teaching must have its association with the process of reflecting back the existing ideas and information so that fresh conclusion can be made. Teaching at reflective level has its roots in goal insight theory of learning. Its emphasis is on the purposeful perfect, goal-directed, insightful approach to learning and try to acquaint the learner with the art and skill of problem-solving behaviour by identifying its goals & problems and provide solution to the problem in a scientific way. Here, the teacher is neither dominant nor authoritarian like in memory or understanding level of teaching. Here the teachers make the student to discover the facts or generalization. Here the learner has to make use of his cognitive abilities and take all initiative in the problem in the problem-solving processes. At reflective level of teaching, methods like analytic method, Discovery method, problem solving method, assignment method, project method etc are proved quite useful.

For example: - raising problems, initiating mutual discussion and interactions; engaging students in the discovery of the truth of the matter and the solution of the problem as independently as possible.

3.4Check Your Progress

1. Teaching and learning are organised at ……level, ……. level and…… level.

2. Reflective level represent ……level of teaching.
3. Give your insight on memory level of teaching and learning.

3.5 METHODS OF TEACHING

A) INDUCTIVE METHOD: -

Meaning- This method is also known as '**Discovery Method**' as it encourages students to analyse the patterns and build their own generalization. This method of teaching proceeds from specific observations and examples to general rules and concepts. It is a student-centred approach and motivates students to explore, discover and formulate their own understanding of a concept.

The importance of this method lies in its ability to foster critical thinking, promote deeper understanding, and engage students more actively in the learning process.

Inductive teaching starts with specific examples, observations, or data, and students are guided to identify patterns, relationships, and ultimately, formulate general rules or principles. It's a bottom-up approach, moving from the particular to the general.

e.g.- Students are given leaves of the trees and then they are asked to identify the similarities. The students might observe that all leaves are green in colour, all leaves have veins further, they might deduce that all plants need leaves for survival.

Importance:

1. **Active Learning**: Students are actively involved in the process of discovery, making them more engaged and motivated.
2. **Deeper Understanding**: By constructing their own understanding, students develop a more robust and lasting grasp of the concept.
3. **Critical Thinking**: The process of observing, analysing, and drawing conclusions encourages critical thinking skills.
4. **Problem-Solving**: Students learn to identify problems, explore solutions, and evaluate them, enhancing their problem-solving abilities.
5. **Flexibility**: The method allows for flexible learning and can be adapted to various subjects and learning styles.
6. **Starts with concrete examples**: Students first explore the concrete or real-world instances and only then they would be able to solve abstract problems.

7. **Generalization and Rule Formulation**: on the basis of observation students draw broader conclusions for their better understanding.

Steps of the Inductive Method:

1. **Introduce Relevant Learning Materials:**

   Provide students with examples, data, or observations related to the topic. This will help them to understand better and develop their own concepts. It will help the learners to retain the knowledge for longer period of time.

2. **Promote Familiarity and Exploration:**

   Encourage students to examine the materials and connect them to their existing knowledge. Exploration will develop curiosity among the learners and they will try to assimilate the new knowledge.

3. **Identify Emerging Patterns:** It enhances the students observation power and students actively look for trends and relationships in the examples. Guide students to identify recurring patterns, relationships, or commonalities within the materials.

4. **Introduce a Problem or Inquiry:**

   Present a problem or question that requires students to apply their newfound knowledge and understanding.

5. **Generate and Evaluate Solutions:**

   Encourage students to brainstorm potential solutions and evaluate them based on the evidence they have gathered.

6. **Organize Steps and Draw Conclusions:**

   Guide students to organize their steps, draw logical conclusions, and formulate a generalization or hypothesis based on their findings.

Advantages:

1. **High order thinking skills**: it develops higher level of thinking among the students as the students have to analyse the data, identify the pattern, draw conclusion- fosters critical thinking skills.
2. **Individualized Learning**: It promotes the individualised learning as it suits the individual learning styles and paces.
3. **Learner-Centred**: Here the learner learns at their own pace and in their own way so it is purely learner centred.

4. **Encourages active Learning**: Learning through examples makes the learning interesting. It helps the students to actively participate.
5. **Deeper Understanding**: Students tend to retain the information better and have a deeper understanding of a concept by discovering the rule themselves.

Disadvantages:

1. **Time-Consuming:** This method needs exploration and drawing conclusions from the examples can take more time so it is not possible to cover all subjects.
2. **Lack of Skilled Teachers**: This method of teaching required skilled teachers who will be able to guide students effectively to avoid misconception but there is lack of such trained teachers.
3. **Incorrect Generalization**: Based on limited examples students might draw limited examples therefor it requires careful guidance from the teacher.
4. **Assessment Challenges**: Measuring conceptual understanding through this method can be challenging and therefor some alternative assessment techniques are required.
5. **May frustrate learners**: Some students may find this approach confusing because some students may prefer direct learning.

(B) Deductive Method:

Meaning: Deductive method also known as "Analytical or Abstract method". It is a logical process where conclusions are drawn from a set of premises or facts. It follows a top-down approach. The deductive method of teaching involves presenting general rules or principles first, followed by specific examples and applications, ultimately allowing students to understand and apply the concepts. It's a teacher-centred approach, suitable for introducing new concepts and building a strong foundation for learners. The importance of deductive teaching lies in its ability to provide a structured, systematic approach to learning, making it easier for students to grasp complex ideas.

The deductive method is a teaching strategy that starts with general rules or principles and then moves to specific examples and applications. It's a logical process of reasoning from the general to the particular. It's also known as a "top-down" approach because it starts with broad ideas and then breaks them down into smaller parts.

Importance:

1. Structure and Clarity: Deductive teaching provides a clear and structured way to present new information, making it easier for students to understand and remember.

2. Foundation Building: It's particularly effective for introducing new concepts and building a strong foundation for further learning.
3. Teacher Control: This method allows teachers to maintain control over the learning process, ensuring that students are exposed to the necessary information in a logical sequence.
4. Suitable for Beginners: Deductive teaching can be helpful for students who are new to a subject or concept, as it provides a clear and structured way to learn.

Steps of Deductive Method:

1. Present the General Rule or Principle: Introduce the main concept, rule, or principle that will be taught.
2. Provide Specific Examples: Illustrate the rule with concrete examples to help students understand its application.
3. Encourage Application: Give students opportunities to apply the rule or principle in various contexts, such as problem-solving or practice exercises.
4. Reinforce and Review: Provide feedback and reinforcement to ensure that students have grasped the concept and can apply it effectively.

Example:

In teaching geometry, a teacher might use the deductive method by first introducing the Pythagorean theorem (a general principle), then providing examples of right-angled triangles and their sides (specific examples), and finally asking students to calculate missing sides or angles using the theorem (application).

Key Differences from Inductive Method:

1. The deductive method starts with rules and then examples, while the inductive method starts with examples and then encourages students to discover the rules.
2. Deductive teaching is more teacher-centred, while inductive teaching is more student-centred.
3. Deductive teaching is suitable for introducing new concepts, while inductive teaching is suitable for exploring existing knowledge and forming new generalization.

Advantages:

1. **Provides Clarity:** It provides clear and structured framework for introducing new concepts. It makes the complex ideas easier to grasp.
2. **Time-Saving:** It provides more time to spent on practice and application by starting the topic

with general rules and therefore makes the method more efficient.

3. **Suitable for learner:** This method is suitable for those learners who prefer a direct explanation of rules i.e. structured and sequentially organised content.
4. **Accuracy:** This method is effective in reinforcing understanding by emphasising the precise application of rules.
5. **Efficiency:** It allows for a more straightforward explanation of rules rather than exploring the knowledge.

Disadvantages:

1. **Passive Learning:** This method is less engaging as it relies heavily on teacher explanation and may not encourage active exploration.
2. **Hinders Creativity:** As this method simply focus on generalized rules and facts, it does not provide opportunity to learners to explore or learn though self. In this way it hinders the creativity and originality of the learners.
3. **Teacher- Centred:** This method relies only on teacher explanation so it provides very less opportunity to learners to actively participate in teaching-learning process and ultimately leads to less student-centred learning environment.
4. **Memorization Over Understanding:** Some Students may prioritize memorizing rules over truly understanding them, that leading to superficial learning.
5. **Difficulty for Young Learners:** Abstract rules may be challenging for young students who are yet not able to grasp complex concepts.

(C) PROJECT STRATEGY

Project strategy is propagated by Sir John Dewey and it the end result of pragmatic ideas.

"What is to be taught should have a direct relationship with the actual happenings in life" –this core idea which forms the basis of project method. The principle of correlation has been emphasised through this strategy and attempts has been made to impart impart education of all the subjects in integrated way by co-relating the content with the actual-life activities. In order to understand this strategy, there is dire need to comprehend the meaning of the term 'project.' Different educationist defined it in the following ways:

According to Stevenson (1922), "A project is a problematic act carried to completion in its most natural setting."

According to Kilpatrik (1921), “A project is a whole-hearted purposeful activity proceeding in a social environment.”

Ballard, H.G. (1936) says, “A project is a bit of real life that has been imported into school.”

The above stated definitions reveal the characteristics of a project strategy:

1. It is a performance which is related to real life activities.
2. In order to solve the emerging problem, this act is undertaken for the realization of purposeful objectives.
3. It is always completed in a social environment and natural setting.
4. It is such an act that is most interesting and absorbing.

These characteristics may help us understand a project as automatic, interesting, self-absorbing, problem oriented and purposeful act which can be accomplished in a complete natural as well as social settings.

Steps involved in the implementation of project strategy

To go with the project strategy, there are some definite planned steps necessary for realisation of objectives:

1. Providing a situation
2. Choosing and purposing of the project
3. Planning of the project
4. Execution of the project
5. Evaluation of the project
6. Recording of the project

Let us now discuss these steps one by one.

1. **Providing a situation**: - First, attempts are made to provide a situation for feeling a necessity of choosing and working on a project. Many times, there is a spontaneous upsurge of such situation, otherwise the teacher must plan for the creation of such situations. The students may spot out a problem while having discussion in the classroom, working in the laboratory or engaging in extracurricular activities, going on some excursions, or visiting some places of scientific or general interest.
2. **Choosing and purposing**: After having confrontation with some genuine problem the students may be persuaded to think about its possible solution by selecting some appropriate project. In

the light of the many alternatives suggested by the students they are persuaded to choose the best appropriate project subject to the availability of the resources in hand and the derivation of maximum educational advantages out of it. The objectives and purposes of choosing this project should then be made clear to all the students after having useful discussion.

3. **Planning of the project**: Every project, for its useful implementation, needs a careful planning. Therefore, all efforts should be made by the students for chalking out a detailed strategy to carry out the chosen project. Under the active guidance of the teacher, the students should be made to hold lively discussion, have consultation with suitable experts and utilize library and other resources for the planning of their project. The duties and responsibilities, individually or collectively in small groups, should also be distributed among them at this stage and decision about the collection of finances, should also be taken for carrying out the project.

4. **Execution of the project**: The project is a joint venture and hence its successful execution needs the combined efforts and joint responsibility on the part of all students related to the project. What is planned at the planning stage is thus made the subject of implementation at the execution stage. Every member of the group works whole-heartedly with a sole purpose of its successful execution. The difficulties, if any, are solved by cooperation under the guidance of an experienced teacher. Students may thus get valuable opportunity for having theoretical understanding and practical application of the many facts and ideas of the subjects of their curriculum.

5. **Evaluation of the project**: Evaluation is a continuous process and for having evaluation of the project work, efforts are made to have review and assessment of the individual and group work of the students from time to time. Discussions are held to have a free and frank exchange of ideas, self, or group evaluation for improving the execution of the activities of the project or seeking changes in the planning and procedure in any aspect or dimension of the execution work. In the end, when the project is fully executed, an overall assessment in terms of what is being done, achieved, or not achieved, difficulties felt or lessons learned is made by holding useful discussion.

6. **Recording of the project**: There should be a truthful recording of the work and events related to each step of the project. How the project was chosen, how it was planned and executed, what difficulties were faced and what results were achieved, should be adequately recorded for future reference as well as improvement.

ADVANTAGES

The project method offers several benefits, including fostering student engagement, promoting real-world learning, developing critical thinking and problem-solving skills, and enhancing social and communication

abilities. It also encourages self-directed learning and responsibility, allowing students to take ownership of their learning process.

A) Enhanced Learning and Engagement:

1. Real-world application: Projects connect learning to real-life situations, making it more meaningful and engaging.
2. Active learning: Students actively participate in the learning process, which leads to deeper understanding and retention.
3. Motivation and interest: The opportunity to choose project topics and work on tasks they find interesting fosters motivation and a sense of ownership.

B) Skill Development:

1. Critical thinking: Projects require students to analyse information, solve problems, and make decisions, developing their critical thinking skills.
2. Problem-solving: Students learn to identify issues, research solutions, and implement strategies to overcome challenges.
3. Communication skills: Working on projects often involves collaboration and communication with peers and teachers, enhancing communication abilities.
4. Social skills: Project work fosters teamwork, cooperation, and the development of social skills.
5. Self-reliance and responsibility: Students take initiative, manage their time, and learn to be accountable for their work.

C) Other benefits:

1. Correlation of subject matter: Projects help students connect different subjects and see how they relate to real-world situations.
2. Transfer of learning: The skills and knowledge gained through projects can be applied to other learning experiences and real-life situations.
3. Democratic approach: Project work encourages collaboration and participation, fostering a sense of community and shared responsibility.
4. Flexibility and adaptability: Projects can be adapted to different learning styles and interests, allowing for personalized learning experiences.

Limitations

1. Time and Cost: Project-based learning can be very time-consuming, both for teachers in planning

and students in executing the project. The method also requires significant resources, including materials, equipment, and potentially external expertise, making it potentially costly.

2. Subject Matter Suitability: The project method is best suited for subjects that lend themselves to hands-on, practical application. It may not be ideal for subjects that require a more sequential or structured approach to learning, or for those that lack a strong emphasis on practical work.
3. Assessment and Equity: Subjectivity can be an issue when assessing project-based learning, as the focus often shifts from objective knowledge to factors like creativity, effort, and collaboration. This can create inequities, as some students may have greater opportunities or skills in certain areas, leading to disparities in outcomes.
4. Teacher Expertise and Shortage: Effective project-based learning requires teachers with strong pedagogical skills and the ability to guide and facilitate student-led learning. This can lead to a shortage of teachers capable of implementing the method effectively, as not all educators may have the necessary training or experience.

D) ANALYTIC METHOD

Meaning: Analytic method of teaching involves the break-down of a problem or concept into its individual components and then analysing those elements to understand the whole. This method is particularly useful for inculcating the critical thinking, reasoning and problem-solving skills among the learners.

Procedure:

1. **Selection of the Topic:** First of all, teacher select the topic which is to be delivered in the class. He keeps in mind the need, interest and requirement of the students while selecting its content.
2. **Breaking Down:** Here the teacher breakdown the topic into small-small subunits or components but in a manageable way. Then teacher disseminate the information about each and every component.
3. **Analysis:** Each component is examined in detail and focussing its relationship to the whole. In this way it contributes to the overall understanding.
4. **Recombination:** After analysis of all the components, the teacher and students collaboratively synthesise the information, building back to a comprehensive understanding of the original problem or concept.
5. **Establishing Whole:** Comprehensive understanding of the contents leads to establishment of whole concepts.
6. **Unknown to Known:** in this whole method we start with unknown problem and work towards finding solutions by connecting it to established knowledge.

Advantages:

1. **Critical Thinking:** This method develops critical thinking among the learners. Here the learner analysis the various components and identify its relationships, draw inferences and evaluate the information.
2. **Promotes Reasoning:** This method encourages logical thinking and ability to connect different ideas and draw inferences which leads to arrive at a conclusion.
3. **Enhances Understanding:** Breaking down of complex concepts into smaller and manageable components can make learning more-easier, accessible and understandable.
4. **Builds Confidence:** It builds confidence in the learners and they can navigate the analysis and synthesis process successfully.
5. **Problem-Solving**: It develops problem-solving attitude among the learners and they gain insight to tackle the challenges independently.
6. **Effective**: This method is well-suited for teaching mathematical concepts as it allows the students to break-down the problems and understand the underlying principles.

Disadvantages:

1. This method is time-consuming as it requires thorough analysis and synthesis.
2. It might not suitable for all students and for all subjects.
3. It requires effective teacher guidance.
4. In some complex problems it is challenging to arrive at conclusion.

E) Synthetic Method:

Meaning:

The synthetic method of teaching involves building new knowledge by combining known facts or components, moving from simple to complex, and from known to unknown. It is a valuable approach in education, particularly in fields like mathematics and language learning, where developing comprehensive understanding from fundamental elements is crucial.

Importance:

1. Foundation for Understanding: The synthetic method helps students build a solid foundation of knowledge by starting with basic concepts and gradually constructing more complex ideas.
2. Logical Reasoning: It fosters logical thinking and problem-solving skills as students learn to

connect individual pieces of information to arrive at a complete picture.

3. Efficiency: By presenting information in a structured and systematic way, the synthetic method can be more efficient than methods that start with the unknown or abstract.

Steps or Procedure:

1. Identify Fundamental Components: Break down the topic into its basic elements or building blocks.
2. Introduce Basic Concepts: Start with the most fundamental knowledge or facts.
3. Combine and Build: Gradually introduce more complex concepts by combining the basic elements in a logical sequence.
4. Apply and Generalize: Encourage students to apply their newfound knowledge to new situations and generalize their understanding.

Advantages:

1. Structured Learning: The synthetic method provides a clear and organized structure for learning, making it easier for students to follow and understand.
2. Logical Thinking: It encourages students to think logically and systematically, developing their problem-solving skills.
3. Efficiency: By starting with basics and building progressively, the method can be more efficient than other approaches.
4. Application to Various Subjects: It can be adapted to various subjects and learning contexts, making it versatile.

Disadvantages:

1. Potential for Rote Learning: If not implemented properly, the synthetic method can lead to rote memorization without genuine understanding.
2. Limited Creativity: The structured approach may limit opportunities for students to explore ideas and develop creative thinking.
3. Teacher-Centered: It can be a teacher-centred approach, with students potentially becoming passive listeners.

Examples: Mathematics: Teaching basic arithmetic operations (addition, subtraction) before moving on to more complex calculations (multiplication, division).

Language Learning: Introducing the alphabet and phonetics before teaching reading and writing skills.

History: Presenting historical events in chronological order to build a sense of context and timeline.

(F) BRAINSTORMING

The term "brainstorming" literally refers to the act of "storming" the brain to come up with a large number of ideas quickly. It's a way to tap into the collective intelligence of a group and generate innovative solutions or approaches. Brainstorming is a group creativity technique used to generate a large number of ideas, typically for problem-solving or idea generation. It involves a free-flowing exchange of ideas, with the emphasis on quantity over quality initially, and with no judgment or criticism of the ideas during the session. The goal is to encourage participants to think creatively and explore various possibilities. As a strategy, it was popularized by A.F. Osborn (1963) through his writing Applied Imagination.

IMPORTANCE

1. **Encourages Creative Thinking**: Brainstorming creates a space for free-flowing ideas without judgment. It helps participants think beyond conventional solutions and generate original, innovative ideas that may not emerge in a structured setting.
2. **Promotes Teamwork and Collaboration**: It brings people together to contribute different viewpoints. This collaborative environment enhances group cohesion, strengthens team dynamics, and allows for the combination of diverse skills and knowledge.
3. **Generates a Variety of Solutions**: By inviting multiple people to contribute, brainstorming produces a wide range of possible solutions to a problem. This diversity improves the chances of finding the most effective and efficient approach.
4. **Enhances Problem-Solving Skills**: Engaging in brainstorming helps individuals and teams approach problems with an open mind. It trains people to explore alternatives and think critically, which strengthens problem-solving capabilities over time.
5. **Boosts Engagement and Participation**: When people are encouraged to voice their ideas, they feel more involved and valued. This active participation can increase morale, motivation, and a sense of ownership over the outcome.
6. **Breaks Mental Blocks and Routine Thinking**: Brainstorming helps participants break away from habitual thinking patterns. It pushes them out of their comfort zones and encourages looking at problems from new angles.
7. **Improves Decision-Making**: With a wide array of ideas on the table, decision-makers can compare, combine, and refine the best ones. This leads to more informed and balanced decisions.
8. **Identifies Hidden Opportunities**: Sometimes, unexpected, or unusual ideas during brainstorming can reveal opportunities or insights that were not initially considered. This helps uncover creative

approaches or untapped resources.

9. **Builds Confidence**: A non-judgmental brainstorming environment empowers individuals to share their thoughts without fear of criticism. This boosts self-confidence and encourages more proactive idea sharing in the future.
10. **Fosters a Culture of Innovation**: Regular brainstorming sessions signal that creativity and input are valued. Over time, this cultivates a workplace or learning culture that embraces experimentation, innovation, and continuous improvement.

STEPS FOR BRAIN STORMING

The procedure for using brain storming as a teaching strategy may be outline as follows:

1. To start with, a small group of students (say 10 to 15) is formed. They are asked to sit in a group and provide with a focus e.g. a particular problem like "student unrest," "growing unemployment in India" or "how to check the truancy in our school," etc.
2. Teacher, as a leader of the group then asked the group members to think about the solution of the problem and give their ideas one by one as rapidly as possible. They are advised to attach the faced problem without any inhibition form many angles; in fact, literally storming it with all possible ideas and solutions. For providing these ideas, they may be instructed as follows:
   (a) Yor are faced with this problem now; think about the possible solution or solutions as you may think proper.
   (b) Come out with as many ideas or solutions as possible. Do not care for the criticism. Provide your suggestions and ideas without any hesitation even if they seem to you quite noble, unusual, and unorthodox.
   (c) Do not criticize others' ideas, but you are free to make alteration, enlargement and synthesis in the ideas or solutions given by others.
   (d) You are also free to alter or improve your own ideas and solutions given by you earlier in this session.
3. In this way, students are encouraged and inspired for giving as many as ideas or solutions as possible. The group members and the leader are supposed to receive these responses in the light of the following precautionary measures or norms:
   (a) All ideas are to be encouraged and appreciated; therefore, no criticism is allowed during the brain storming session.
   (b) Ideas are to be listened and accepted patiently, without passing any judgment or

comments of any sort until the session is over.

