CC-9, UNIT-1 Tools and Techniques of Evaluation

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Tools:

A tool is used to measure a student's academic abilities, skills and fluency in a specific subject.

1. Checklist

2. Rating Scale

3. Questionnaire

4. Anecdotal Record

5. Portfolio

Technique:

Technique is a method of accomplishing a desired aim. It explains how tasks and activities are integrated into lessons.

1. Examination

2. Interview

3. Project

4. Observation

5. Group Discussion

6. Debate

7. Assignment

Differences Between Assessment And Evaluation

Assessment	Evaluation
1. It tests how learning is going.	1. It tests what has been learned.
2. Diagnostic: It identifies areas for improvement.	2. Judgemental: It arrives at an overall score.
3. Identify weaknesses and improve the learning.	3. Judge the Quality.
4. Conducted during the learning process.	4. Held at the end of learning process.
5. Help students to learn from each other.	5. Make students compete with each other.
6. Process oriented and formative.	6. Product oriented and summative.s

Examination

Examination is a set of various tests, interviews, observations or projects, etc. which are conducted in different situations for some time-bound objectives. Test is a tool of examination and many tests combine to make one examination.

Types of Examination:

1. Closed/Restricted Exam

2. Open Book Exam

3. Take Home Exam

4. Multiple Choice/Objective Type Exam

5. Short Answer Exam

6. Essay Type Exam

7. Case Study Exam

Appraisal