(c) Members are not restricted to new ideas but are also encouraged to enlarge upon ideas put forward by other fellow students.

(d) All the ideas and alterations are to be recorded properly (preferably written on the blackboard or displayed on the screen).

4. At the end of the brainstorming session, all the solutions and ideas received from the members are discussed in a free and frank democratic environment. Out of this discussion (wisely guided by the group leader) the most viable ideas are accepted for the solution of the problem in hand.

ADVANTAGES

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10. **Fosters a Culture of Innovation**: Regular brainstorming sessions signal that creativity and input are valued. Over time, this cultivates a workplace or learning culture that embraces experimentation, innovation, and continuous improvement.

DISADVANTAGES

1. **Groupthink Can Occur:** In group settings, individuals may feel pressured to conform to dominant ideas or opinions. This can suppress unique perspectives and lead to a consensus that is not necessarily the best solution—this is known as groupthink.
2. **Dominance by a Few Participants**: In some brainstorming sessions, outspoken or senior individuals may dominate the discussion, leaving others reluctant to contribute. This reduces the diversity of ideas and limits input from quieter participants.
3. **Time-Consuming Process**: While brainstorming can be productive, it can also take a lot of time—especially if the group is large or unfocused. Sessions can drift off-topic and extend unnecessarily without producing concrete results.
4. **Ideas May Lack Feasibility**: Many ideas generated in brainstorming are creative but unrealistic. Filtering through impractical suggestions to find viable solutions can be a lengthy and frustrating process.
5. **Distractions and Lack of Focus**: Without proper facilitation, brainstorming sessions can become chaotic. Participants might go off-topic, joke around, or get sidetracked, reducing the efficiency and productivity of the session.
6. **Evaluation is Delayed**: Since brainstorming encourages withholding judgment initially, some unworkable or low-quality ideas are recorded and kept longer than necessary. This can clutter the idea pool and slow down the decision-making process.
7. **Not Suitable for All Personality Types**: Introverted or shy individuals may find it difficult to speak up in a group setting, especially in the presence of more assertive people. This can prevent valuable insights from being shared.
8. **Requires Skilled Facilitation**: Effective brainstorming depends on a skilled facilitator to guide the session, manage time, and ensure equal participation. Without proper guidance, the session may lose structure and purpose.
9. **Risk of Idea Theft or Lack of Credit:** In group settings, it is sometimes unclear who originally

came up with a specific idea. This can lead to disputes over recognition or feelings of being undervalued among team members.

10. **Can Create Overload of Information**: Brainstorming can produce an overwhelming number of ideas, making it difficult to prioritize and choose the best one. This idea overload can lead to confusion or decision paralysis.

3.6 Check Your Progress-2

1. Highlight the steps of inductive method.

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2. What do you mean by Brain Storming?

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   …….....

3.7 GLOSSARY/KEYWORDS

1. Inductive- tending to induce
2. Deduce- to reach a conclusion
3. Synthesis- formation of something complex
4. Analyse- to examine

3.8 Let Us Sum Up

In nut shell, we can say that teaching can be performed at various levels Ranging from the least thoughtful to the most thoughtful behaviour or mode of action. Memory level lies at the bottom and involves least thoughtful behaviour whereas, reflective level at the top needing the involvement of higher cognitive abilities and the most thoughtful behaviour. The understanding level falls in between, requiring the involvement of the thoughtful behaviour in a moderate reasonable amount. The process of teaching task is carried out to achieve certain set desirable objectives. It is carried out by the teacher for students in a conducive teaching-learning environment. Teaching act requires a planned and organised sequential activity. The teacher used different methods of teaching to suit the needs, requirements and potential of the learner.

3.9 Self-Assessment Questions

1. Give the meaning and importance of inductive method.
2. Discuss the advantages and disadvantages of Project method.
3. Discuss the procedure of Analytic method of teaching.

3.10 Suggested Readings:

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LESSON : 4

Individualized and Cooperative Teaching and Learning

STRUCTURE

4.1 Introduction-

Dear learner, for teaching and learning the content developer may go for the evolution of the appropriate programmed learning systems for self-instruction or self-learning on the account of learners. Emphasis is laid on the needs, requirement and interest of the students so that they can learn the content with their own pace and understanding. In this lesson we shall highlight the individualised and cooperative methods of teaching which are very essential in teaching-learning processes.

4.2 Learning Objectives-

The learning objectives would be -

- To acquaint the students about individualised methods of teaching.
- To acquaint the students about cooperative methods of teaching.

- To enable them to understand the different modes of instruction.
- To apprise the students about importance and procedures of individualised and cooperative methods of teaching.

4.3 Concept of Individualised teaching:

Individualized teaching and learning are an educational approach that tailor instruction to meet the unique needs, strengths, and weaknesses of individual learners. It moves away from a "one-size-fits-all" method, recognizing that students learn differently and at different paces. This approach involves adjusting content, pace, methods, and materials to accommodate individual learning styles, preferences, and background knowledge.

Key Principles of Individualized Instruction:

1. **Centred:**

   The focus is on the individual learner's needs and how they learn best, rather than a standardized curriculum.

2. **Assessment-Driven:**

   Teachers continuously assess students' progress and use this information to adjust instruction.

3. **Flexibility and Adaptability:**

   The learning process is designed to be flexible and responsive to individual needs.

4. **Personalized Learning:**

   Students have more autonomy in their learning journey, with opportunities to set goals and work at their own pace.

5. **Multiple Intelligences:**

   Recognizes that individuals learn in different ways (e.g., visual, auditory, kinesthetic) and adapts instruction accordingly.

How Individualized Instruction Works:

a) **Differentiated Instruction:**

   Teachers adjust the content, process, product, and learning environment to meet diverse student needs.

b) **Small Group Instruction:**

   Students work in smaller groups based on their learning needs and abilities.

c) **Independent Study:**

Students have opportunities to explore topics independently, often using a variety of resources.

d) **Tutoring:**

Students receive individualized support from peers or teachers.

e) **Project Work:**

Students engage in in-depth learning through projects that allow them to demonstrate their understanding.

Importance of Individualized Instruction:

1. **Increased Engagement:** Students are more motivated when they feel their needs are being met.
2. **Improved Learning Outcomes:** Students are more likely to achieve mastery when they learn at their own pace and in a way that suits them.
3. **Greater Success:** Students are more likely to succeed when they feel supported and challenged in a way that matches their individual needs.
4. **Development of Self-Regulation:** Students develop greater responsibility for their own learning.

Challenges of Individualized Instruction:

1. **Time and Resources:** Individualized instruction can be time-consuming to plan and implement.
2. **Teacher Training:** Teachers need to be trained in how to assess and adapt instruction for individual learners.
3. **Large Class Sizes:** It can be challenging to individualize instruction in large classrooms.

In essence, individualized teaching and learning aims to create a more personalized and effective learning experience for all students, allowing them to reach their full potential.

Concept of Cooperative Teaching and Learning

Meaning: Cooperative teaching and learning strategies involve students working together in small groups to achieve shared goals, promoting social skills and collaboration. These strategies emphasize positive interdependence, individual accountability, and face-to-face interaction, creating a more engaging and effective learning environment.

Here are some key cooperative learning strategies:

1. Jigsaw Method: Students are divided into “expert” groups, each focusing on a specific part of

a topic. They then become "experts" in their area and teach their knowledge to other groups, fostering a shared understanding.

2. Think-Pair-Share: Students individually think about a question or topic, then discuss it with a partner before sharing their ideas with the whole class, encouraging active participation and peer learning.
3. Numbered Heads Together: Students are assigned numbers and work collaboratively to resolve a problem or answer a question. When the teacher calls out a number, any group member with that number is ready to share their group's answer, ensuring individual accountability and engagement.
4. Pair-Share: Students discuss a question or topic with a partner and then share their insights with the class, facilitating interaction and idea exchange.
5. Group Projects: Students work on a common project, dividing tasks and contributing their individual strengths to achieve a shared goal, promoting teamwork and collaborative skills.
6. Role Assignment: Assigning specific roles within groups, such as facilitator, recorder, or presenter, helps students understand their individual contributions to the group's success.
7. Positive Interdependence: Ensuring that students are interdependent for success in the group, meaning their success depends on the efforts of all members, fosters a sense of shared responsibility and cooperation.
8. Individual Accountability: Holding each student accountable for their individual contributions within the group, ensures that everyone actively participates and learns from the experience.
9. Group Processing: Regularly evaluating the group's effectiveness and identifying areas for improvement, helps students develop their collaboration skills and learn from their experiences.

Importance

1. Improved Academic Performance: Studies show that cooperative learning leads to higher achievement and better retention of information.
2. Enhanced Social Skills: Students develop essential skills like communication, teamwork, conflict resolution, and empathy through group work.
3. Increased Motivation and Engagement: The collaborative nature of cooperative learning makes learning more engaging and enjoyable, leading to greater intrinsic motivation.
4. Positive Relationships and Self-Esteem: Working together in small groups fosters positive relationships and can boost students' self-esteem.
5. Development of Higher-Order Thinking: Cooperative learning encourages students to actively participate in the learning process, think critically, and solve problems together.

6. Preparation for Real-World Skills: Cooperative learning prepares students for collaborative work and teamwork, which are valuable skills in many professions.

How Cooperative Learning Works:

- Small Groups: Students work in small groups (usually 2-5) to accomplish a shared learning objective.
- Clear Objectives: Tasks and roles within the group are clearly defined to ensure individual accountability and a shared understanding of the goal.
- Positive Interdependence: Students understand that they are all interdependent and need to work together to achieve the set target.
- Individual Accountability: Each student is responsible for their own learning and contribution to the group.
- Equal Participation: All students have an equal opportunity to participate and contribute to the learning process.
- Face-to-Face Interaction: Students interact directly with each other to discuss ideas, solve problems, and learn from each other.

Language Laboratory

Language laboratory is a dedicated space, often equipped with technology, that helps students learn and practice language skills, particularly speaking and listening. It provides an environment for active participation and increased practice compared to traditional classrooms, emphasizing pronunciation, grammar, vocabulary, and fluency. The significance of a language lab lies in its ability to enhance language acquisition by offering structured practice, individualized feedback, and a stimulating learning environment.

Concept of a Language Laboratory:

1. Dedicated Space: A language lab is a physically separate area designed for language learning, often including audio/visual aids, computer access, and sometimes isolated booths for practice.
2. Technology-Enhanced Learning: It utilizes technology to deliver audio and visual materials, allowing students to listen to native speakers, record their own speech, and receive feedback.
3. Active Participation: The lab encourages active participation through various activities like pronunciation drills, listening exercises, and interactive software.
4. Focus on Oral Skills: The lab emphasizes the development of speaking and listening skills, which can be challenging to cultivate in traditional classroom settings.

Significance of a Language Laboratory:

1. Enhanced Language Acquisition: Language labs provide a structured and supportive environment for students to practice and improve their language skills.
2. Improved Pronunciation and Fluency: Students can practice pronunciation by listening to and replicating model sounds, and the lab provides opportunities to build speaking fluency through exercises and dialogues.
3. Individualized Feedback: Many labs offer software that allows students to record themselves, listen to their recordings, and compare their pronunciation to a model, providing immediate feedback.
4. Increased Confidence: The controlled environment and opportunities for self-assessment can help students build confidence in their language abilities.
5. Versatile Tool for Language Learning: Language labs can be used for various language learning tasks, including pronunciation drills, vocabulary building, grammar practice, and writing exercises.
6. Cost-Effective Learning: English Language Lab can be more cost-effective than traditional methods, as they can serve multiple students simultaneously.

Tutorials

tutorial is a form of instruction, either through interactive sessions with a tutor or through structured guides (like written or video tutorials), designed to provide practical knowledge and guidance on a specific subject or task. The significance of tutorials lies in their ability to enhance learning by making complex concepts more accessible and engaging, promoting active participation and problem-solving skills.

Concept:

1. Interactive Learning: Tutorials can involve face-to-face meetings with a tutor for small groups or one-on-one instruction, allowing for personalized guidance and discussion.
2. Structured Instruction: Tutorials can also take the form of written guides, video demonstrations, or software-built instructions, providing step-by-step guidance on how to perform a specific task.
3. Problem-Solving Focus: Many tutorials are designed to help learners tackle challenging concepts and develop problem-solving skills through interactive exercises and guided discussions.
4. Active Participation: Tutorials encourage active learning by involving learners in discussions, asking questions, and exploring different approaches to understanding the material.

Significance:

1. Enhanced Understanding: Tutorials help learners grasp complex information more effectively by providing clear explanations, practical examples, and opportunities for active engagement.
2. Improved Problem-Solving: Tutorials foster problem-solving abilities by guiding learners through the process of identifying challenges and finding solutions.
3. Increased Confidence: Tutorials can boost learners' confidence by providing a supportive environment for asking questions, making mistakes, and learning from them.
4. Independent Learning: Tutorials can help learners develop into independent learners by providing them with the knowledge, skills, and confidence to tackle future learning challenges on their own.
5. Personalized Learning: Tutorials can be tailored to meet the specific needs and learning styles of individual learners, ensuring that they receive the support they need to succeed.

Personalized system of instruction

Professor Fred S. Kelker along with some of his Associates originated a new system of instruction known as personalized system of instruction in March 1963. The personalise system of instruction was initially used in the University of Colombus for instructing new psychology programme. In order to pay tribute to its main designer, this system of instruction is also Known as Keller plan.

The promoters of Keller's plan were highly encouraged and impressed by the then most prevalent individualised system of instruction devised by Professor B.F Skinner, well-known as programmed instruction. They tried to enhance its scope and making its use in higher classes and Higher Learning. Personalized system of instruction was intended to develop a strong system that might:

a) provides larger frames

b) possess more flexibility

c) adaptability

d) introduce a personal social element

e) bring a significant change in the role of the teacher from giving mere information to manager of the learning of all individual students.

By keeping in mind, the above points, Keller and his Associates conducted various experiments and research and ultimately, introduced this new system of instruction.

Meaning:

The personalized system of instruction means a system of instruction which is totally personalised or individualised. The pupil who is receiving instruction is a main figure here. He dominates the whole process of teaching- learning. The decision what instruction should be imparted and how it is to be carried out to be carried out, is purely based on the needs, interest and abilities of the individual learner. In this way, instructions are carried out and received by the individual learner in the teaching learning process in his own way. In this system of teaching learning process, the learner is a central figure.

Definitions:

Naper (1980): Personalized system of instruction is, basically, a system where students learn according to their pace, work independently and masters the content of the particular designed curriculum. Objectives and instructions are provided in every unit regarding the reading assignment and the related problem. Once the student gets mastery over the content, he may undergo a brief test on that unit. It is inevitable for the student to undergo a test for being permitted to work on the next unit. Student observer evaluates these unit test which is taken by the students.

From the definition we can arrive on the following conclusions regarding characteristics of personalized system of instruction (PSI):

1. **Personalized system of Instruction:**

   Here the instruction can be carried out on personal basis according to the need and interest of an individual by serving individual learner individually.

2. **Individualized Learning:**

   The curriculum is designed to fit the needs, interest and abilities of the learner rather than one size fits all learner.

3. **Flexible pacing:**

   Here the learner can procced and learn according to his pace and he is free to work independently.

4. **Continuous assessment:**

   Regular monitoring of students understanding enable the teachers to provide continuous feedback about their learning.

5. **Formative and summative assessment:** Both ongoing feedback (formative) and summative (final) helps the learner to enhance their learning as well as understanding.

6. **Clear learning goals:**

   The subject matter can be divided into small organised units and necessary instructions and material

facilities is also provided for going through the units. This helps the students to remain focused on their respective learning goals.

7. **Mastery based learning:**

   Here the individual is required to gain mastery over the subject matter. He can test his accomplishments by appearing unit test and he is never compared with the accomplishments of his fellow students.

8. **Regular feedback:**

   Teacher has to provide regular, suitable and timely motivation and feedback to all the individual learners so that they can make improvements as well as progress in there interested areas.

9. **Teacher- students collaboration:**

   Teacher work with students to plan the individualised learning and provide guidance and support throughout the learning process.

10. **Personalized tutoring:**

    This system provides one on one guidance, direction, support and supervision.

11. **Problem of wastage and stagnation:**

    Personalized system of instruction late in faces on the master level to be acquired by the individual learner. No time limit is fixed for the achievement of it. When one attains one Level, he is permitted to proceed further on the subsequent unit. In this way, it reduces and checks the problem of wastage and stagnation faced by the learner in the traditional system.

12. **Role of the teacher:**

    In this system, a teacher has to play a significant role in the teaching learning process. He has not only to impart knowledge and information to the students rather it is mandatory for the teacher to provide individualised and personalized instruction to students. In this way, his responsibility as a teacher is greatly appreciated in the personalized system of instruction.

Advantages:

1. Personalized system of instruction helps the learner to work independently.
2. It enables the learner to carry on their path of learning with their own feasibility.
3. It helps the learner to attain mastery over the content.
4. This method is more suitable to the teaching of higher classes and college courses in comparison to school classes.
5. This system is useful in teaching all the subjects that need convergent thinking on the part of learner.

6. This system help the individual to develop good study habits and work regularly on the successive course unit at his own pace.
7. The system makes the learner quite responsible, disciplined and sincere in the process of learning.
8. With the help of this system, the learner can develop positive attitude towards learning and education.
9. Personalised system of instruction helps in developing positive personal social element in the process of teaching and learning.
10. Instruction and guidance are provided to the Learner through face-to-face and one- to-one basis.
11. For making this method quite effective and efficient, the use of proctors plays an important role in the method of instruction.

In this way, personalized system of instruction proves a quite effective individualised instruction strategy in comparison to other ones.

Disadvantages:

1. Lack of trained and skilled teachers, as it is not included in the courses of teacher preparation of various University. Therefore, the teachers lack in such type of knowledge.
2. As change is not easy and nobody wants to work out of their comfort zone. Such attitude of rigidity is a great obstacle in adopting this new instructional system.
3. The feasibility, workability and effect of this system as a method of instruction have not been properly tested and evaluated in our Institute. Unless it is not properly tested, there would be reasonable resistance from the traditionalists.
4. Personalised System of instruction faces a lot of practical difficulties in being adopted as a method of instruction because for its implementation, our classroom environment and resources can hardly meet the requirements.
5. As the system provides full freedom to the learner in completing his unit at his own pace, there is a dangerous and possibility that he may miss utilise this freedom investing his time.

4.4 Check Your Progress-1

1. Write five principles of individualised method of teaching.

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2. Highlight challenges of individualised instruction.

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3. Give the concept of language laboratory.

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4.5 Learner Controlled instruction

Introduction:

The psychologist all over the world agree that no two individuals are alike, they vary in their likings, disliking, attitude, aptitudes, abilities, capabilities, interest etc. Consequently, the educationists and psychologists accepted to provide the learning or education of the learner according to their individual differences. It increased the persistent endeavours on the part of educationists to tailor the individualised instruction. In simple manner, individualisation of instruction means tailoring of the instruction according to the individual needs and abilities of the learner which is most appropriate/accurate for the learner. For carrying out the system, the researchers and psychologists have developed on number of proper instructional plans and schedule. learner controlled instruction is one of among them.

Meaning: learner-controlled instruction as the name depicts, means the type of instruction which is purely under the control of the learner. In the conventional method of instruction, the entire process of teaching and learning is dominated by the teacher themselves. The learner had to follow the learning sequences which were always predetermined and travel to already fixed learning path. Learner controlled instruction is an open revolt against the traditional methods of teaching and learning. It suggests that an individual pupil can understand and learn better if an opportunity is given to him to follow his own learning style, evolve his own sequence of understanding and engagement according to his choice while using the teachers as a resource person. Here the learners take the lead and teacher follows. The teacher does not initiate. The individual learner decides what to-ask, to do and how to proceed on the learning course for the realisation of pre-planned goals of education. The teacher does not act but he is there to offer his help whenever needed by the learner. He simply reacts and respond to the different requirement of the students. There is a close interaction between the teacher and the learner but the key of this instruction lies with the learner.

In nut shell, it is the method of individualised instruction, where the students have full control over the

teaching-learning process process right from the formulation of objectives to the accomplishment. Leading all the way throughout and make the teachers to help the learner nearly in the capacity of a good resource person.

Steps involved in learner-Controlled Instruction:

1. **Decision about the initial behaviour-**

   Here the learner is provided an opportunity to initiate learning according to his abilities and potential because he knows better about himself.

2. **Decision regarding the formulation of objectives-**

   Here what the learner wants to study and where he needs to reach is again decided by the learner himself. In terms of educational goals, the teacher provides help to set clearly specified objectives in behaviour terms.

3. **Selection and Sequence of the learning -**

   Here the learner is left free to instruct himself in anyway and in any order. For the realisation of set objectives, the learner can do any activity or experiment he wishes. He gets assistance from the teacher or any resource if he wants. In this way the learner develops his own learning Strategies and sequence according to his need interest and abilities for educational goals.

4. **Evaluation of instructional process-**

   Though the whole control of learning lies in the hands of the learner but the whole instructional process becomes a shared responsibility of both the teacher and the learner. The teacher always helps and assist the individual learners in the achievement of objectives. The teacher persuades the learner to evaluate themselves in terms of learning outcomes. Besides this the teacher help the learner to supervise their work and activities and provide guidance accordingly. Periodic test and other evaluation devices may also be held for the assessment of individual learner's performance.

Advantages:

1. **Learner control instruction provides better individualised instructions-**

   As we know the instruction process here is controlled by the individual learner. Each learner is free to study according to his wish and follow their own sequence of learning. In this way, it is a pure learner centred instructional method and it provides better individualised instruction to learners of all types.

2. **Helps in identifying the initial behaviour-**

   The learner himself is the basic source of identifying his basic potential because he knows himself

accurately. Therefore, for achieving the desired objectives, it is the learner who has to decide from where he has to start his journey of learning. Since in learner-controlled instruction, the initial behaviour of the learner depends upon the learner himself and it helps the learner to made a better way for learning.

3. **Helps in setting meaningful objectives-**

   Learner control instruction helps the learner to set specific, desirable and realistic objectives according to his own interest, needs and abilities because the learner is very much familiar about his initial behaviour and can make a better judgement for the formulation of specific and realistic objectives.

4. **Provides opportunity to develop own sequence of learning-**

   In learner-controlled instruction, it is the learner who has to decide the sequence of learning to achieve the desired objectives. The learner is not forced to study or follow the sequence which has been planned by the teacher, as in traditional teaching learning process.

5. **Maintains proper interest and motivation-**

   As the instructional process revolves around the learner. Nothing can be imposed upon the learner from out. He is the key person in taking all decisions in the path of learning. Such kind of freedom and encouraging environment makes a learner enthusiastic so that he remained interested and motivated from the beginning till end in the teaching-learning process.

6. **Helps in resolving classroom problems-**

   Learner controlled instruction is meant for the individual and it is controlled and directed by the learner himself. In case the learner needs any kind of guidance and support in the path of learning he is free to ask questions and get desired assistance from the teacher when needed. In this way the problems of the learners are addressed.

7. **Helps in the establishment of harmonious relationship between teacher and the learner-**

   Learner controlled instruction provides opportunities and environment for developing a healthy interaction and harmonious relationships between the teacher and the learner. As it provides ample freedom to the learner to ask questions, satisfy their curiosity and proceed on the learning path.

8. **Inculcates good habits-**

   Learner control instruction provides the learner a lot of opportunities for removing unnecessary fear, hesitation, shyness etc. And creates an ambience for the development of self-confidence, habit of independent self-study, persistence effort, hard work, problem solving ability, originality, initiative, creativity etc.

9. **Saves time and energy-**

   As the learning sequence is planned by the learner himself therefore, no time and efforts are wasted in making the learner to learn. Research studies have shown that learner controlled instructions help in saving as well as managing the time and energy of both the learner and the teacher for the realisation of set instructional objectives.

10. **Helps in providing practical learning experience-**

    In learner-controlled instruction, there is a wide scope for gaining rich practical life experiences. It helps the students to take cognizance of concrete things & in practical experiences rather than abstract principles and theories.

Disadvantages-

1. In practical sense, it is not possible to meet the individualised needs and requirements of the learner as it is neither feasible nor possible for country liking India.
2. In other controlled instruction the total teaching learning process is controlled by the students from beginning till end. Teachers are there only to respond their questions, satisfy their curiosity and provide assistance were ever needed. Children are yet children, such kind of freedom on the part of learner made generate a hip of problems. We cannot expect from the learner to carry the entire responsibility of instructional process. There is also a possibility that they may waste the time and energy in the pursuit of unnecessary and irrelevant things.
3. It is the tedious task on the part of the teacher to cater the needs of every individual learner. He must have thorough knowledge and skills to guide an assist the learner in every sequence of learning. It is hard to have such skilled and trained teachers.
4. It requires a different setup and teaching learning environment and it cannot be prevalent in our present educational system.

Conclusion:

No doubt, the education must be provided according to the need, requirement and interest of the learner as discussed in learner control instructions. It is a new innovation in the field of teaching and learning. Such kind of learning develops self-confidence, habit of Independence self-study, problem-solving ability, originality, initiative etc. But it is not practicable in the present educational setup because there is every possibility of its being resented by the teachers and the educational authorities. Moreover, it is the need of hour to change the attitude on the part of its users too. Learner control instruction suffers from serious limitations like difficulty on the part of the role of students, difficulty in catering the needs of individual learner etc. Before implementing the learner-controlled instruction, it is imperative to address the various

limitations. With other progressive and traditional methods, only then this instruction could be tried to some extent.

Computer-Supported Collaborative Learning

Meaning-

Computer-supported collaborative learning (CSCL) is a pedagogical approach where learning occurs through social interaction facilitated by computers or the internet. It emphasizes the role of technology in enabling collaborative activities, knowledge sharing, and collective knowledge building. CSCL can be implemented in both online and classroom settings, and can involve synchronous (real-time) or asynchronous (delayed) interactions.

Key aspects of CSCL:

1. **Technology as a tool:**

   CSCL leverages technology as a primary means of communication and as a shared resource for learning.

2. **Social interaction:**

   It focuses on the social dynamics of learning, emphasizing the interactions between learners.

3. **Knowledge building:**

   CSCL promotes the development of knowledge through collaboration and the sharing of ideas.

4. **Diverse learning theories:**

   CSCL draws from constructivist and social cognitive learning theories, which emphasize the role of interaction and collaboration in learning.

5. **Online and classroom settings:**

   CSCL can be implemented in both online and traditional classroom environments.

6. **Synchronous and asynchronous learning:**

   CSCL can involve real-time interactions (synchronous) or interactions that occur over time (asynchronous).

7. **Scaffolding and mediation:**

   CSCL is guided by the principles of scaffolding (gradually transferring responsibility to students) and mediation (using technology to enhance learning).

8. **Focus on interaction:**

   CSCL emphasizes three levels of interaction: cognitive (understanding the task), social (interaction

between learners), and organizational (how the group is structured).

9. **Teacher as facilitator:**

   In CSCL, teachers often act as facilitators, guiding and supporting student collaboration rather than directly instructing.

Benefits of Computer-Supported Collaborative Learning:

1. **Enhanced learning:**

   CSCL can lead to deeper learning and knowledge acquisition through collaboration and knowledge sharing.

2. **Improved communication and collaboration skills:**

   CSCL helps learners develop their communication, teamwork, and interpersonal skills.

3. **Increased motivation and engagement:**

   The collaborative nature of CSCL can foster a sense of community and increase student motivation.

4. **Access to diverse perspectives:**

   CSCL provides opportunities for learners to interact with individuals from different backgrounds and with diverse perspectives.

5. **Flexibility and accessibility:**

   CSCL can provide greater flexibility and accessibility to learning opportunities, especially in online environments.

4.6 Check Your Progress-2

1. Write down the steps involved in learner-controlled instruction.

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2. Discuss the Benefits of Computer-supported collaborative learning.

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4.7 Let Us Sum Up

Individualized teaching and learning are an educational approach that tailor instruction to meet the unique needs, strengths, and weaknesses of individual learners. It moves away from a "one-size-fits-all" method, recognizing that students learn differently and at different paces. This approach involves adjusting content, pace, methods, and materials to accommodate individual learning styles, preferences, and background knowledge. Computer-supported collaborative learning (CSCL) is a pedagogical approach where learning occurs through social interaction facilitated by computers or the internet. It emphasizes the role of technology in enabling collaborative activities, knowledge sharing, and collective knowledge building. CSCL can be implemented in both online and classroom settings, and can involve synchronous (real-time) or asynchronous (delayed) interactions.

Both individualised and cooperative teaching and learning have their own merits and demerits. Both ways need change in the mind-set of learner as well as environment. These ways are more effective and fruitful, if the conditions of the classroom are favourable.

4.8 Glossary/ Keywords

1. Accessibility- Reachability
2. Constructive- useful
3. Dynamics- the force which stimulate growth

4.9 Self-Assessment Questions:

1. What do you understand by Personalized system of instruction?
2. Discuss the mechanism of PSL.
3. What are the advantages and disadvantages of learner Controlled Instruction?

4.10 Suggested Readings

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LESSON : 5

Teaching Devices: Oral Communication, Exposition, Explanation, Narration, Description, Illustration, Questioning, Homework, textbooks and Reference books

STRUCTURE

5.1 INTRODUCTION

"Teaching is not the cup of tea for all"

A teaching device is a kind of instructional aid that facilitates effective classroom instruction. A common sense device is a piece of equipment that helps people do things more quickly and effectively In common sense device is a necessary equipment adopted for doing things in a better and easy way. Throughout the teaching and learning process, educators commonly employ a variety of tools to maximize student engagement. We call these tools—which include both hardware and software—teaching devices. Teaching resources are crucial for fostering social and emotional growth, encouraging lifelong learning, supporting students' skill development, and engaging them. Additionally, they play a major role in motivating students and achieving positive, productive outcomes. Effective teaching tools allow teachers to establish a productive and influential learning environment that helps students both inside and outside of the classroom. Teaching tools plays a crucial role for involving students and helping them to develop their hidden talents, potentialities & abilities, Moreover these helps in encouraging lifelong activities, and promoting social and emotional growth for the students. Teachers can provide a productive and influential learning environment that helps students in and out of the classroom by utilizing efficient teaching tools.

5.2 LEARNING OBJECTIVES

- To provide knowledge and acquaint the students with the Meaning of Teaching devices .
- To enhance and improve the quality of Teaching and learning process through various Teaching devices.
- To Enable the students to understand and examine the meaning of various Teaching Devices
- To assist students in comprehending the significance of narration, illustration, questioning, and homework
- To help the students in Understanding the role of Oral communication, Exposition, Explanation and description.
- To Equip the students to know the role of Text books as one of the important Teaching device.

5.3 MEANING OF TEACHING DEVICES:-

One kind of teaching aid for efficient instruction in the classroom is called a device of teaching. The term Teaching device" refers to certain equipment that has been used by the teacher to make teaching and learning process easier and more efficient. For optimal classroom interaction, teachers often employ a variety of tools, which include both software and hardware. Teaching tools play a vital role in motivating students and producing positive and productive outcomes. These tools are necessary for capturing students' attention,

helping them develop their abilities, encouraging lifelong activities, and promoting social and emotional growth. Teachers may create an impactful and positive learning environment that benefits students both inside and outside of the classroom by utilizing effective teaching tools. In general, devices All things considered, gadgets are essential to the present educational system because they give students useful information, encouragement, and feedback, assisting them in forming the habits, abilities, and knowledge necessary for a healthy and Teaching gadgets are a few tools designed to facilitate intentional teaching and learning. A useful tool for classroom engagement is a teaching device. These are some of the abilities that educators employ to improve their instruction in the classroom. Hence The term "devices of teaching" refers to some of the instructional resources that educators employ to produce high-quality work in the classroom. A teaching device is a strategy, method, or tactic used to facilitate effective instruction and meaningful learning. It is expected of a teacher to use the gadget throughout class.

5.4 MEANING OF ORAL COMMUNICATION

The term "oral communication teaching devices" describes the instruments and methods used to support and improve the instruction of oral communication skills, including speaking, listening, and presenting. The sharing of ideas and information by spoken word is known as oral communication. It can be done directly in person, face-to-face, or by an electronic device such a radio, phone, or video platform . The spoken exchange of ideas and information that is frequently employed in a wide range of fields is known as oral communication. To improve their speaking and presentation abilities, a student can, for instance, give an oral presentation to their classmates while utilizing visual aids. The tools and techniques used to assist and enhance the teaching of oral communication skills, such as speaking, listening, and presenting, are referred to as "oral communication teaching devices." In simple words it is the verbal exchange of concepts and information. The most effective approach for organizations to communicate verbally is through staff meetings, webinars, and workshops. The ability to communicate verbally is becoming more and more important for both students and workers, particularly in a setting where new digital and spoken communication channels are constantly emerging. Multiple means of communication must be used simultaneously, as video conferences and telework enable both the providing and receiving parties to see and hear each other through the combination of audio and video. In addition to verbal communication, participants in video conferences also need to show appropriate body language, which was not as common in the past. Podcasts and Voiceover Internet Protocols (VoIP), like Skype and Team Speak, are other innovative oral communication methods that let people connect vocally online without paying for a phone call.In order to do their work, stay productive in their positions, and successfully communicate with management, students and teachers need to be able to use both of these contemporary spoken communication platforms. Proficiency in oral communication provides numerous significant advantages to students in teaching and learning process. The continuous improvement and development of oral communication demonstrates a dedication to carrying out responsibilities in the classroom which boosts output and fosters better relationships between peers. The likelihood of

doubts, confusion & conflict is further decreased and a more positive results may become more evident when communicate vocally in an intelligible way. Effective oral communicators are also more likely to form cohesive teams and become more creative, which will help them succeed and grow in academic spheres. It aids in problem-solving and is a basic component of language learning. Additionally, it enables rapid information sharing and emotional communication during interactions. Oral communication mostly consists of speaking, but body language and eye contact are also crucial for conveying ideas and information. There are five main aspects and components of Oral communication these are as below:-Sender, Medium, Channel, Receiver, and Feedback.in the nut shell Oral communication helps to encourage the students to clear their doubts by actively involving in teaching learining process which is known as oral communication hence oral communication is a powerful tool to communications and promotes discussions, better understanding, patience and productivity.

5.5 MEANING OF EXPOSITION

The Term Exposition is derived from Latin word exponere which means to put out, exhibit, or explain. It is where the word exhibition originates. Some individuals use the word "exposition" as if it were a bad thing, which introduces awkward background detail gaps in the story's flow. It's critical to know that exposition is a part of all fiction. It can be done well enough that, as a reader, you hardly notice it's happening, or poorly enough that it monotonously disrupts the story's tempo or intensity .Exposition is one of the most important teaching methods. The teacher delivers a 'presentational discourse' that includes describing, explaining, and demonstrating. Many topics, such as abstract conceptions and concepts beyond their personal experience, will be difficult for students to grasp unless explained by a teacher. A teacher delivers knowledge and explains concepts and ideas to students while they listen, think, and respond. While there is much more to effective teaching than merely 'telling', a good presentation or vivid geographical 'story' may bring the world to alive in your classroom. Most sessions will be started by a teacher reviewing the previous lesson, which is an effective technique to offer geographical knowledge while also introducing students to geographical language, ways of thinking spatially, and presenting an argument. The description or explanation of background material in a literary work is called exposition. Characters and their interactions, the scene or time and location of events, and any pertinent concepts, information, or historical background can all be covered in an exposition. Teachers who are strong raconteurs can present engaging first-hand descriptions of their own geographical experiences as intriguing openers to lessons. The phrase "once upon a time" is frequently used in classic fairy tales to introduce explanatory facts, such as the primary characters, the setting, and the story's main conflict or issue. Although exposition isn't always obvious, it can be included in practically all literary works, and readers usually rely on it along with background information to put a story's key events in context.Expository details are the discrete bits of background data that authors utilize to construct exposition. Exposition can be included into a story in a number of ways by authors, but it can be found in all storytelling genres and styles. Two techniques that authors might employ to produce

exposition are prologues and epilogues, which give readers details that help them comprehend the plot or ideas of a piece of literature. Explaining a story's "who, what, where, when," and sometimes the "why," immerses readers in the world of the narrative. A story's exposition can be introduced at the beginning or progressively throughout, depending on the goals and writing style of the author. This is commonly done to create mystery or suspense by leaving out important elements that help contextualize important events and reveal the characters' motivations or worldviews. One advantage of this is that it might encourage viewers or readers to keep reading or watching as the story progresses. There are various types of Exposition like:- Direct and Indirect Exposition

5.6 (a) MEANING OF EXPLANATION:-

An explanation is a statement, or series of statements, that elucidates the causes, context, reasoning, or underlying principles of a given phenomena. The Latin word explicatus, meaning to give an explanation for, is where the word originates. Since one of science's objectives is to offer explanations that contribute to a better comprehension of diverse occurrences, explanations are essential to the field. Explanations explain what something is, how something happens, or why something works in plain English. They frequently employ action verbs, give a temporal sequence, and explain cause and effect relationships. Typically, an explanation consists of five parts: (i) giving the concept a name or description, (ii) outlining its elements or components in a suitable sequence, (iii) elucidating the relationships between the elements, or . Identifying or defining the topic, describing its aspects or components in a suitable sequence, explaining how the elements relate to or connect to one another, giving an example, and summarizing with a conclusion are the five main components of an explanation. The ability of students to describe scientific concepts is a basic need of the majority of school science courses.Explanation is a core teaching strategy. It entails breaking down difficult ideas into smaller, more manageable .components. The teacher presents information in a logical manner, ensuring that students can follow along without becoming overwhelmed. So explanations is an important teaching tool which enables both teachers and taught to clarify concepts and in this way it tries to help all students to understand all the complex concepts and ideas in effective way . Explanation can more simply and precisely connect students' past knowledge to new material, which can bring improvement in the learning process. We might also state that explanations help pupils and prepare by them by instilling motivation and awareness. Furthermore explanation is regarded as a potent tool or a cutting-edge teaching paradigm that promotes rational thought . It is commonly observed that a well-organized explanation encourages pupils to think critically and reason. Explanation as one of the Dynamic teaching device proves to be very beneficial because by using this device Teacher introducing new material in manageable chunks and avoids overloading students' working memory, it means that it tries to reduces fatigueless and boredom from Teaching and Learning Process this technique helps to make the process more engaging. It was used to connect new knowledge to instances from everyday life. By keeping a conversational tone to keep pupils interested. Teachers may guarantee that pupils understand important concepts and retain them for

a longer amount of time by becoming experts at explaining them. According to Enser (2018) , fostering students' innate curiosity about the world around them and avoiding distractions are key components of engagement. A teacher must provide a carefully thought-out explanation that is full of parallels and examples in order to engage students. According to research by Brown and Armstrong (1984), pupils are more likely to engage with higher order thinking when teachers are skilled at explaining things. explanation is defined as "a tool that is utilized by a speaker for comprehending or 'providing a sense' to the target of communication, of argument, or of discussion …." An explanation's function is to clarify the meaning of an object (a word, technique, or assignment) while technically preserving the required separation between the tools and the action or study's object. Both teachers and students use explanation as a tool in the teaching and learning process. Its objective is to demonstrate understanding.

5.6 (b) MEANING OF NARRATION

An essential teaching tool that uses storytelling is narration, in which the teacher uses a tale to impart knowledge. For classes that follow a chronological order, like literature or history, this teaching approach works particularly well. Students' emotions and imaginations are stimulated by narration, which improves learning effectiveness and engagement. Narration can be regarded as a memory retention method that helps to improve the learner's recall rate because it draws pupils in by narrating stories. People are known to retain knowledge better when it is delivered in a narrative fashion. In addition, narrative fosters emotional bonding. Teachers' stories can evoke strong feelings in their students, making them relate to the subject matter on more deeper level . When used skillfully, narration can turn dull subjects into lessons that students find engaging. For example, a history teacher narrating the events leading up to India's independence, a literature teacher narrating the plot of Shakespearean dramas, or a science teacher explaining the discovery of gravity through Newton's story. Make the narrative engaging and dynamic by utilizing dramatic elements like tone and pacing. The act of recounting a tale, usually in chronological sequence, is called narration.In general, narration refers to any form of explanation or recounting. Narration is frequently used in songs where the singer recounts how something happened, such as the day he lost his guitar, his truck, his wife, and began singing the blues. It is typically used in literary works to tell stories or describe events. a message that describes the specifics of an action, incident, or sequence of events; it can be delivered by writing, theater, film, or television. In storytelling, narration is a technique used to tell a narrative, present a concept, or deliver a message. The voice is what brings. Hence The act of recounting a tale, usually in chronological sequence, is called narration .In general, narration refers to any form of explanation or recounting. Narration is frequently found in songs where the singer recounts how something happened, such as the day he started singing the blues after losing his guitar, truck, and wife. The message conveys the specifics of an action, event, or sequence of events; it can be portrayed in text, drama, film, or as a television or radio show. . Narration is a technique used in storytelling to express a story, concept, or message. The voice breathes life into a story, directing the audience through the plot, introducing them to characters, and providing

insights that would otherwise go missed. The narrator can be an identifiable external entity, a character's internal thought process, or an omnipresent voice with an all-knowing perspective. Narration influences how a story is interpreted, establishing the tempo, tone, and perspective, making it an essential component of every narrative genre, including literature, film, theatre, and even video games. It is the portrayal of the plot, characters, and setting through a specific voice or perspective.

5.7 CHECK YOUR PROGRESS-1

- Explain the Term Teaching Devices with Examples**?**

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- Discuss the meaning and importance of Oral communication?

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- Write down the meaning of Exposition as an Important Teaching Device?

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- Write a short Note on :-

  a. Exposition

  b. Explanation

5.8 (a) MEANING OF DESCRIPTION

In order to assist students comprehend and acquire new concepts, the description method in teaching relies on giving thorough explanations and examples. The Description Method of Teaching is an instructional style that emphasizes extensive explanations and demonstrations to assist students in understanding and learning new topics. With this approach, complicated concepts are divided into smaller, easier-to-manage components, and each step or component is described in simple, straightforward language. Creating a vivid mental image for the pupils is a crucial component of the description approach. Descriptive language that engages the senses can do this. The same is true for sharing extra content that improves the sensory

experience, like thorough descriptions, pictures, or links to videos, using programs like Free mail. For instance, a teacher can explain the sights, sounds, and other aspects of a historical event rather than just informing the pupils about it. One of the most important components of employing the description approach is creating a clear picture in the students' thoughts. This can be accomplished by use sensory-rich language. Similarly, systems such as free mail can be used to distribute supplemental materials that improve the sensory experience, such as lengthy descriptions, photographs, or video links. .For instance, a teacher can explain the sights, sounds, and scents of a historical event rather than just informing pupils about it. Students are better able to visualize and relate to the material as a result.

Making the material relatable to the pupils is a crucial component of employing the description approach. This can be accomplished by employing familiar examples and analogies. Making the content relatable is crucial, but so is making it interesting. This can be accomplished by developing a narrative around the topic utilizing storytelling techniques. Teachers can grab students' attention and help them remember the material by telling a tale. For instance, when instructing a history class .a teacher can explain the sights, sounds, and scents of a historical event rather than just informing pupils about it. Students are better able to visualize and relate to the material as a result. Making the material relatable to the pupils is a crucial component of employing the description approach. This can be accomplished by employing familiar examples and analogies.

Making the content relatable is crucial, but so is making it interesting. This can be accomplished by developing a narrative around the topic utilizing storytelling techniques. Teachers can grab students' attention and help them remember the material by telling a tale. For instance, when instructing a history class .This strategy enables teachers to deliver step-by-step directions, which makes it easier for pupils to follow along and comprehend the material. Furthermore, the description style promotes a more visual and concrete grasp of a topic. Teachers can assist students understand complex concepts by utilizing examples, analogies, and visual aids. This is especially useful for students who are visual learners who struggle with abstract thought. By presenting tangible examples, teachers may make the topic more accessible and understandable.

5.8 (b) MEANING OF ILLUSTRATION.

The technique of using charts, diagrams, and other visual aids to represent information is called illustration. The human brain processes visual information much more quickly than it does text, which makes it a valuable teaching tool. Teachers can improve student retention and engagement by combining oral explanation with visual assistance. The best method for increasing learner retention is illustration. Exposure to visual aids can help students retain information longer, and illustrations also simplify and ease complex ideas. Diagrams and other visual aids make difficult concepts easier to understand. Additionally, the illustration improves learning by stimulating the senses of sight and sound, for example. Scientific procedures are depicted using diagrams, Pictures and videos that illustrate historical occurrences or customs. Students should

be encouraged to visualize Encourage pupils to use mental imagery or their own drawings to illustrate ideas. Illustrations help pupils comprehend and remember material better, which makes them an effective teaching tool. An illustration is a visual representation, interpretation, or embellishment of a text, idea, or procedure that is intended for use in print and digital media, including flyers, posters, magazines, books, instructional materials, animations, video games, and movies. Usually, an artist creates an illustration. A textual material can be portrayed or illustrated visually with illustrations. They could serve as decoration, a story, or an explanation of an idea. They are available in a variety of traditional and digital formats. One of the most popular illustration techniques is black-and-white and color drawings. Because they offer spatial metaphors for logical structure, illustrations are useful in the teaching of abstract concepts. Through the use of color, space, lines, boxes, arrows, and the proportional separation of pieces, an illustration can offer. An illustration can give abstract concepts a tangible counterpart. In education, there is a learning process. Attention, memory, language, processing and organization, (writing), and higher order thinking are the six interactive elements of learning. These processes interact not just with one another but also with teachers, families, conduct, social skills, emotions, and the atmosphere in the classroom. People can enhance their comprehension of ideas and become more involved with instructional materials, according to research. It serves as an example of how images can serve as "anchors" to previously learned material.They help with recalling memories. Learning is facilitated by the potent visual aids that picture illustrations offer. Numerous learning skills, including comprehension, memory, and problem-solving, are improved by illustrations. Diagrams and graphics are examples of illustrations . They help with recalling memories. Learning is facilitated by the potent visual aids that picture illustrations offer. Numerous learning skills, including comprehension, memory, and problem-solving, are improved by illustrations. Diagrams and graphics are examples of illustrations that use appropriate and minimum visual language to assist interpret vast amounts of data. It aids in the development of pupils' critical thinking abilities, visual literacy, and many other abilities.

5.9 (a) MEANING OF QUESTIONING

A question is defined as any remark with an interrogative form or purpose. Teacher questions in the classroom are instructional signals or stimuli that communicate to pupils the subject and elements to be learnt, as well as commands for what and how to do. The ability to pose questions is essential for inquiry learning. One of the most effective teaching tactics is to ask questions. It has a profound impact on learning, teaching, and testing. It is believed that the ability and discernment with which we ask questions has a greater impact on the success and efficiency of our instruction than any other component. It is said that "the teacher who never questions, never teaches.Actually, one of the noble arts of teaching is the ability to ask insightful questions. "Developing a good style of questioning can be written down as one of the basic aspirations of a young teacher," says Raymond. Actually, one of a teacher's tricks of the trade is asking questions. Asking questions is a natural and fun way for kids to develop their social and intellectual skills. It is seen as one of the most crucial ways to encourage a child's thinking and learning during their formative years. This tool can help students develop their creative thinking skills and bring the teacher and student's minds

closer together. One way to describe questioning is as “the cornerstone to all creative. One way to describe questioning is as “the cornerstone to all creative action.” Asking questions is a crucial component of teaching since it enables teachers to keep an eye on students’ proficiency and comprehension while also encouraging conversation. Teachers can gauge their pupils’ familiarity or interest in the subject matter by encouraging them to make thoughtful answers and share their thoughts. It is an engaging tool that encourages critical thinking in pupils. It enables educators to gauge pupils’ comprehension, promote involvement, and cultivate an atmosphere of inquiry. Asking questions is a good way to pique students’ interest and promote critical thinking. It allows teachers to assess students’ understanding, encourage participation, and foster an inquiry-based environment. Encourages active learning Students are encouraged to ponder, reflect, and interact with the material when questions are asked. So this tool helps to Assess the level of understanding of students ,Instructors can determine if their pupils have grasped the subject matter. An interactive method that keeps pupils alert and encourages deeper learning and active engagement is questioning. The most powerful tool in a teacher’s educational toolbox is the skill of questioning. According to F. Theodore Struck, good questions are inherently educational and play a significant role in all forms of education. In learning, teaching, and testing, asking questions is essential. When used appropriately and at the appropriate moment, questions open up new areas of understanding and can be used to organize knowledge, correlate the outcomes of educational experiences, integrate personalities, and try together learning components. A person who asks good questions is a good teacher. According to Salmon, a lousy teacher is a bad questioner. Questioning. Questioning is intended to attract, engage, and challenge students, as well as to assess past knowledge. It aids in the stimulation of recollection and the application of prior information and experience to the creation of new understanding and meaning. It allows students to focus and think about significant concepts and concerns, broadening their thinking from concrete and factual to analytical and evaluative. Questioning is an important ability for instructors because it is the most prevalent mode of contact between teacher and student. It is an essential component of almost every style and model of education. It is an important approach of delivering appropriate challenges for all students. One may also argue that it has a significant impact on the extent of progress made and is the most immediate and accessible approach for a teacher to assess learning. However, rather than relying solely on one strategy, it is critical to incorporate a variety of questions to guarantee that each student’s learning style is met. The teacher should encourage students to express their opinions freely by asking divergent questions. This instills in children a sense of importance and confidence, leading to more participation in the future. Feedback following student responses is a vital component of questioning.

5.9 (b) MEANING OF HOME WORK

Any task assigned to students outside of the regular classroom that has been planned and approved by the teacher and is often due in a limited amount of time is referred to as homework. So every task or assignment given by a teacher, school, or other educational establishment is referred to as homework.

Both work done at home and work done in class are referred to as homework. It is the time students spend outside of the classroom on designated tasks to practice, apply, or reinforce newly learned knowledge and abilities as well as to gain the skills they need for independent study. Homework is highly important because it helps students understand science and connect what they learn in class to what they experience at home. Students will develop a sense of responsibility when they consistently complete their assignments on time and with positive feedback from the teacher. High exam performance can be attributed to properly completing and successfully returning homework on a regular basis under supervision. Since homework improves learning, it should never be eliminated.Since classroom instruction has grown to be just as significant as extracurricular learning, homework and modern education go hand in hand. From an educational standpoint, homework is a crucial tool for skill development, memory testing, comprehension expansion, and improving grades. Resources like as research papers, digital projects, and online tests that can be given as homework are made available to students in today's classrooms. In addition to solidifying classroom information, homework in contemporary education fosters a lifelong love of learning, which is essential for success in a world that is constantly changing. Assigning homework to students is a common practice in schools. On the other hand, different people view homework in various ways. Homework and modern schooling go hand in hand since the learning Many parents and students believe that homework is a complete waste of time. But the truth is the complete opposite. Instructors and educational institutions assert that homework is an essential component of education and serves to improve students' learning outcomes. Even researchers have discovered how important homework is to students.In general, homework is an out-of-class activity/assignment allotted to the students as an extension or revision of classwork. Improves memory.Home work use to bring improvement in memorization While doing homework, students are able to revise all the topics that they learnt in the classroom. This helps in increasing their memory and in honing their learning skill.Students learn to make good use of time: Students spend most of their time in completing their homework. This keeps them away from useless activities like spending long hours on television, phone or video games. Generally speaking, homework is an assignment or task given to students outside of class that serves as an extension or revision of their coursework. enhances memory.Homework is used to increase memorization. Students can review all of the material they learned in class while working on their homework. This improves their memory and sharpens their learning abilities.Students gain time management skills: The majority of a student's time is spent on homework. This prevents kids from engaging in pointless hobbies like playing video games or watching television for extended periods of time. Learners gain their independence: Students become more independent and self-assured when they do their assignments without assistance from a teacher or acquaintance. Pupils acquire accountability: Students who complete their assignments on a daily basis come to understand that finishing

KEY POINTS ON HOME WORK

- Students gain responsibility: When students complete their assignments on a daily basis, they realize that it is their duty to finish them. As a result, they become more responsible individuals.
- Students prepare for class the following day: Homework gives students the chance to study on

their own, get their questions answered, and prepare for class.

- Students learn how to use resources: Students learn how to locate the material they need to finish their homework by using resources like the internet, libraries, etc.
- Enable parents to participate in their child's education: Homework enables parents to learn about their child's progress and become involved in their education.
- Enhances academic performance: Academic success requires more than just classroom instruction. Studying on your own is just as crucial to getting good scores.
- Homework helps students develop the habit of self-study and allows them to review what they have learned in class. This improves their score.
- Improves focus: Students discover a quiet study space where they can focus better while working on their assignments.
- Fosters the development of vital life skills: Students solve problems while completing assignments.

5.10 (a) MEANING OF TEXT BOOKS

It is rightly said that "Books are keys to wisdom."

- Text books are one of the most important Teaching Device which helps to shape the personality of an individual .Books are significant teaching tool which contains knowledge and information that students can successfully master to pass exams and land jobs. Textbooks assist teachers in organizing their lessons in a methodical manner. They cover the course material in a way that helps the examiner create a thorough and trustworthy question paper. In our educational programs, textbooks have historically been more significant than other forms of instructional materials. Almost anything can be used by an inventive educator to accomplish the goal of successful instruction, and that object starts to function as instructional resources. The goal of language classes is to maximize the development of speaking and listening abilities. Textbooks compile the facts, concepts, and principles of a given subject or course. It is usually written by one or more knowledgeable educators, such as teachers, college professors, or education professionals. More teaching materials, ideas, and activities to use throughout the year are included in the teacher guides that accompany most textbooks. Top of Form In addition to having all the material needed, a textbook is essential since it facilitates teaching and learning in a useful way. Textbooks aim to cover a far greater range of knowledge and information and are intended for a general audience. The course book outlines the boundaries of its field and provides as much information as possible given the specific learning level. They guarantee that all students, regardless of school or teacher, have access to the same subject by providing standardized information in accordance with the curriculum.

Let us have a brief look on the following points which throws light on the role of text books

- ❖ Homework and Revision Resource: Textbooks are a great way for students to be ready for tests and exams by serving as a resource for homework assignments and revision. In situations where internet connectivity is unavailable, they are also an excellent resource.
- ❖ Teaching help: For new teachers in particular, textbooks are an excellent teaching help. They give educators pre-made lesson plans and curricula so they may concentrate on their instruction and interactions with students.
- ❖ Reliability: Subject matter experts frequently write and review textbooks, guaranteeing the authenticity and dependability of the material. They frequently draw from the most recent research as well as successful instructional techniques. For educators and schools trying to stay in line with academic standards, this can be especially helpful.

5.10 (b) MEANING OF REFERENCE BOOKS

Books facilitate a thorough exploration of the vast ocean of knowledge. The curriculum is the only thing that influences the education it provides; a greater comprehension of the subject is not. However, it is simple to obtain a deeper comprehension of the subjects by using reference books.For topic exploration, finding in-depth notes on concepts, finding more questions to answer, and comprehending the underlying principle, reference books are a highly helpful tool. Reference books serve as a complement to maximize the learning environment. It provides the learners with helpful information in a well-structured format and flow chart. Overall, it's a fantastic tool that can helps the learners to find the way when they're feeling lost. The large number of issues it raises on a straightforward subject aids in your thorough preparation and closure. Better exam preparation that is in perfect alignment with the paper pattern is made possible by the conceptual segregation. The topic is vividly described, which enhances the knowledge source and makes the short explanation easier to understand. Books serve as a source of knowledge with the enhanced capacity for problem-solving. It provides keen insight into various market-related circumstances and aids inIt increases students' confidence and provides them with acute awareness of various market-related scenarios. Each reference book has its own value and significance. Reference books are printed works that often aim to provide people with in-depth information for consultation or research purposes. They contain a wealth of interesting facts and tidbits of information; they store data and information gathered from numerous sources; they have their own chronology and arrangement; the arrangement methodology makes it simple and convenient to obtain information; and they offer a broad overview of all the subjects covered in the syllabus year. They are typically kept in libraries for reference and knowledge acquisition; they are typically meant for primary consultation; and they typically concentrate on offering information backed by verifiable facts. Reference books aid in proving the veracity of analytical findings by effectively imparting knowledge to the reader. Students can develop the habit of self-study and self-analysis by using reference books.

They want to increase their total efficiency by having the drive to finish the assignment independently and becomes aware of the long-term value of self-effort in this way text books instills and develops the sense of self discipline among the students. Reference books can serve as a tool to promote scientific thinking because they provide vivid information these acts like a guidelines to students for further studies. Students' personal development is aided by the successful instillation of a scientific mindset so these books helps in entire teaching and learning process because it update students with new ideas ,concepts, information and knowledge hence in the nut shell we can say that it enables students to work on their assignments more successfully and effectively.

5.11 CHECK YOUR PROGRESS-2

a) Briefly discuss the meaning of Teaching Devices.

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b) Briefly Discuss the significance of Teaching Devices.

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c) Enlist various Teaching Devices.

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d) Define Illustration as one of the important Teaching device.

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e) Write down the Meaning of Oral communication, Exposition, Explanation and description.

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5.12 LET US SUM UP

The aforementioned leads us to the conclusion that instructional technology plays a critical role in motivating students. Motivation is believed to be the key to learning. Teaching tools were therefore essential in igniting students' motivation and interest. Incorporating instructional strategies such as inquiry, illustration, narrative, and explanation enhances student comprehension and retention while also adding interest to the learning process. By combining the unique advantages of each gadget, a dynamic learning environment is produced that encourages students to engage with the material, exercise critical thought, and reflect.When these resources are used effectively, they can change the way that education is delivered and ensure that learning is about improving understanding of concepts rather than memorizing facts.

5.13 KEY WORDS

Teaching Device, Illustration, Explanation, Motivation, Narration, Exposition, Oral Communication, Questioning, Text books

5.14 SELF ASSESSMENT QUESTIONS

1. Define Narration as one of the Important Teaching Device.
2. Enumerate some key points on the importance of Text books .
3. Describe How Home work or Practice helps the students .
4. Differentiate Text books and Reference Books.
5. Explain the role of Description.

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LESSON : 6

FIXING DEVICES: DRILL, REVIEW, RECAPITULATION & REPETITIVE

STRUCTURE

6.1 INTRODUCTION

"Fixing devices" most likely refers to instructional aids or equipment that make learning more permanent or reinforced while also assisting students in understanding and retaining the material. Teachers may engage students and clarify concepts with the aid of these interactive, audio, and video materials. By offering a variety of viewpoints and experiences, these gadgets aid in helping pupils retain and comprehend subjects. They improve retention and lessen monotony by making learning more engaging and participatory. Fixing gadgets can help make abstract ideas easier to understand and clarify difficult information. By engaging

the senses of sight, sound, and touch, these Real items, field trips, and manipulative These tools support a variety of learning styles and enhance recall by appealing to the senses of sight, sound, and touch. By the help of these devices teacher can demonstrate to children how ideas relate to actual circumstances. They promote engagement and active participation as opposed to passive listening.

that is useful for assisting with instruction and are useful in teaching learning process to bring positive output.

6.2 LEARNING OBJECTIVES

- To Enable pupils to grasp and explore the significance of different fixing devices.
- To help students to understand the value and importance of Drill in Teaching and Learning process
- To enable the students to understand the role of Review and Recapitualization .
- To enhance and improve the quality of Teaching and learning process through various these devices.

6.3 MEANING OF FIXING DEVICES

The term “devices of teaching” refers to a particular kind of instructional aid used in classrooms. A “common sense device” is a piece of equipment that is used to accomplish tasks more effectively and conveniently. Teachers regularly employ a variety of resources, such as software and hardware, to enhance classroom engagement during the teaching and learning process. “Fixing devices” probably means using and incorporating particular tools, technologies, or methods to improve learning and teaching results. These tools might be anything from software and technology to instructional techniques, all of which are meant to improve the effectiveness and engagement of the learning process. Generally speaking, teaching gadgets are instruments or methods that educators employ to improve the efficiency and interest of the learning process. Devices can accommodate various learning styles, offer chances for active learning, and give abstract ideas more tangible form. Online tests, homework, and feedback can all be completed on devices. Make learning engaging, applicable, and enjoyable.Devices can give possibilities for active learning and help make abstract ideas more tangible.

6.4 MEANING OF DRILL

It is rightly said that “Practice makes a man perfect”

One of the most popular tools for obtaining long-lasting learning outcomes is the drill. Repetition of an encounter helps students retain their impressions. The adage “practice makes perfect” highlights the value of repetition in strengthening particular behaviors until they are unlikely to be forgotten.Drill Or practice is a crucial component of every learning scenario. Students require experience committing concepts to

memory and overlapping a fundamental, principle, or generalization. “Drill is a serious activity which has for its objective the perfection of a skill or the strengthening of association to make them more permanent,” according to Yoakam and Simpson.Students can gain mastery, control over basic processes, and meaning through drills. allow children to develop meaning, control over simple procedures, and mastery of principles or elements that must be recognised correctly. This enables pupils to go to more advanced learning without compromising their efficiency. Drills are useful for a number of other purposes. It isn’t just repetition; it’s always accompanied by intensity or pleasure. This supports healthy learning. Hull believes that drilling without reinforcement just creates barriers to repetition; only when reinforcement is present does repetition increase the possibility of response learning. The Gestalists view repetition as an opportunity to develop new patterns or structures. Kohler’s chimpanzee developed a mental pattern (gestalt) of the box and banana, which altered his cognitive structure. Automatic recall is usually the purpose of drill or practice; it is more effective when the student has a thorough comprehension of the content prior to the exercise and recognizes the importance of the drill. It helps pupils increase their knowledge. It provides an opportunity for the teacher and authorities to assign correct positions to students in the class. This strategy makes it easy to discriminate between dull and clever students. Bright kids will be able to answer difficulties quickly. It allows the teacher to identify the pupils’ weaknesses and provide specific attention to them. Hence over and all Drill and Practice is considered as one of the prerequisite for Sound Learning.

6.5 MEANING OF REVIEW

Review literally means “see again.” Reviewing the learned materials is a mental activity.It is among the crucial and efficient repair tools. To improve memory and retention, the prior experiences are recalled. It entails recognizing and forming new relationships with old elements.

“The term review connotes not a mere repetition to cement them more firmly in mind, but rather a new view of these facts in another environment that results in knowledge, changed attitudes, or different behavior patterns,” according to Bossing. Risk states that a review entails obtaining a fresh perspective or renewing an old one in order to ensure a better understanding of the relationship under study. The review’s objective is to restate and organize the facts and relationships. To review something is to go back and assess it or recall it. A physician may consult your medical history in order to make a diagnosis. A book or movie review frequently assesses the work in question by pointing out its advantages and disadvantages, and occasionally it concludes with a suggestion. The review process provides a symbiotic learning opportunity for the observer and instructor to discuss teaching, exchange instructional tactics, and reflect on their ways. One might want to study (or “brush up on”) the previously learned content before a large test. Regular reviews assist students connect their prior knowledge to the current situation, or we may argue that they aid in the transfer of knowledge. Before the instructional review, ascertain theSome of the Key points on Review:-

- Review is essential to re-state and arrange the facts and relationships in order to correct them.
- Review assist the students in grouping the resources and activities into more comprehensive units
- To provide them a more comprehensive understanding of the topic under study and the field in general Review is necessary.
- Review is useful to identify areas where students struggle with comprehension and preparation, and where teachers struggle with planning and instruction.
- We can conclude that review aids in the transfer of knowledge. Prior to the teaching evaluation, ascertain its goal and note any deliverables that might result from it (e.g., suggestion for a teaching award, letter for a teaching portfolio, etc.). One strategy to improve pupils' knowledge retention is to begin each lesson with a review of prior material. You could want to utilize the review to remind students of their knowledge of the verb's present tense if you are teaching, for instance, the near future tense in Spanish or French

6.6 CHECK YOUR PROGRESS-1

1. What is the primary purpose of using drill in teaching

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2. How does drill differ from other teaching methods?

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3. Give an example of a drill activity in the classroom.

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4. How can teachers make drill activities more engaging and effective?

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5. Why is continuous review essential for teaching?

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6.7 MEANING OF REPETITION

One essential component of learning is repetition. In order to strengthen learning and improve memory, specific acts or information are repeated over time. Numerous disciplines in education, psychology, and neuroscience have conducted in-depth research on the effects of repetition on learning. Let's examine the different ways that repetition influences learning and its results.

Information is encoded into long-term memory with the help of repetition. Multiple repetitions of an activity or piece of information engage the brain circuits linked to that task, which facilitates later memory. These cerebral connections get stronger the more often we use them, which makes remembering that knowledge easier and more natural. Information is moved from short-term to long-term memory during this process, which is known as memory consolidation. This process is strengthened by repetition, which guarantees that the knowledge is retained for extended periods of time.

Performance is enhanced and skills are developed via repetition. For example, in order to develop fluency and accuracy in speaking and writing when learning a new language, repetition is essential. Repeating specific phrases and grammatical structures helps us become more accustomed to them and improves our ability to use them in various situations. Repetition is crucial for developing muscle memory and improving our skills when learning a new sport or musical instrument. Additionally, repetition makes jobs more accurate and less prone to error, which eventually improves performance. Learning is reinforced and forgetting is avoided by repetition. Research has indicated that repetition can help reduce the forgetting curve, which describes how quickly we lose information over time. We can preserve information in our minds and stop it from fading away by repeating it at regular intervals. To make sure that pupils retain what they have learned, teachers frequently go over previously taught ideas before presenting new ones.

Learning through feedback is facilitated by repetition. We get performance feedback when we repeat a task, which helps us pinpoint areas that require work. Feedback aids in directing our education and improving how we approach the assignment. In the event that we are learning to play a When we make a mistake when learning to play an instrument, for example, the feedback we get enables us to pinpoint our mistakes and figure out how to fix them. Receiving criticism and adapting accordingly is an essential part of the learning process. Repetition boosts self-esteem and motivation. . Additionally, repetition makes jobs more accurate and less prone to error, which eventually improves performance.

Learning is reinforced and forgetting is avoided by repetition. Research has indicated that repetition can help reduce the forgetting curve, which describes how quickly we lose information over time. We can preserve information in our minds and stop it from fading away by repeating it at regular intervals. To make sure that pupils retain what they have learned, teachers frequently go over previously taught ideas before presenting new ones. Learning through feedback is facilitated by repetition. We get performance

feedback when we repeat a task, which helps us pinpoint areas that require work. Feedback allows us to steer our learning and improve our approach to the activity. For example, if we are learning to play a musical instrument and make a mistake, the feedback we receive will assist us determine where we went wrong and how to fix it. The process of getting feedback and making adjustments based on it is crucial to learning. Repetition helps to boost motivation and confidence. When we repeat a job or piece of knowledge and perceive ourselves improving, we are more motivated to keep learning and mastering it. Repetition helps us gain confidence in our talents and motivates us to take on more difficult activities.

6.8 MEANING OF RECAPTUALIZATION

A recapitulation, abbreviated as "recap," is a summary, review, or restatement. A recapitulation serves as a reminder to your reader or audience of your important ideas. A recapitulation contains no new information, only the same knowledge presented in a smaller, more condensed form. The prefix re- indicates that a recapitulation will repeat anything. Successful teaching is mostly dependent on well-planned lessons. To make sure they cover all the essential topics and meet their learning objectives, teachers must prepare their lectures in advance. To guarantee that the students understand the lesson, it is just as vital to have a well-structured lesson plan as it is to guide the teacher through the teaching process. A crucial component of lesson planning is recapitulation or review, which helps students to revise the topics they have learned, identify any gaps in their understanding, and consolidate their learning. The process of going over and editing the content that has been taught is known as recapitulation. The process of going over and editing the content that has been taught is known as recapitulation. It is a crucial step in the learning process that helps pupils to fill in any knowledge gaps and consolidate what they have learned. Because it helps pupils commit material to long-term memory and retain it, recapitulation is an essential part of the learning process. Although revision and recapitulation are sometimes used interchangeably, they are not the same thing. While recapitulation is the process of going over the content that has been taught in a certain lesson or unit, revision is the act of going over the content once more. Recapitulation guarantees that pupils fully comprehend the topics and serves to reinforce the content. It assists students in reviewing what they have learned, filling in any knowledge gaps, and consolidating their information. Additionally, repetition helps pupils retain and apply the learning in a variety of circumstances by reinforcing it. Additionally, it gives educators a chance to evaluate students' learning and modify their pedagogical approaches accordingly. Students may struggle to apply the concepts presented in a lesson in various circumstances and may not completely comprehend them if they are not recapitulated. Recapitulation makes it easier for students to retain and apply the information in many settings by ensuring that they have a comprehensive comprehension of it. A crucial part of lesson planning that supports student learning is recapitulation. Careful preparation and execution are necessary for effective recapitulation, and educators should employ a range of strategies to guarantee that pupils fully comprehend the subject matter. It is important to incorporate recapitulation into the lesson plan, schedule it at suitable times, and vary it. Teachers may guarantee that their pupils

have a solid knowledge base and are more equipped for future learning by employing efficient recapitulation strategies. improve their kids' learning experiences and results.

6.9 CHECK YOUR PROGRESS-2

- What do you mean by the term Fixing Devices.

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- Enumerate various Fixing Devices.

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- Define the Term Drill/Practice.

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- How Review is important in Teaching and Learning Process.

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6.10 LET US SUM UP

To sum up, fixing devices has a big impact on the learning process. It affects memory consolidation, skill development, performance, forgetting prevention, feedback, motivation, confidence, deepening understanding, encouraging creativity, encouraging automaticity, and the timing and spacing of repetition. Repetition techniques should be varied, timed and spaced appropriately, and individual variances in learning preferences and styles should be taken into consideration .Instead than encouraging passive listening, these gadgets will encourage active participation and engagement. that are beneficial for supporting education and are helpful in the teaching and learning process to provide favorable results Teachers can stimulate students' enthusiasm and readiness by implementing effective repetition into their lessons; for this reason, these are regarded as the most crucial instruments to produce the finest learning outcomes.

6.11 KEY WORDS

Fixing Devices, Drill, Review, Recaptulization,Repetation,Motivation

6.12 SELF ASSESSMENT QUESTIONS

- Which of the following fixing devices is useful for long-term retention?
- How many types of teaching devices are there?
- What is the TL model of teaching?
- What do you mean by devices of teaching?

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LESSON : 7

Communication Media: Concept, types and functions of Audio, Visual & Audio Visual media Audio: Radio, Tape recorder Visual : Projected aids, overhead projector and slide projector

STRUCTURE

7.1 INTRODUCTION:-

Communication media, encompasses various tools and strategies which ranges from conventional techniques like lectures and textbooks to contemporary technology like video conferencing and online platforms, includes a variety of instruments and strategies used to communicate information and promote understanding during the learning process. Among their many uses are idea clarification, student engagement, and the

encouragement of interactive learning. refers to the routes and techniques utilized in a learning environment to spread knowledge and concepts. to improve the entire learning process, encourage comprehension, and ease the transfer of knowledge.

7.2 LEARNING OBJECTIVES:-

- To Equip the students with the knowledge of Communication Media.
- To help students to understand the Types and functions of Audio visual Media.
- To enable the students to understand the types and functions of Audio Visual aids.
- To enable the students to get aware with the concept and use of Projector.
- To bring Qualitative improvement in Teaching and learning process through these aids.

7.3 MEANING OF COMMUNICATION MEDIA:-

One innovation in the educational system is Communication media, which makes it possible to customize the learning process. In the quickly changing educational environment of today, media has a significant impact on how students absorb information and interact with it. Social media, interactive platforms, podcasts, and videos are just a few examples of how media technologies are converting conventional classrooms into dynamic learning spaces. But what specific effects does media have on education? What benefits come with incorporating media into the classroom, and what obstacles do teachers encounter? In addition to discussing the current "No Significant Difference" controversy, we will examine the function of media in contemporary education and provide tips for using it in the classroom. For instance, in diversified learning environments, students may find it very useful to be able to pause films, replay topics, and learn at their own pace. Whether it is presented verbally, visually, or audibly, media can assist in providing tangible knowledge. Fundamentally, media serves as an effective instrument for improving educational opportunities. Visual, aural, and interactive media are all used in education, and they are all made to meet various learning goals and approaches. Through interactive apps, digital simulations, social media discussions, or video lectures, media can inspire students, give them fresh viewpoints, and provide them access to materials that were previously unattainable. The media's capacity to engage students is among the strongest arguments for why it has emerged as a major force in education. Digital-native students frequently find it difficult to focus on traditional instructional techniques like lectures or textbooks. On the other hand, media capitalizes on their familiarity with and love of technology. For instance, videos can blend visual and aural components, keeping students interested and stimulating their creative and logical faculties. By catering to different learning styles, this multimodal method boosts students' willingness to learn and improves their memory of material. Media simplifies difficult ideas into easier-to-understand formats. Consider attempting to comprehend the complex functions of the human heart; viewing a thorough animation will help you understand

the process far more easily than reading about it. The media simplifies difficult ideas into easier-to-understand formats. Consider attempting to comprehend the complex mechanisms of the human heart. Seeing a thorough animation will help you understand the process much better than reading about it in a textbook. For a variety of learners, this increases the relatability and accessibility of learning.

7.4 TYPES AND FUNCTIONS OF AUDIO MEDIA

When it comes to learning, audio has always been less important than visual elements. However, audio has become a very significant and practical educational component since the epidemic, when it became necessary to give students all over the world constant access to instruction. The goal of audio media is to enhance the educational process. Text by itself frequently fails to capture the subtleties and emotions that audio can. An engaging learning environment can be produced by a narrator's use of tone, intonation, and rhythm to highlight key ideas and exude passion. Students may be inspired to remain committed and focused on the subject matter by this emotional connection. All students' engagement and retention can be enhanced by multimodal learning, which is promoted by combining auditory with other sensory inputs. Through the integration of text, music, graphics, and interactive elements, learning modules Learning modules can provide a more comprehensive and captivating educational experience by integrating text, audio, visuals, and interactivity. There are many different **types of audio**, such as background music, sound effects, podcasts, and voice narration. Its incorporation into online learning settings enhances engagement, promotes a variety of learning methods, and enhances memory retention. Every learner learns and processes information in a different way. While interactive simulations, films, and presentations can help certain students retain and process more material, listening to podcasts, audio books, or simple recordings can help others. These students' preferences are met by including auditory components, which improves their ability to process and remember knowledge. some students learn best through listening to podcasts, audio books, or simple recordings, others can retain and process more knowledge through interactive simulations, films, or lectures. By including audio components, one may accommodate these students preferences and improve their ability to process and remember knowledge. For instance, audio classes and podcasts might be very beneficial for people who learn best by listening. However, audio has become a very significant and practical educational component since the epidemic, when it became necessary to give students all over the world constant access to instruction. The goal of audio media is to enhance the educational process.. An engaging learning environment can be produced by a narrator's use of tone, intonation, and rhythm to highlight key ideas and exude passion. Students may be inspired to remain committed and focused on the subject matter by this emotional connection . The use of audiovisual aids is essential if you want to retain the information for a long period of time. Audio-visual aids are frequently used to cover the majority of the themes within the many subjects. This explains why good boards and projectors have replaced black boards as the day category space for electronic equipment. It's a lightweight, sound-based production type of communication. Audio is crucial to eLearning because of its numerous benefits that enhance learning

experiences and results. By supporting different learning styles, increasing engagement, and improving accessibility, audio helps create more inclusive and effective learning environments. As eLearning advances, the careful use of audio will remain essential to delivering excellent training that meets a variety of student needs. If you want to remember the knowledge for a long time, you must use audiovisual aids. Most of the themes within the numerous subjects are covered via audio-visual aids. This explains the replacement of black boards as the day category space for electrical equipment by good boards and projectors. It's a production-based, lightweight kind of communication. With its many advantages that improve learning outcomes and experiences, audio is essential to Learning. Audio contributes to the development of more inclusive and successful learning environments by accommodating various learning styles, boosting engagement, and enhancing accessibility. The thoughtful application of audio will continue to be crucial to providing high-quality instruction that satisfies a range of student demands as eLearning develops.

- Increasing the level of accessibility :-students with disabilities to access eLearning, audio is crucial. Screen readers and audio descriptions make visual content accessible to students with visual impairments. Students who struggle with reading might also benefit from audio, which guarantees that they can interact with and comprehend the content.
- Learning a Language Audio is essential to language acquisition. Students' conversational and listening abilities improve when they hear the proper pronunciation, intonation, and rhythm of the language they are studying. Language classes that incorporate listening activities, dialogues, and pronunciation aids are more successful than those that only use text.
- Students can follow information while commuting, exercising, or working on other assignments thanks to the flexibility provided by podcasts and audio courses. This ease of use increases accessibility to education and may promote lifelong learning.
- Strategic use of sound effects and background music can improve learning by sustaining focus and giving the material an emotional undertone. To prevent distractions, it is crucial to use these components sparingly.
- Systems for Interactive Voice Response (IVR) :_Incorporating IVR systems in eLearning can enable interactive scenarios where students respond to audio prompts. These algorithms can replicate actual interactions and engage with consumers quickly. Because it provides realistic practice scenarios, this method is very helpful in language training and customer service simulations.

7.5 TYPES AND FUNCTIONS OF VISUAL MEDIA

Visual media are those instructional devices which are used in the classroom to encourage learning and make the process easier and enjoyable. It is a colloquial expression used to designate things like TV, movies, photography, painting, and so on. visual media are real objects that people come in contact and it become

part of people's daily life. Word do not look or sound (usually) like the thing they stand for, but visual are iconic, they have some resemblance to the thing they represent. Visual media hold a very important role in the learning process. Visual media can be thought of as an educational instrument that must be seen in order to improve comprehension and fortify memory of the subject matter. Any image, model, object, or other tool that provides pupils with a genuine visual experience is considered visual media in the context of visual instructional concepts. It can facilitate understanding and strengthen the memory of the students. Visuals can also foster students' interest and can provide a relationship between the content of the subject matter and the real world. Visual media have been an important component of the language classes over the year. They are great tools for seeing and understanding things or concepts. To be exact, the use of visual media for presenting, training, and teaching languages has been around since the 1920s or 1930s, consisting mainly of film strips, pictures, slides and pass-around objects . Students' memories can be reinforced and comprehension aided by visual media. Throughout the year, visual aids have played a significant role in language instruction. They are excellent resources for observing and comprehending objects or ideas

Visual Media Types

A variety of visual aids can improve different facets of learning:

- Presentations: Good for giving a broad overview of subjects and summarizing important elements.
- Conversations: Real-world circumstances and applications can be illustrated through visual role-plays or dialogues.
- Narratives: Visuals that tell a story make ideas more relatable and interesting.
- Demonstrations: Videos or detailed illustrations can explain procedures and offer real-world examples.
- Visual Organization: To improve understanding and clarity, properly arrange information using structured graphics.

Visual media comes in several forms, such as:

- **Graphic media** : Graphic media is a type of visual media that uses words, sentences, numbers, symbols, or images to convey information or ideas.
- **Static Images:** Charts and diagrams: These are great tools for visualizing data and breaking down difficult ideas.
- **Posters:** Good for spreading knowledge, reiterating important concepts, and fostering an eye-catching learning atmosphere.
- **Flashcards:** An easy and adaptable way to reinforce concepts, facts, and terminology.

- **Maps:** Assist pupils in comprehending routes, geographic places, and spatial linkages.
- **Models:** three-dimensional depictions of things or ideas that are very helpful in science and other fields where visual aids are essential.
- **Info graphics:** Use text and images to convey information in a clear and interesting manner.
- **Educational posters:** To help students understand topics, these frequently use icons and sparse writing.
- **Moving Pictures:** Videos: Use narration, examples from real life, and demonstrations to engage pupils.
- Information can be presented in an organized and aesthetically pleasing way with the use of slide shows.
- **Simulations:** Provide students with a virtual environment in which to investigate intricate systems and processes.
- Real-time collaboration and interactive learning activities are made possible with interactive whiteboards.
- A multitude of visual tools, such as interactive simulations, films, and multimedia information, are available on websites and online learning platforms.

7.6 CHECK YOUR PROGRESS-1

1) Define communication Media

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2) Give an example of Communication Media

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3) Write down the Meaning of Audio Media

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4) Write down the Meaning of Visual Media

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5) Enlist types of Audio Media & Visual Media

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6) Describe various functions of Audio Media in relation to Teaching and Learning process

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7) Describe the Role of Visual Media in Teaching & Learning Process

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7.7 TYPES AND FUNCTIONS OF AUDIO VISUAL MEDIA

The term “audiovisual method” refers to both sound and visuals, usually presented by the teacher to the pupils in the form of slides, videos, recorded speech, or music. The French group CREDIE was the first to pioneer the audiovisual approach in the 1950s. The method is essentially a mechanical procedure designed to teach ordinary language, and it works best when spoken before written form. The categorization of audiovisual aids is founded on the concept of sensory experience; learning is primarily obtained through direct sensory contact. Keeping this in mind, these are frequently divided into three primary categories: Visual Aids, Audio-Visual Aids, and Audio Aids. The Kothari Commission states that “improving the quality of instruction requires that all schools have access to teaching tools.” It would actually contribute to a change in the nation’s educational system. He Commenus says that “only when we employ more graphics in our books may our teaching be purposeful.” He believed that information is acquired through a variety of senses. Eye and Ear cooperate in audio-visual aids. The use of teaching aids, particularly enhanced aids to make teaching and learning more realistic and effective, has been emphasized in the National Policy on Education from 1986 and as amended in 1992. Another name for audiovisual aids is instructional material. The terms “visual” and “audiovisual” refer to what may be seen and heard, respectively. All of these educational resources give us firsthand knowledge through our senses of sight and hearing while also making the learning scenarios as realistic as possible The educational system benefits greatly from audiovisual tools. The purpose of audiovisual aids is to facilitate and make the teaching and learning process more engaging in schools. The most effective way to teach and disseminate knowledge is through audiovisual tools. The teacher uses instructional aids, often known as audio-visual aids, to assist students understand certain ideas more successfully. Effective teaching aids are those that are relevant to the lesson, meet certain learning goals, and are used appropriately. Using audiovisual tools helps teachers adhere to teaching tenets such as “simple to complicated,” “concrete to abstract,” “known to unknown,” and “learning by doing,” among

others. Audiovisual assistance are beneficial. Our kids benefit from audiovisual tools when it comes to verbalization. However, despite their high educational value, the majority of teachers do not make use of these tools. These are instructional resources, not your typical stuff. As a result, audiovisual materials can be any instrument that can be used to make the learning process more dynamic, realistic, and concrete. Educational materials are another name for audio-visual aids. Visual means to see, while audio means to hear. All of these tools that try to make information understandable to us through our senses are called "Audio-Visual Aids," or educational materials. Through the senses of hearing and sight, these instructional resources give us fundamental data and make learning as realistic as possible. Hence, any tool that may be used to make learning more tangible, efficient, realistic, and dynamic is frequently referred to be audiovisual. Multisensory experiences are offered by audiovisual materials during the teaching-learning process. When adult learners or students use audiovisual resources, they actively engage with them in addition to seeing and feeling them. This indicates that these experiences are entering through a variety of sensory channels. Through our senses—the eyes (see), ears (hear), nose (smell), tongue (taste), and skin (touch), these experiences seep in. The sense organs are also known as the "Gateways of Knowledge" since they contribute to the provision of tactile, gustatory, olfactory, visual, and auditory experiences. Utilizing audiovisual resources creates opportunities for the utilization of various types of visual, audio, and audiovisual assets. Their application transforms the most challenging, perplexing, and abstract ideas into tangible experiences and realities. The abstractions are transformed into tangible educational opportunities that aid students in gaining information, facts, and a deeper comprehension and application of ideas. Utilizing audiovisual resources creates opportunities for the utilization of various types of visual, audio, and audiovisual assets. Their application transforms the most challenging, perplexing, and abstract ideas into tangible experiences and realities. The abstractions are transformed into tangible educational opportunities that aid students in gaining information, facts, and a deeper comprehension and application of ideas.

FUNCTIONS

- Audiovisual materials enhance the teaching process by eliciting and sustaining learners' attention
- making the classroom a more appealing and interesting environment
- breaking the monotony of the lecture method
- adding variety, diversity, and newness to the lesson.
- Audio-visual materials play a crucial role in the teaching-learning process by making concepts more concrete, clarifying facts, and facilitating conceptual understanding.
- Audiovisual materials improve comprehension and learning.
- They play a significant part in the teaching-learning process.

7.8 (a) MEANING OF AUDIO

What we hear is called audio. The five senses—taste, smell, touch, hearing, and eyes—are essential for conveying messages. For communications to be properly received and transmitted, hearing is necessary. Oral and facial contact are the most basic means of communication. In oral, face-to-face communication, hearing is crucial. Any sound or noise that is audible to the human ear is referred to as audio. A sound card generates the audio signal from a computer, which is then played back through speakers or headphones. Audio materials are those that rely solely on one sense—that is, hearing. They are made up of spoken words, which are the most widely used and prevalent. Music, sounds, and sound effects are also used in audio material, which enhances the beauty of spoken language. They may emit directly or through the use of a gadget like a cell phone, iPod, tape recorder, or radio. Lectures are the best instrument available to educators and facilitators. Some people have really good word skills. Their efficacy as a teacher is further increased when they use words in conjunction with suitable dramatic gestures. Other audio materials include recordings, audio clips, radio broadcasts, phones, and mobile devices in addition to lectures. Audio resources are excellent for language acquisition.

(b) RADIO

A radio is a mass communication tool that is used for a variety of purposes all over the world. Even if the radio-entertainment industry has been overtaken by technology and online learning, it still has a significant impact on education. Schools can use radio even in rural locations because it is a low-cost medium with extensive reach. Radio's function has gradually changed throughout time, moving from being primarily an entertainment medium to becoming a vital instructional tool.It makes use of Teachers and students can create more effective learning strategies with the use of radio education. Teachers can, for instance, produce brief instructional movies and broadcast them to their audience on the radio. Additionally, it will give pupils a means to review their knowledge at home or The radio is a useful tool that can improve education in a variety of ways. They can effectively communicate with a big number of kids and support their teaching in the classroom. In other words Radio is one such technology that has the potential to expand and improve educational quality, particularly in developing nations with limited funding, teachers, and other equipment and resources. Hence It is one such tool that provides a plethora of educational opportunities. They are accessible from dawn to midnight and are not restricted to the five or six hours of school. Effective radio use allows youngsters from all around the world to experience art, culture, and knowledge. The radio can serve as an educational tool that will uplift and educate everyone, no matter where they are.

(c) TAPE RECORDER

Tape recorders are recording devices that record and reproduce sound waves using electromagnetic phenomena. After a microphone transforms the incoming sound wave into an electrical signal, a time-varying magnetic

field is created in the magnet's gap. It is One of the audio aids that significantly contributes to generating interest among students in effective way is Tape recordor is said to be highly helpful in the teaching and learning process since it allows teachers to motivate pupils in the best possible way which leads to excellent results. We may claim that this is the most effective tool a teacher can use to make learning more engaging and successful. It can be applied in all type of Extension works, in meetings, training sessions, campaigns etc. Moreover this tool heps to withdraw the hidden talents of students in this way Tape recorder can be a potent weapon to instill confidence among the students.

7.9 MEANING OF VISUAL

The term "visual" describes the application of visual aids, strategies, and approaches to improve understanding, engagement, and retention. It includes the way that visual aids like pictures, graphs, diagrams, and films are used to present, process, and remember information.

Visual media are crucial to the educational process. Students' memories can be reinforced and comprehension aided by visual media. Additionally, visuals can pique students' interest and provide a connection between the subject topic and the outside world. a significant part of the language courses throughout the year. They are excellent resources for observing and comprehending objects or ideas: Pupils find it easier to follow the learning process and feel more involved. Visual-based media, such as photos or parables, are essential to the learning process.Visual materials are those that can be seen and understood by inspecting an object's visual component. These resources are designed to replicate real-world experiences. The visual sense is the most beneficial and effective of the five senses during learning. Visuals capture learners' interest, produce vivid mental images, accelerate comprehension, improve memorisation, and provide a shared experience. A teacher has access to a wide range of visual resources. Images, charts, posters, maps, models, sketches, caricatures, and display boards are among the materials included. Projected audiovisual materials include power point presentations, slides, film strips, films, and transparencies, which are displayed on screen or against a white-washed wall to create a larger image of the information.

(a) PROJECTED AIDS

Projected aids are visual teaching tools that are displayed using a projector. Examples include filmstrips, slides, silent movies, cartoons, and more that are shown using an overhead projector or an opaque projector (epidiascope).we can say that Power point presentations, slides, film strips, movies, and transparencies are examples of projected audiovisual materials. These items are shown on a screen or even against a white wall to provide a larger view of the content. They can be used suitably for both large gatherings as well as small groups. They are more powerful than a non-projected aid because of the large, vivid, and colorful larger-than-life images. These aids plays a significant role in arousing interest among the students

(b) MEANING OF OVERHEAD PROJECTOR

In classrooms and other educational settings, overhead projectors (OHPs) are becoming more and more

common. It is a medium that uses projection to display still visual materials on a screen. It is fairly easy to use and doesn't require any particular training to become proficient. It is currently regarded as the most practical tool available to educators. Compared to other visual teaching tools, and particularly to chalkboards or blackboards, it offers a number of additional benefits. It makes two-way communication easier: A teacher loses eye contact with the students when writing on the chalkboard, yet they can still face each other when images are displayed. This allows the teacher to see how the students respond to the more advanced teaching technique. This also allows students to interact while being taught, It is a time-saving device Visual materials can be produced before to attending the class (as well as during the session), saving a significant amount of time wasted writing on the chalkboard. The items can be prepared ahead of time and placed in the proper order. since a result, education becomes less stressful since the teacher spends more time discussing rather than lecturing and writing on the chalkboard.thus we can say that It is quite straightforward to use.

(c) SLIDE PROJECTOR

Slide Projector is apparatus for viewing photographic slides. slide projector is a visual aid that uses photographic slides and a light source was frequently used for instruction and learning. Teachers were able to communicate with big audiences by projecting images onto a screen. Although they have mostly been supplanted by digital projectors, slide projectors had benefits including mobility and user-friendliness. Students may envision abstract ideas with the aid of projected pictures, which enhances learning and facilitates comprehension. Because slide projectors are lightweight and somewhat small, they are simple to move to other classrooms or locations. They require no technical knowledge and are easy to use. Particularly secondhand models, slide projectors can be a less expensive option than digital projectors . Teachers and students may feel more at ease using slide projectors in some educational settings since they are a familiar technological tool.

7.10 CHECK YOUR PROGRESS-2

- Which is the oldest form of audio media?

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- What do you mean by Audio visual Media?

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- Briefly Discuss the Role of Radio & Tape recorder in Teaching and Learning Process?

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- Write down the Meaning of Overhead Projector & Slide Projector?

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7.11 LET US SUM UP

It is clear from the foregoing that communication media are crucial to the teaching and learning process. A child's personality development is positively impacted by a variety of communication medium, including audio and visual media. The significance of tape recorders and radios was emphasized in this unit under audio media. Teachers could prepare the majority of these materials and use them in the teaching-learning process. The purpose and capabilities of audiovisual aids are effectively explained in this unit.

7.12 KEY WORDS /GLOSSARY

Communication Media, Audio visual aids, Tape recorder, Radio ,Overhead projector, Slide Projector

7.13 SELF ASSESSMENT QUESTIONS

- Define Projected Aids .Why these aids are essential for Teaching and Learning Process.
- Enlist Various visual aids.
- Enumerate Audio aids with Examples.
- Write down the Role of Radio and Tape recorder in Educational set up.

7.14 SUGGESTED READINGS

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LESSON : 8

Non Projected Aids: Charts, Display-Boards, Models, Posters, Maps, Diagrams, Flash cards Audio Visual: Films, Television, Video-Projection, and Satellite instruction

STRUCTURE

8.1 INTRODUCTION

One of the most important aspects of the teaching and learning process is the approach and strategies used. It is imperative that the instructor take into account the cost, dependability, and relevancy of the educational materials while choosing their media. The benefits that students were expected to receive can be distorted by poorly chosen media on a given subject. An outstanding lesson can occasionally fall flat due to an improper teaching strategy. If a teacher wants to give the pupils a thorough knowledge, media

use should be essential. Therefore, it is the responsibility of the instructor to choose engaging and accessible media that accurately reflects the concept being taught to the students on that particular day. In an environment where each party controls their environment for their own gain, non-projected media improves the teaching and learning process and enables professors and students to interact as human beings. it is also useful for emphasizing facts, simplifying them, and clarifying difficult ideas. Non-projected media help students better understand concepts. Additionally, it can be utilized to highlight facts, simplify them, and make challenging concepts clear.

8.2 LEARNING OBJECTIVES

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

- Explain the concept of Non projected Aids.
- To help students to equip with the knowledge of Posters, Charts, Maps, Display- Board etc.
- To understand the importance of Diagrams & Flash card as Non projected aid.
- To enable the students to understand types of Visual aids like Films, Television ,Video Projection & Satellite instructions

8.3 MEANING OF NON PROJECTED AIDS

Non projective aids are those teaching aids which are used by the educator to arouse motivation among the learners. Traditional practice media such as puppets, folk theater, songs, and drama, as well as posters, charts, flash cards, and more, are examples of non-projected audiovisual resources. As a result, they can be employed effectively. They give students first-hand experiences and encourage active participation. They guarantee greater outcomes and longer retention by enhancing the learner's interest and involvement. There is no projection when using these tools. As a result, they convert abstract concepts into a more grounded format. They make it possible for instruction to progress from verbal to more tangible forms.We can state that non-projected aids are widely available and plentiful. Additionally, these tools are inexpensive, easy to use, and electricity-free. These tools can be applied in a variety of ways across all educational and disciplinary levels. Non projective aids can be applied in a variety of ways at all educational and disciplinary levels with the aid of these tools. By telling stories or creating stores, teachers and educators can encourage creative expression. Many of these can be turned into projection aids.

8.4 CHARTS

Charts are collections of vertical, numerical, graphic, or visual elements that concisely and effectively illustrate a topic. Charts are used to depict complicated operations. Flip charts, flow charts, tree charts, tabular charts, pie charts, organization charts, and pictorial charts are just a few of the many possible types

of charts. Effective Chart Use examines how to strategically and efficiently use visual aids in learning environments. In a range of classroom contexts, charts can enhance learning by giving teachers practical advice on how to use these tools for clarity, student participation, and instructional efficacy. Teachers utilize charts as teaching tools to visually represent knowledge and assist students in learning. They can take many different forms, such as mind maps, graphs, flowcharts, or anchor charts. These visually attractive & appealing charts transmit information, illustrate ideas, describe methods, and provide instructions. They accommodate varied learning styles and improve students' comprehension and retention by demystifying difficult subjects and emphasizing key details. Charts are employed as teaching aids and reference materials, creating a dynamic and welcoming atmosphere that can suit a wide range of learning needs. Charts, which serve as both teaching tools and reference materials, promote an engaging and inclusive atmosphere that accommodates a wide range of learning needs and encourages student involvement. Making and implementing charts is an excellent technique to improve the educational environment. These visual aids can considerably boost learning and give students a point of reference that can improve comprehension.Charts may be a very beneficial tool in the teaching process if used correctly. Charts should be examined and updated on a regular basis to guarantee their relevance and accuracy.

MODELS

Models are copies or scaled-up or scaled-down versions of the actual items. According to Edger Dale, "a model is a recognizable imitation of the real object with the main variation being an increase or decrease in size." Because of this, they could be the same size as the thing they represent, or they could be bigger or smaller. They make reality easier to understand and encourage students to engage in creative endeavors. They are typically divided into three categories: working models, cross-sectional models, and solids. Due to their physical, three-dimensional nature, models are regarded as non-projected teaching tools since they can be handled and viewed directly without the need for projection equipment or a light source such as a projector. Charts, diagrams, posters, and other non-projected aids are included in this larger category. The model is a recognizable copy of an abstract (magnetic) or real (eye) object. Except for scale, a model typically resembles the real object in every way. An object can be made smaller or larger. The object is simplified to display only the most important components when its size is decreased. For instance, a globe is a simplified depiction of the world that only depicts its most important components. On the other hand, the object's details are displayed as the size is increased. For instance, the eye model is expanded to make all the intricacies simply and plainly visible.Models are helpful as they Simplifies complex ideas, Make big things smaller so they can be seen easily. Showcase the internal organization of a system or object. Assist students in comprehending challenging aspects of a system or object. By removing intricate details that could make it difficult to understand the notion and concentrating solely on the most important aspects, it simplifies challenging ideas, procedures, or complex circumstances. Models are effective teaching and learning tools. Certain considerations must be made when employing models. Models ought to be big enough

for all students to view them. To help learners comprehend the linkages, models can be enhanced with additional teaching and learning materials, such as charts. Verify the model's functionality before using it in your class.

DISPLAY BOARD

Display Boards: These boards come with a wide range of visual elements, such as chalk/blackboards, flannel boards, peg boards, magnetic boards, and bulletin boards. A display is a structured visual arrangement on a certain subject that is shown on a surface, either vertically or horizontally. They are typically made to convey important information. Display boards come in a variety of forms, such as roller boards, graphic boards, easel-mounted blackboards, fixed blackboards, and magna boards. Teachers' best and oldest friend is the chalk/black board. Because words, pictures, images, and concepts are all written and created to help students envision and comprehend, a teacher cannot function without this visual aid. Today's blackboard is swapped out for a white board and marker. Bulletin Board is one of the type of Display board.Today, a white board and marker are used in place of the blackboard. Bulletin Board is one of the type of display board A bulletin board is a board made of cork or soft wood that is used to display notices, news items, images, accomplishments, newspaper clippings, artwork, and other materials. Flannel board, also known as felt board A wooden board with felt paper or flannel cloth covering it that can hold various flash cards, flannel grams, or flannel graphs: Magnetic strips on a display board allow items, displays, even ironed letters to be shown. Even at night, the material will be visible if tube lights are mounted at the rear of the glass.

8.5 POSTER

A poster is a symbolic depiction of one concept. Posters are typically bold and visually striking, showcasing a single theme to draw in students and convey a message. Posters contain both verbal and graphic elements. The purpose of the visual component is to grab the learner's attention, thus it must be vibrant and striking. The term "caption" refers to the use of text to communicate a visual message. The picture serves to draw attention and encourage non-digital teaching and learning resources.Posters are audacious and symbolic depictions of a single concept. Posters are often posted at a height and are designed to be visually appealing in order to draw in customers and reinforce messages. They are employed to convey messages, educate people, and provide information in all spheres of life. to compel a layperson to understand the desired facts. Hoardings are large posters that are enormous in size. In addition to propaganda and even protests, political campaigns are the main context in which posters are used.

MAPS

Maps are miniature depictions of the actual surface of the earth on When it comes to teaching basic concepts like size, distance, space, location, and direction, maps are an essential visual aid. Since each map represents

a summary of the earth's surface, it offers information in a reduced style. Symbols include words, signs, dots, lines, and colors. Maps are a valuable tool in all fields. Learning geographic, historical, and economic ideas is crucial in social science. assist us in determining the location, size, form, direction, and distance of different places on Earth. It is a precise depiction of the earth's surface that includes the positions of the continents, nations, seas, rivers, and other significant features. Information on the Since each map represents a summary of the earth's surface, it offers information in a reduced style. The following categories are used to generally classify maps:

- Physical maps that display resources, rainfall, soil, forest regions, climate, etc.
- A political map that displays the political divides of nations and regions.
- Maps that depict the distribution of crops, land use, transportation, etc. are known as economic maps
- Social maps, which display the country's population distribution. Language, tribes, literacy rate, and other information are displayed on Maps of the language, tribes, literacy rate, etc. are displayed for ease of understanding.
- Historical maps display the borders of empires, travel routes, combat zones, treaty locations, and more.

DIAGRAM

Diagrams are seen to be an effective tool for comprehension and problem-solving. Diagram effectiveness is thought to be due to self-explanation. Diagrams are useful teaching tools because they simplify difficult concepts into visually appealing representations. They can help students interact with the content more successfully, retain information better, and understand topics more fully. Diagrams can be used to show several facets of a subject, such as relationships, processes, and structural elements. Diagrams are a useful tool for teaching science because they allow pupils to understand the principles underlying occurrences. Students may be better able to comprehend the phenomena' underlying principles and successfully apply their knowledge across topic areas if they are given pictures to illustrate them. Diagrams provi. Visual aids, such as diagrams, are popular among visual learners and can improve memory when compared to text or verbal information alone. A research published in the journal "School Science and Mathematics" found that diagrams can assist students grasp the relationships between distinct components of a concept, the sequence of events in a process, or the structure of an object. Diagrams are more visually appealing than vast blocks of text, which can help students focus and enjoy studying. Drawing a diagram from memory or utilising it in a study quiz might help to reinforce learning and retention. Diagrams can accommodate varied learning styles, particularly visual learners, and can be tailored to specific topic areas and age groups.

FLASH CARDS

One of the non-projected teaching tools that is thought to be ideal for memory retention in this day and age of short attention spans is flashcards. Key subjects are highlighted via flash cards, which are quick visual messages on poster board cards that are flashed (rolled over at short intervals) in front of the audience. These cards are presented to the audience one at a time in a predetermined order, and they are held like a pack of cards. It is a piece of paper with a cue or tip on one side and an answer on the other. A single word, image, or even a question might set off an expected reaction. Definitions, vocabulary from other languages, scientific symbols, and historical Using a "question and answer" structure, one can learn definitions, foreign language vocabularies, scientific symbols, historical dates, traffic signs, and countries and their respective capitals or currencies.During a presentation. Preparation Write, print, or draw on a white piece of paper, then stick it to the cardboard to make a simple flash card. By using flashcard apps on their phones or tablets students learn a variety of courses in a more engaging way. They may now create visually stunning and instructive presentations and decks on their own. These applications' advanced algorithms enhance learning in previously unheard-of ways. Hence Flashcards are cards that include a short quantity of information, such as words, phrases, questions, pictures, numbers, or even a tiny sketch. These apps' powerful algorithms increase learning in ways never previously seen. Flashcards are cards that include a little quantity of information, such as words, phrases, questions, images, numbers, or even a sketch. Typically, all of these are related to a subject or area of study. They are useful for memorization-intensive study and learning activities. This is because they intend to boost a student's active recollection of specifics connected to a subject**.**

8.6 CHECK YOUR PROGRESS-1

- Explain the purpose of using teaching learning resources in teaching learning process.

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- Briefly Discuss Non Projected aids.

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- How do you Differentiate Between Maps and Charts

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- Write a short note on the following
    a. Models
    b. Diagrams
    c. Flash Cards

8.7 AUDIO-VISUAL: FILMS

A film is one of the best audiovisual materials. Due to the "phi phenomenon," or persistence of vision, movies that tell a story or portray an event that was caught on camera as a series of moving images and seen on television or in a theater give the impression that the images are moving. Persistence of vision is created by viewing exposed still images at a specific rate of still frames per second in order to mimic motion. France developed the first photography technique to capture motion in 1888.Watching movies can aid with language learning. Students who are predisposed toward self-directed learning are supported by them. The production is larger than life, which helps with perception, visualization, analysis, and critique. Watching movies helps develop critical thinking skills.They assist pupils who have a propensity for independent study. The larger-than-life production aids in the development of perception, visualization, analysis, and critiquing skills. Movies help people develop their critical thinking and creative skills. In addition to helping students discover new places, people, cultures, civilizations, and traditions from the past, movies can also help them envision the far future and guide them on a voyage of self-discovery and discovery of others.

TELEVISION

TV is regarded as a projected audio-visual aid since it uses both sound and visuals to improve learning by projecting both onto a screen. These aids are gadgets that enhance comprehension by appealing to both the visual and auditory senses. Within the area of audio-visual aids, television can be regarded as a projected instructional aid. It is comparable to other projected aids, such as overhead projectors or film projectors, in that it employs both visual and aural components to communicate information. Television has accumulated a variety of acronyms. The influence of television is enormous. Being a broadcast medium, it offers both visual and aural sensations. Therefore, it has an advantage over radio, where listeners are the only ones listening. It has the ability to captivate audiences and has the capacity to connect viewers across time and location boundaries. It has extensive coverage. Because of its captivating qualities, visual impact, and widespread appeal, it can disseminate the necessary information, impart skills, and alter attitudes. According to Michael J. Apter, "TV is the most effective mass communication medium that has ever existed and it has completely changed our life." On September 15, 1959, television made its debut in India as a UNESCO-sponsored pilot project with the express purpose of educating people. In 1965, the regular broadcast started on Independence Day. In India, television was first thought to have a significant impact on family planning, agriculture, nutrition, health, and education. The addition of entertainment to its mandate came much later.

Doordarshan first broadcast colour television during the 1982 Asian Games. Since its inception, India has broadcast a diverse range of educational television programming for schools, universities, and farmers. While wealthier countries make great use of television in education, underdeveloped countries do as well

8.8 VIDEO PROJECTION

Projectors are an essential piece of technology for modern education, which demands current solutions. They enable the large-scale, public display of complicated information, including scientific data, mathematical formulas, and diagrams. Compared to conventional whiteboards, this not only increases visibility but also fosters a visually stimulating learning environment that holds students' interest. In recent years, projectors have become much more common in classrooms. These visual aids are now more than simply a symbol of contemporary technology in lecture halls and classrooms; they are an essential tool for improving accessibility, interactivity, and comprehension in the learning environment. By offering captivating, dynamic visuals, encouraging student interaction, and accommodating a variety of learning styles, video projection improves teaching and learning. It enables multimedia and interactive presentations. Multimedia classes, interactive presentations, and access to resources that enhance conventional approaches are all made possible by it. Video projection can enhance student comprehension, retention, and engagement by enhancing the visual stimulation and participatory nature of learning. Lessons become more dynamic and participatory using beamers. Instructors can change or add to content in real time while projecting it straight from their computer or tablet. This gives the students more chances to collaborate and have involved conversations. Students can work directly on the projected image when utilizing touch-enabled projectors or when combined with other devices like tablets. This promotes teamwork and collaborative learning. Projector technology can be easily incorporated into current teaching strategies. Because they work with so many different software programs and media types, educators can use a range of This enables educators to use a range of materials in their classes. Projectors are a flexible tool that may be used in any learning environment for anything from interactive educational games to PowerPoint presentations and videos.There are several uses for projector technology in the educational field. Videos and images can assist make stories come to life and foster language skills in elementary school. Projectors make it possible to analyze texts, scientific data, and historical documents in great detail at secondary schools and universities. By enabling webinars and virtual classrooms, projectors for online courses serve as a link between virtual and real-world learning environments. In addition to their present benefits and potential uses, projectors are crucial in the educational field because of their ability to evolve with new technologies. They play a major role in the continuous digitization of education. Projectors provide a means of incorporating the emerging technologies of virtual reality (VR) and augmented reality (AR) into conventional education. They enable the development of immersive learning environments where students can virtually tour historical locations or get up close and personal with intricate scientific procedures using virtual reality glasses. The beamer's projection allows the other students to follow along. These advancements demonstrate that projectors will remain crucial to the progress of education, opening the door for creative teaching strategies and continuously enhancing the classroom setting

SATELLITE INSTRUCTION

A satellite is a type of spacecraft that receives signals from an earthly transmitter, amplifies them, modifies the carrier frequencies, and then sends the amplified signals back to the earthly receivers. With the former USSR's 1957 Sputnik satellite launch, the space age and satellite launch began. Satellites have been launched since then for a variety of uses, including defense, telecommunications, meteorology, remote sensing, and catastrophe warning. Worldwide, satellite communication is employed in education. Countries whose location and population make it impossible to provide effective formal education use interactive television and satellite broadcasting. In light of this, numerous technologies have been tested. One powerful tool for the advancement of satellite communication technologies is EDUSAT. EDUSAT, a satellite communication technology, is a powerful instrument for the advancement of distance learning. Using EDUSAT, the goal of information and communication technology is to provide high-quality education to the nation's impoverished, from primary to higher education, as well as technical and professional training.Through the video programs provided by EDUSAT, the students are able to visualize the instruction and methodology. Especially in places where access to traditional education is limited, satellite instruction makes use of satellite technology to broadcast instructional information and promote interactive learning. Live lectures, pre-recorded shows, and interactive sessions using satellite TV and two-way communication tools like teleconferencing can all fall under this category.directions for satellites enables students and teachers to communicate in real time, answering queries and clearing up misunderstandings. This allows for remote learning by bridging geographical gaps between teachers and students. offers educational possibilities in underprivileged or isolated places where access to regular schooling may be limited or impossible. uses satellite-based programs to support teacher training and professional development, particularly in distant places.gives students access to educational materials such as lectures, interactive sessions, and video programs. One of the best examples of satellite-based education is EDUSAT, an educational satellite in India. Interactive simulations, video lectures, and other learning aids are among the educational materials that are created. Through teleconferencing or other interactive technology, students and teachers can communicate in real time, exchanging ideas and providing feedback. Satellite interactive terminals (SITs) can be installed in dedicated learning centers to promote engagement and learning.

8.9 CHECK YOUR PROGRESS-2

- Write Examples of Audio visual aids

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- Describe the importance of Films in Teaching and Learning Process.

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- Explain the Role of Video Projection.

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- Define the term Satellite instructions.

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- Discuss revolutionary impact of Television on Education

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8.10 LET US SUM UP

This section covered a wide range of audiovisual tools and how they are used in extension and development work. In the classroom, audiovisual aids are tools used to make learning easier and more interesting. The se can also assist educators in conveying information or messages in areas where regular outreach is not possible. Audiovisual aids encourage individuals to learn about subjects they are not interested in. The se tools are very effective for pupils with unique needs, such as those who have visual or hearing impairments. Students are using a variety of audiovisual technologies to aid in their studies. Examples include graphical or pictorial representations such as maps, diagrams & flash cards, among others. During training, teachers use overhead projectors to show brief videos. Using a tape recorder or other audio aid Using a radio or tape recorder as an audio tool lets pupils express their creativity. It supports auditory learning. This conversation helped us to understand that while creating and utilizing audiovisual aids for extended instruction is not a simple process, it does improve learning outcomes and make them more engaging and long-lasting. Overall, this conversation helped us recognize that while some aids can be utilized for every occasion, others can be carefully chosen and used appropriately for every situation.

8.11 KEYWORDS /GLOSSARY

Audio Visual Aids, Non projected Aids,. Visual aids ,Flash Cards ,Poster, Charts, Diagrams, Display board, Video

8.12 SELF ASSESSMENT QUESTIONS

- Enumerate various Non Projected Aids.
- Distinguish between Maps and Charts.

- Write down the Meaning of EDUSET
- How Satellite instruction Influences Educational system

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LESSON : 9

❖ Meaning, importance and Criteria of an Effective Lesson Plan ❖ Approaches in Lesson Planning-Herbartian & RCEM Approaches,Difference between different Approaches

STRUCTURE

9.1 INTRODUCTION

The instructor's job in the teaching and learning process is to pique students' attention. To do this, the teacher should design a lesson plan, which is a crucial tool for successful learning .A lesson plan is an organized approach to planning that helps a teacher accomplish his goals. It includes every aspect of the teaching-learning process, such as the characteristics of the students, their educational backgrounds, the capacities of the teachers, and the monitoring.Planning is linked to lessons in the teaching profession. A

teacher's ability to plan a lesson is crucial in the classroom because a lesson is not just about following directions or information. It turns into an opportunity for education, critical thinking, comprehension, and judgment. All aspiring instructors must engage in lesson planning as part of their educational journey. Since preparation is necessary for effective instruction, lesson planning is a crucial component of all teacher preparation programs. Since it allows the instructor to organize the material in a logical, methodical, and efficient manner, lesson planning is unavoidably a crucial component of the educational process.

9.2 OBJECTIVES

After going through this lesson,

- The students will be able to comprehend what an effective lesson plan is.
- Explain salient features and importance of lesson plan
- Discuss the importance Approaches in Education
- Learners becomes aware with the knowledge of Herbartian & RCEM Approaches in Education

9.3 MEANING & IMPORTANCE OF EFFECTIVE LESSON PLAN

A lesson plan is a methodical, comprehensive document created by teachers to organize a class hour. It acts as a teacher's indispensable road map, guaranteeing that the goals, activities, assessments, and materials of a lesson all correspond with the intended learning outcomes. Lesson plans are essential in the classroom for a number of reasons. It ensures that the teacher has a clear path to follow, making it easier to move between different lecture elements. Students benefit from a cohesive and interesting learning experience as a result. Differentiated learning is promoted when teachers use lesson plans to tailor their instruction to each student's unique requirements, skills, and interests. It helps with the ongoing development of teaching methods by allowing a teacher to evaluate the lesson's efficacy using preset success criteria. A lesson plan serves as a teacher's daily roadmap for what has to be taught to students, how that instruction will be delivered, and how learning will be assessed. By offering a thorough framework for each class time, lesson plans assist teachers in becoming more productive in the classroom. This guarantees that every minute of class time is spent imparting new knowledge and engaging in insightful debates rather than winging it! It helps the instructor choose the best approach, account for potential problems, bring about clarity, get a good sense of what the student already knows, choose how much to impart and how much to learn from the students, and ultimately make teaching effective. Teachers gain self-assurance, perseverance, security, and pride via lesson planning. As a result, the lesson plan showcases the teacher's personality, intelligence, and inventiveness. Through the description and usage of various devices, it raises awareness of the structure and content organization that teachers are associated with in order to accomplish his goals. Thus, we may conclude that lesson planning is a crucial component of teachers' work that can further help them in to bring Positive outputs.

IMPORTANCE

Lesson plans assist educators in increasing their efficacy as professionals. Every part of human activity requires planning, but more planning is needed for a prepared lesson.

- **An appropriate setting** :-A lesson plan outlines the goals of the class and predetermines the teaching methods, approaches, resources, etc. The teaching task proceeds in a well-planned manner when a suitable teaching environment is established.
- **In light of prior information** :-When creating lesson plans, the instructor builds on the students' prior knowledge to offer new information. On the one hand, this makes it possible for the students to learn things extremely easily, and on the other, the teacher achieves his goal.
- **Instruction in psychology** :_-The instructor employs effective teaching methods, approaches, and resources while taking into consideration the students' interests, skills, needs, and abilities. When lesson plans are created, the teacher employs appropriate instructional methods, approaches, and resources while taking into consideration the students' interests, skills, needs, and capacities. The instruction becomes more psychological as a result.
- **Subject matter limitation:-**The scope of the lesson plan is constrained. The teacher can now give up items that aren't relevant. He just recalls specific, condensed information and how it was presented before the students became comfortable. Additionally, the information is taught to the students in an orderly and methodical manner.
- **The identification of the activities:-**The activities that teachers and students do in a lesson plan are predetermined based on the class level. This gives the instructional actions significance and direction.
- **Making the necessary materials:-**While getting ready When creating a lesson plan, the instructor chooses which facts will be clarified using which methods, tools, and approaches, as well as which aids to employ when. Before beginning the instructional task, this gets the required and useful aids ready.
- **Gaining proficiency in teaching:-**The lesson plan serves as a crucial tool for the student-teacher to strengthen their teaching abilities. Applying theoretical understanding During their training time, the student-teachers acquire theoretical knowledge.
- **Confidently instructing**:-Teachers can better understand the subject and related subjects by creating lesson plans. They become more confident as a result. A instructor gives the fresh information when he has gained confidence in himself.
- **The importance of classroom discipline:-**The instructor learns what, when, and how much work

has to be done in the classroom by creating a lesson plan. This engages every student in their assigned work. As a result, there is noticeable classroom discipline.

- **The ability to detect time:-** A lesson plan is created that accounts for the length of each period.

9.4 CRITERIA FOR AN EFFECTIVE LESSON PLAN

- The lesson plan does not need to be a comprehensive document that covers every scenario that could occur in the classroom in order to be effective. Furthermore, it is not required to predict every single student's answer or query. Rather, it should give a broad overview of learning objectives, teaching goals, and strategies for achieving them. It serves as a reminder of the goals and desired course of action. A successful lesson is one in which both teachers and students gain knowledge from one another, not one in which everything goes according to plan. Clear learning objectives, interesting activities, and a methodical approach to instruction and evaluation are all components of an excellent lesson plan. Additionally, it must to be in line with the demands and learning of the students. Using a variety of instructional strategies and materials, it should also be in line with the needs and learning preferences of the students. Hence A good lesson plan should satisfy four key criteria: clearly defined learning objectives and outcomes that specify what students will do; adequate and relevant resources, including time; effective instructional strategies appropriate for the students' learning level; and motivating activities that directly support their Personality Development.

- **Clearly defined learning goals**: Smart goals should be time-bound, relevant, quantifiable, achievable, and explicit. They have to specify exactly what the students should understand or be able to perform by the end of the class.For instance, "Students will be able to create a paragraph utilizing a specified grammatical structure" or "Students will be able to recognize the primary concept of a given text" are examples.

- **Intriguing Activities**:-Activities must to be diverse and accommodate various learning preferences (kinesthetic, visual, and aural). They ought to be pertinent to the learning goals and the interests of the students. Discussions, group projects, role-playing, games, and creative writing exercises are a few examples.

- **Structured Instruction**:-Each activity in the session should flow logically from introduction to practice to evaluation. Instructors ought to give concise justifications and examples. To help struggling students and push those who are prepared for a deeper knowledge, scaffolding and differentiation should be employed.

- **Effective Assessment**:-Using a variety of techniques to gauge student learning, assessment should be continuous and varied. Tests, written assignments, presentations, and observations are a few examples.

- **Feedback must be provided frequently**:- Students should receive feedback on a frequent basis to help them learn better. Provide pupils with regular feedback to help them learn.
- **Alignment with Student Needs and Learning Styles:-**Customize the lesson to match each student's specific needs and learning style. Consider language proficiency, prior knowledge, and cultural context. Customize teaching methods and materials to match specific learning needs.
- **Time Management:-**Plan a well-paced class that includes ample time for activities and assessments. Set appropriate expectations regarding time limits. Adjust the lesson plan based on student progress and involvement. Be realistic about how much information you can cover in a given amount of time. Base lesson planning on student growth and engagement.
- **Materials and resources:-**Ensure all materials and resources are readily available. Select items that are appropriate for the student's level and learning objectives. Think about using technology to improve learning.

9.5 CHECK YOUR PROGRESS-1

- Write your answer in the space provided after each item

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- Write 6 characteristics of good lesson planning.

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- What is the Criteria for Effective Lesson Planning

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- When should we plan a lesson?

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- Why material aids are useful in teaching?

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- What are the benefits of lesson planning.

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9.6 APPROACHES IN LESSON PLANNING

The term "approach" in lesson planning refers to the general framework or philosophy that directs your choice of teaching methodology and lesson structure. It serves as the theoretical foundation for your instructional strategies, guiding your priorities and content presentation. In the classroom, an approach gives rise to certain tactics (like group work) and methodologies (like task-based learning). Essentially, the methods and procedures are the "how" of lesson planning, whereas the approach is the "why". An approach gives rise to methods, which are ways of teaching that use techniques or activities in the classroom to aid students in learning. For instance, the most well-known method of teaching languages nowadays is the communicative approach. One approach related to it is task-based learning. An approach is more than just a technique. One approach related to it is task-based learning. An approach is a set of ideas about how knowledge should be taught and how people learn, not just a technique. It serves as the cornerstone for all the strategies, tactics, and exercises, guaranteeing that teacher complement the overarching educational goal. There are various approaches which are being used by the educator in teaching learning process to bring qualitative improvement and positive outputs,Herbartian Approach and RCEM Approaches are consider as significant approaches which helps the teacher and learner to bring good results in teaching and learning process.

9.7 HERBARTIAN APPROACH

- The German educator Johann Friedrich Herbart was the one who first established the Herbartian approach. Because of the significant influence that his ideas, such as the Herbartian approach, had on contemporary education, Herbart is considered one of the founders of modern scientific pedagogy. He made significant contributions to modern education as a German educator. In addition, he is regarded as the founder of scientific education. He popularized his Herbatian method in the 19th century. Adolescent pupils were the main audience for it. His idea of education, Herbartianism, was first presented in two of his works: Universal Pedagogy and Pestalozzi's Idea of an A B C of Sense Perception. His hypothesis was founded on the way information is assimilated by the mind. By relating new information to past experiences, the mind absorbs knowledge. First, his instruction His teaching theory consisted of four steps; however, his students added two more, making the total six. Now, let's look at the six steps to better comprehend the process. Before we get into the specifics of the six phases, let's look at their definition. The steps are as follows:

Included are the following:

- introduction and preparation

- presentation
- comparison and association
- generalization;
- Application
- Recapitalization

a) **Getting Ready and Introducing** :-As the name suggests, this is a stage of preparation where students get ready to present the subject to the class. This is to pique the pupils' curiosity about the subject. To introduce the subject to the class, the instructor can write it on the blackboard. Students will be able to get ready for the classes that come next with the aid of this step. The pupils' brains would be prepared for the instruction at this point in the Herbartian technique. To get students interested in the new subject, teachers can utilize maps, charts, or pictures.teachers can tell a tale or conduct an experiment.

b) **Presentation** :-In this phase of the This level in the Herbartian technique introduces new ideas to learners through the use of physical objects or actual experiences. Students would be encouraged to connect their previous experiences to this new topic in order to become interested in it. Teachers would ask pupils a series of questions to learn more about their previous experiences so that they might apply them to the current topic. In this way, students become active participants in the learning process. Teachers can also utilise charts, photos, graphs, and other teaching aids to help students learn more effectively. Teachers would also summarise the issue under discussion for their students. The major goal of this step is to effectively deliver the ideas to the students.

c) **Suggested reading:** Association and Comparison of Different Teaching Aids.During this stage, the new knowledge is compared to the student's previous experiences, as solitary information can easily slip through their memory. When individuals correlate one piece of information with another, knowledge retention improves. They would be able to define the learning notion for themselves by comparing this data. Students are encouraged to draw parallels and contrasts between their experiences. This is a helpful approach for learning.

d) **Generalisation**:-Students are encouraged to inferences from their comparisons. During the generalisation stage, the teacher acts as a facilitator while passively observing the learning process. It is an essential technique in the teaching of adolescents. This stage is intended to expand the mind's capabilities beyond perception and physical thinking. Students have a solid understanding of the topics since they are actively involved in the learning process. This step in the Herbartian approach also helps students build critical thinking abilities.

e) **Application:-** This is an important step in the Herbartian approach because students attempt to apply their newly acquired knowledge in real-life situations.This step is crucial to the Herbartian

approach because it allows students to attempt applying what they have learned to actual situations. The knowledge acquired by the learner would be wasted if they were unable to apply it in various contexts. With the use of this technique, the subject would become deeply ingrained in the pupils' thoughts and remain there for a considerable amount of time. Additionally, the idea gets functionally ingrained in their minds, allowing them to interpret events in a meaningful way.

f) **Recapitulation**:-Teachers provide pupils with a summary of the entire subject as the last step in the Herbartian approach. The instructor would quiz the pupils on a variety of topics to gauge their The teacher would offer the students a variety of questions to assess their understanding of the material. Teachers might also set tasks or other activities to assess pupils' comprehension. Teachers can use this method to determine whether or not their pupils understand the material. This stage is used to measure the instructional efficacy.

9.8 RCEM APPROACH

The name comes from the Regional College of Education, Mysore, which promotes the RCEM approach. The system approach in education serves as the justification for this strategy. Information must be presented methodically according to a system approach. The RCEM approach is a behavioral approach to establishing instructional objectives that was created at the Regional College of Education, Mysore (RCEM), India. It offers an organized method of connecting goals, learning opportunities, and anticipated behavioral changes in students by emphasizing mental capacities rather than merely terminal behaviors. RCEM approach offers a thorough framework for organizing and carrying out instruction that links goals to learning experiences and evaluations and places a strong emphasis on the development of mental skills. According to cognitive domains and mental capacities, this method divides educational goals into groups and offers a model for lesson plans that include goals, instructional strategies, and student evaluation.

Important Aspects of the RCEM Method:

- **Modified Taxonomy**: This grouping of the six cognitive areas into four categories—knowledge, understanding, application, and creativity—modifies Bloom's Taxonomy of educational objectives.
- **Focus on Mental Abilities:** It places a high priority on the development of critical mental skills like creativity, application, recollection, and relationship comprehension.
- **Behavioral Objectives:** This approach places a strong emphasis on defining learning objectives in behavioral terms, outlining the skills that students should possess upon completion of their studies.
- **Linking Objectives to Learning Experiences:** In order to promote meaningful learning, the strategy pushes teachers to create learning experiences that complement the stated objectives.
- **Lesson Plan model:** It offers a methodical model for lesson plans that comprises goals, instructional

techniques, and methods for assessing student learning. The RCEM approach can also be thought of as a three-step process: input, which is the initial knowledge or experience; process, which is the learning activities; and output, which is the learning demonstration.

- Across the four aims, the RCEM approach identifies 17 mental abilities: Knowledge: Identifying and remembering. The ability to recognize connections, provide examples, discriminate, categorize, interpret, validate, and generalize are all components of understanding. Use: reasoning, hypothesis development, hypothesis testing, inference, and prediction. Analyzing, combining, and assessing are all aspects of creativity.

In conclusion,

Hence from the above we can say that The RCEM approach consists of three phases or components, which are: The process, sometimes referred to as communication strategy, the input, also known as Expected Behavior outcomes (EBOS), and Another name for output is Real Learning Outcomes (RLOS). EBOS input The RCEM approach's initial step involves determining the behavioral objectives related to a certain lesson or topic. Process Presenting and integrating knowledge and abilities is part of this lesson planning component. The focus is on how effectively the skills and knowledge are conveyed to The RLOS, or output Following learning, the output shows the pupils' final behavior or change in behavior. The next part of the lesson is represented by the output stage in lesson planning. Process level: During this interactive phase, you are interacting with your students in the classroom. For the topic to be presented effectively, you must choose several instructional techniques and audiovisual aids. iii) Output level: Real learning outcomes (RLOs) are referred to in this section of the instructional process. This is comparable to terminal behavior, which is typically assessed using written and spoken questions. The output portion focuses on assessing the desired behavioral change in students.

9.9 DIFFERENCE BETWEEN HERBARTIAN APPROACH & RCEM APPROACH

The main difference between the Herbartian technique and the RCEM approach to lesson planning is what they focus on, to put it simply. The Herbartian Approach focuses on information transfer using a five-step, teacher-centered, linear, and methodical methodology. In essence, however, it is a teacher-centered approach. On the other hand The RCEM Approach focuses upon The needs, interests, and skills of the students so the potentialities and capabilities of the students are the top emphasis during the teaching and learning process in this learner-centered approach. With RCEM, a more participatory and learner-centered approach, specific learning objectives and activities are developed, often in a three-step process.

- **Herbartian Approach:** Knowledge-based, systematic, and teacher-centered.
- **Steps:** Application, Generalization, Association, Presentation, and Preparation.
- **Nature:** Frequently seen as a sequential method, it proceeds through the five steps in order.

- ❖ Actively providing information and directing the class is the role of the teacher.
- ❖ The role of the student is passive, taking in information and answering inquiries from the teacher.
- ❖ **RCEM Approach** Emphasis: Interactive, learner-centered, and goal-oriented.
- ❖ **Steps:** Teaching Points (Content Analysis, Sequential Arrangement, Statement), Learning Experiences, and Assessment are frequently the three steps in this technique.
- ❖ **Nature:** More adaptable and dynamic, enabling modifications in response to student participation.
- ❖ The role of the teacher is to facilitate learning by assisting pupils with tasks and promoting involvement.
- ❖ The role of the student is active, taking part in events and learning via interaction and investigation.

9.10 CHECK YOUR PROGRESS-2

- Write down the meaning of Lesson planning.

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- How Lesson planning brings fruitful results explain with examples.

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- Elaborate the Role of Herbartian Approach in Teaching and Learning Process.

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- Briefly discuss RCEM Approach.

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- Differentiate between Herbartian Approach & RCEM Approach.

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9.11 LET US SUM UP

We may conclude from the foregoing that this course focuses on the need of planning our class and subject

curricula both annually and daily. The efficient distribution of instructional materials to students is made possible by careful planning. A number of lesson planning techniques have been thoroughly covered in the first stage. A lot of work has gone into helping the students develop a lesson plan that will motivate them throughout the learning process. Various formats of lesson plans have been discussed. In order to facilitate teaching and learning, the previously described lecture also covers the distinctions between the Herbartian and RCEM approaches.

9.12 KEY WORDS/GLOSSARY

Lesson Planning, Approaches, Herbartian Approach, RCEM Approach, EBOS,RLO

9.13 SELF ASSESSSMENT QUESTIONS

- ❖ Define Herbartian Approach.
- ❖ Explain RCEM Approach.
- ❖ Describe Effective Lesson Plan.
- ❖ Enumerate Various Educational Approaches.

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LESSON : 10

❖ Concept of Evaluation, Relationship between Teaching and Evaluation. Types of Evaluation (Formative & Summative)
❖ Method of Evaluation through Essay Type, Objective Type and Oral Method, Comparative Merits & Demerits of Different Methods of Evaluation

STRUCTURE

10.1 INTRODUCTION

Students' learning experiences are greatly influenced by assessment in the field of education. Assessment can be done in a number of ways and gives both the teacher and the student the ability to track their progress toward meeting learning goals. Teachers assess students' overall development, knowledge, and abilities using a variety of techniques. In the teaching and learning process, formative and summative assessments are two popular forms of evaluation that have distinct functions. Both are necessary for evaluating a student's learning, but they vary greatly in terms of methodology, schedule, and results.

10.2 LEARNING OBJECTIVES

- ❖ To help educators comprehend the significance that assessment plays in the students' overall development.
- ❖ To assist the educator in selecting resources that best suit their pedagogical approach and the needs of their pupils.
- ❖ To Emphasize the relationship between Teaching & Evaluation.
- ❖ To impart the knowledge of formative and summative evaluation for the overall efficacy of the program
- ❖ To bring Awareness among student Teachers regarding .Various methods of Evaluation

10.3 MEANING AND CONCEPT OF EVALUATION

Evaluation in education refers to the methodical process of determining the worth, value, or quality of anything. To enhance teaching methods and learning outcomes, it entails collecting or amassing data, evaluating the findings, and making well-informed judgments. Teachers can better comprehend student learning, pinpoint students' strengths and weaknesses, and direct instruction with the use of evaluation. In the teaching-learning process, evaluation is unavoidable. When decisions must be made, whether they are straightforward or intricate, it is unavoidable in classroom instruction as it is in all other areas of endeavor. When evaluating someone, you measure their performance and make judgments about them based on predetermined standards. The assessment procedure is a useful tool for assisting a project, program, or even an organization in evaluating a goal, proposal, or other option. As everyone knows, throughout the school day, principals, teachers, and other staff members make a lot of decisions concerning kids and assist them in making a lot of decisions for themselves. Evaluation plays a part in an effective decision-making process. For instance, classifying pupils into different groups, or rankings, requires them to have their accomplishments measured and interpreted. Even a cursory examination appears to point to the benefits of a methodical application of planned evaluation because the necessity of evaluation is so fundamental to the teaching-learning process. Teachers can make better evaluation decisions with the aid of evaluation.

Action must be taken and decisions must be made. We will be more successful in guiding our students' learning if we evaluate them more precisely. Our ability to effectively guide our students' learning will increase with the accuracy of our assessments. Making better decisions about how to guide students' development toward worthwhile educational goals requires a thorough understanding of evaluation ideas and techniques.Peer review is an excellent illustration of evaluation. Peer review is used in online learning systems such as Coursera, where students verify each other's project work before proceeding to the next section of the course. People who possess the same skills and information as the course participant do this. They assess and assign grades to one another's work. Hence Evaluation in education is the act of determining how well students understand the course material in order to pinpoint the learning goals that In education, evaluation is the process of assessing students' grasp of the curriculum in order to accurately identify whether or not learning objectives have been met. The following are the most commonly used educational assessments : A preliminary assessment.

Formative assessment. diagnostic assessments and summative evaluations

10.4 RELATIONSHIP BETWEEN TEACHING AND EVALUATION

- Evaluation and teaching are closely related and create a circular process in which teaching serves as the framework for assessment and evaluation informs and enhances teaching.
- Recognizing the needs of students: Evaluation, which includes formative tests like quizzes and class discussions, provide information about students' comprehension and areas of difficulty. Teachers can use this information to address certain learning gaps and customize their training.
- Enhancing instructional strategies: By examining how well students score on different tests, educators Teachers can determine which teaching strategies are most successful and make necessary modifications by examining student performance on a variety of exams.
- Establishing a learning environment: Teachers can use evaluation to determine how well their classroom is working and make necessary adjustments to make it a more encouraging and stimulating place to learn.
- Instruction offers a framework for Evaluation:Matching evaluations to learning goals:

  Assessments that are in line with learning objectives and give a clear picture of student achievement are guaranteed by effective teaching.
- Giving insightful feedback: Teachers can use Evaluation results to provide students targeted, helpful criticism that enhances their learning.
- Encouraging student participation: Students are more likely to be involved when they are aware of how their work will be evaluated and examined.

- ❖ Evaluation as a tool for reflection: Instructors can utilize evaluation results to consider how they teach and modify their methods to enhance student learning.
- ❖ Continuous improvement: The teaching and evaluation cycle is a never-ending process of improvement in which future instruction is informed by assessment feedback.

10.5 TYPES OF EVALUATION : FORMATIVE AND SUMMATIVE

The words formative and summative assessment were first used by Michael Scriven in 1967, and he highlighted the distinctions between the two in terms of the information's intended use and its objectives. According to Scriven, formative evaluation collected data to evaluate a curriculum's efficacy and make decisions on which curriculum to implement and how to enhance it within the school system. In 1968, Benjamin Bloom used the phrase in his book Learning for Mastery to discuss formative assessment as a means of enhancing students' teaching-learning experiences.

- ❖ The term "**formative assessment**" describes instruments that detect learning gaps, difficulties, and misconceptions along the route and evaluate how to bridge them. It offers useful resources for assisting in the shaping of learning and, if students realize that the objective is to enhance learning rather than assign grades, can even strengthen their capacity to take charge of their education. Ideally, teaching and learning are enhanced at the same time using formative evaluation techniques. By actively encouraging students to evaluate their own abilities and retention of knowledge, as well as by providing clear instructions and feedback, instructors can support students' growth as learners. Evaluation of Formative In addition to measuring student success, formative assessment can evaluate the development of the teacher also. For instance, while introducing a new exercise to the class, one can assess whether it should be repeated (or changed) by surveying the students and/or observing. Finding areas that might require improvement is one of formative assessment's main goals. These tests, which are usually not evaluated, serve as a barometer for students' learning development and an indicator of how well teachers are using the right techniques and exercises. Feedback and information are provided by formative assessment throughout the teaching process and as learning is happening. Formative evaluation gauges student development, but it can also evaluate the performance of teacher. Hence we can say that a constant method of checks and balances in the teaching and learning processes is formative assessment. The approach enables teachers to regularly review their students' progress and the efficacy of their own practice, enabling students to evaluate themselves. In the classroom, practice is formative in the sense that teachers, students, or their peers use evidence about student achievement to inform their decisions about the next steps in instruction. These decisions are likely to be better or more well-founded than they would have been had the evidence not been elicited. Formative evaluations provide real-time insight into what students are or are not learning, allowing teachers

to adjust their methods, resources, and academic support accordingly.

- **Summative evaluation** is a thorough analysis of a program's efficacy that is usually carried out following implementation. Along with program statistics including attendance, staff characteristics, funding, and cost-effectiveness data, it focuses on quantitative data and outcomes, such as children's developmental, behavioral, or cognitive outcomes. Summative evaluation can be used to support qualitative or procedural evaluations or as part of an effect evaluation.The purpose of summative assessments is to offer a collection of findings that may be utilized to determine the effectiveness of a program. When it comes to reviewing ECEC programs, these kinds of assessments are taking the lead. While a summative assessment's timing must provide the program a realistic possibility of succeeding,

It is frequently used to assess short-term objectives. Summative assessments are typically outcome-oriented and offer quantitative data. However, these assessments frequently contain program statistics, such as attendance, staff characteristics, funding, and cost-effectiveness data, in addition to the developmental, behavioral, or cognitive results for children. Summative assessments can be used as supplementary evidence in qualitative or process evaluations, or they can be a component of impact assessments. Assessing whether students have fulfilled the learning requirements and objectives for the course or program is the primary objective of summative evaluation. Following completion of the learning process, summative assessments are conducted to offer information and feedback that summarizes the teaching and learning process. At this stage, there is usually no more formal learning occurring except from incidental learning that may occur from completing tasks and assignments.

For summative evaluation, rubrics—which are frequently formed around a set of criteria or expectations—can be employed. To help students understand exactly what is expected of them for each criterion, rubrics can be provided before they start working on a project. Additionally, by using the same criteria that students used to finish the project, rubrics can assist to be more objective when determining a final, summative score.

Because rubrics use the same criteria that students used to finish the project, they can also help you be more objective when determining a final, summative mark. High-stakes summative assessments are typically administered to students at the conclusion of the semester or at a certain point in time to assess what they have learnt and how effectively they have learnt it. Grades are often the result of summative assessments; they indicate whether the student has learnt enough to go to the next portion of the class, the next course in the curriculum, or the next degree of academic standing. The section "Grading" has further information about grading and its impact on student achievement. Summative assessments analyze the finished output, whereas formative assessments focus on the project completion process. There are no modifications allowed after the project is completed. No changes can be made after the project is finished. However, if students

are permitted to make changes, the evaluation turns into a formative one, giving them the chance to do better. While formative assessment concentrates on the process; summative assessment evaluates the finished output.

10.6 CHECK YOUR PROGRESS-1

- What are major component of teaching-learning process ?

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- Define Learner appraisal.

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- Discuss the relationship between Teaching & Evaluation?

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- Enumerate various Types of Evaluation?

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10.7 METHODS OF EVALUATION: ESSAY TYPE

There are various methods for assessing a student's growth and behavioral changes. Evaluations of knowledge, information, and comprehension are conducted using oral, essay, short-answer, and objective assessments. Let's take a quick look at each type.

Essay Type :- The word "essay" suggests a written response that could be one or two pages long. The student is free to choose how to phrase, lengthen, and structure and organize their response. The essay-style questions or subjective type methods are used to evaluate and assess knowledge in a effective way.such style can be used by the educator to assess language and writing abilities of the learners in a best possible way . An essay type test or subjective method of evaluation is one where students must create, arrange, and compose an original composition in order to fully address a prompt or question. It is meant to evaluate students' ability to write a coherent, logical, and convincing essay. These assessments encourage students to develop sound study habits. Moreover this type of tests are simpler to prepare and perform, and they can eliminate a significant amount of guesswork. All levels of thoroughness and correctness can be measured using these kinds of exams. There are numerous skills that can only be assessed by essay-

style questions and not by any other kind of inquiry. These skills include: Choosing pertinent information from the corpus of learned facts. to recognize and create connections between different facets of knowledge. Additionally, subjective tests assist students to enhance their capacity for critical thinking, logical thinking, systematic presenting, etc. These assessments give the youngster a chance to demonstrate their initiative, creativity, and inventiveness, among other qualities. These assessments are thought to be the most successful in evaluating a person's capacity for effective concept organization, criticism or justification of statements, interpretation, etc.

MERITS & DEMERITS OF ESSAY TYPE METHOD OF EVALUATION

- **Merits**
    - **Evaluate Higher-Order Thinking**: By allowing for analysis, synthesis, and evaluation, essay questions push students to show a deeper comprehension of concepts than just recollection.
    - **Thorough Evaluation**: They offer a sophisticated evaluation of students' understanding and expertise, especially in areas that call for in-depth justification.
    - **Complicated Reasoning**: Students can solve issues, convey complicated ideas, and show that they can explain ideas logically by answering essay questions.
    - **Writing and Communication Skills**: Students' writing and information-communication abilities are improved by essay evaluations.
    - **Understanding of Thought Process**: Teachers can spot knowledge gaps by using the insights that essay grading offers into students' thought processes.
    - **Assessment of Mastery:** Essay type of assignments assist educators judge if students have understood the subject area and can back their arguments with evidence.
- **Demerits**
    - **Subjectivity in Scoring**: Essay-based grading or evaluation can lead to variations, even among the same assessor.
    - **Time-consuming**: Compared to other assessment methods like multiple-choice questions, this sort of evaluation takes longer to complete.
    - **Potential for Bias**: Unrelated characteristics, such as handwriting or response length, may influence scoring.
    - **Low Reliability:** Assessing through Essays time method may have low reliability and validity due to variables such as restricted sampling and subjective assessment.
    - **Multiple-choice or short-answer questions are** more successful in measuring low-level learning

outcomes than essay-style evaluations.

- **Students can "bluff"** or provide incomplete information in their answers, though it is not as common as in multiple-choice questions.

10.8 OBJECTIVE METHOD OF EVALUATION

The objective method of Evaluation is consider as one of the important tool to measure or evaluate Students' degree of objectivity via objective tests. As the name suggests Objective method is objective in nature which is Based on psychological notions. When the test is objective, the individual who is scoring it can no longer have biased opinions or judgments. The assessment tool is regarded as very objective when the range of scores assigned is unaffected by the judgment, bias, or subjective opinion of the scoring. On objective evaluations, students are required to identify whether a particular response is right; they are not required to write much. We can say that this type of method helps the teacher to effectively gauge students' level of objectivity. Students only need to indicate whether or not a given response is correct on objective assessments; they are not needed to write much. Objective assessments are necessary for a number of reasons, including assessing IQ, aptitude, interest, and accomplishment. In a little period of time, the examinees are able to respond to a sizable number of questions. The validity of exams is maintained by these objective assessments, which also assist the examiner in avoiding subjectivity. With the use of a scoring key, the examiners can also assess a huge number of answer books. Typically, objective assessments are used to gauge pupils' level of understanding. First, the questions are relevant to the field, whose level of knowledge needs to be quantified. Second, there are typically a lot of questions covering the whole spectrum of knowledge. Third, these questions are evaluated objectively. Thus, these Third, these questions are evaluated objectively. Thus, these tests are reliable and valid. All the questions included in them are unambiguous and bear only one meaning, and their replies too are definite.

MERITS AND DEMERITS OF OBJECTIVE METHOD OF EVALUATION

- **Merits**

  - **Efficiency and Speed:** They enable for speedy assessment of a large number of pupils and can cover a wide range of topics within a shorter timeframe.
  - **Validity and Reliability**: Properly constructed objective tests may measure what they are supposed to measure with consistency.
  - **Easy to Evaluate :**Whether conducted online or offline, objective exams are convenient for large groups due to their ease of administration and evaluation.
  - **Objective and Unbiased Scoring:** Objective tests are simple to assess, with obvious right or wrong responses, reducing subjectivity and biasness.

- **Testing Diverse conceptions**: They can include a huge number of questions testing multiple conceptions of a subject.
- **Suitable for Various evaluation Purposes**: Objective tests are well-suited for diagnostic evaluation, performance testing, and aptitude tests.
- Pupils like this type of test item as there is no chance for the teacher to show personal bias or favoritism. Because the students are more engaged, these exam items are instructive for them. These test items are educational for the students because they are more interested in answering this form of test.
- The exam items are more dependable and valid. Objective type test items can be easily standardised by applying them to a large number of students of the same age group before the real examination.

• **Demerits**

- **Possibility of Guessing:** Students occasionally have the ability to guess the right response, particularly when answering multiple-choice questions, which might result in an incorrect assessment of their true knowledge.
- **Students are not required to summarize** the content or apply concepts, which are obviously important skills for this kind of exam topic.
- **Encourages Cramming and Rote memorization**: The test items of this sort are not utilized to diagnose students' learning issues. It is frequently stated that the objective type test items fail to check cramming.
- Teachers will provide test-taking guidance to students when an objective test has been standardized. Following this, the test will have no purpose and be of no benefit to the students.
- **Lack of Flexibility and Nuance**: It's possible that objective assessments won't be able to adequately represent the intricacy of learning or take individual differences in comprehension into consideration.
- These test items do not place an emphasis on students' abilities to organise subject matter
- Students do not have opportunities to make comparisons. Students are not asked to summarise the material or apply principles, which are valuable skills in this sort of exam topic.
- These test items are not used to diagnose students' learning issues.
- Once an objective test has been standardised, teachers will guide students on the test. After this, the test will be worthless and useless to the students.

10.9 ORAL METHOD OF EVALUATION

One of the straight forward way to Evaluate students learning outcomes is Oral method of Evaluation. By asking questions, an oral exam is a simple and straightforward way to evaluate the capabilities and potentialities of the students' . Oral tests does not have a structured list of questions. Oral assessment tasks, which can take many forms, from formal interviews to presentations and open debates, use spoken language to evaluate students' learning. They give teachers and students the chance to communicate directly, enabling individualized and significant learning experiences for each student. Higher-order cognitive abilities, such as applying theory to practice, applying deep learning, and problem-solving techniques, as well as "soft skills," including formal information delivery and good communication, can all be assessed orally. Oral assessments, often known as oral exams or "viva voce," or "live voice" in Latin, have become more and more common in higher education and are seen as The oral assessment, also known as the oral exam or 'viva voce', or 'living voice' in Latin, has grown in popularity in higher education, and it is regarded as an authentic, secure, and versatile means of measuring students' competence. It is a method of assessment in which students demonstrate their knowledge and understanding of a topic through spoken responses to questions. It is a dynamic method of assessment that enables real-time involvement and evaluation of skills such as critical thinking and communication. Oral assessment activities use spoken words to measure student learning and might take the form of open discussions, presentations, or formal interviews. They enable direct interaction between students and teachers, resulting in more personalized and meaningful student learning experiences.

- **Merits**
    - ❖ Oral exams are diverse. Orals Exams have been utilized successfully in a wide range of fields, including mathematics, religious studies, commerce, physics, medicine, and modern languages.
    - ❖ Oral exams provide evidence and support for higher order thinking and problem solving skills. Learning how to solve problems accounts for a significant portion of STEM education. Many written tests use just shorter problems to ensure that a student who encounters a barrier is not penalized excessively. In contrast, during an oral test, instructors can provide supporting suggestions to help students overcome any obstacles and practice and display their problem-solving abilities more thoroughly. This makes an oral exam both gentler and more comprehensive than a written exam.
    - ❖ Oral exams can improve learning performance. The act of explaining an answer to the examiner adds to the student's understanding, making the examination an opportunity for further learning. Oral exams might affect how students study. When students in Iannone and Simpson's study realized they'd be examined orally, they concentrated on comprehension rather than memorization. Students may study more thoroughly for an in-person test than for a written test.

- ❖ Oral exams help students develop authentic communication skills in their discipline. It is believes that oral assessments might help her students learn how to communicate like scientists. Oral assessments help students enhance their communication skills in areas that will be useful later in their careers.

- **Demerits**
  - ❖ **Time consuming:** In general, oral evaluations need more time than written tests, particularly in larger classrooms. As a result, teachers may have more time to prepare, and students may have longer exam times.
  - ❖ **Bias Potential**: Oral evaluations are subjective, bias may be introduced into the grading process. The evaluator's assessment may be unintentionally influenced by elements such as a student's language proficiency, shyness, or articulateness. So the element of biasness may occur while using this type of test
  - ❖ **Increases the level of Stress;** Students who are not accustomed to speaking in front of others or who have mental health issues may find oral exams to be a major cause of anxiety. Their performance can suffer as a result of this stress. Their performance can suffer as a result of this stress. They may comes under stress due to which their performance while facing Oral Tests.
  - ❖ **Fairness and dependability**: Questions of fairness and dependability may arise if students are given diverse questions or if the evaluation standards are unclear.
  - ❖ **Problems with Academic Integrity**: Students may divulge their questions to third parties, which could jeopardize the validity of the test.
  - ❖ **Fairness and dependability:** There may be questions regarding the evaluation's dependability and fairness if pupils are given various questions or if the assessment criteria are unclear.
  - ❖ **Limited Scope:** Written tests are better suited to evaluate complicated problem-solving abilities and abstract thinking than oral assessments.

10.10 CHECK YOUR PROGRESS-2

- ❖ What are the benefits and drawbacks of essay-based tests?

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- ❖ How would you improve the format of essay-type tests?

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- Describe the guidelines for writing objective tests.

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- Explain the definition of oral exam. Evaluation.

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- Explain the advantages and disadvantages of oral exams.

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- Compare essay and objective tests.

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10.11 LET US SUM UP

This section attempts to illustrate the concept of evaluation as an important component of education. The above unit delves deeply into the link between teaching and evaluation. In addition, several types of evaluation, such as formative and summative evaluation, are stressed, which sheds light on the meaning and nature of formative and summative evaluation. In the last chapter, numerous techniques of evaluation that play an important part in the growth of the kid are explored, including the essay type, objective type, and oral method. hence from the above we can sum up and say that this chapter discussed all about the Evaluation .

10.12 KEY WORDS /GLOSSARY

Evaluation, Teaching, Formative, Summative, Subjective/Essay type, Oral Method, Objective Method

10.13 SELF ASSESSMENT QUESTIONS

- What do you Mean by The term Evaluation?
- How the Process of Evaluation Influences the Personality of the Learner?
- Enumerate various types of Evaluation?
- Write down the Meaning of Objective Type of Evaluation?

- ❖ Explain Essay Type of Evaluation With its Merits & Demerits?
- ❖ Describe Oral type of Evaluation along with its merits & Demerits?

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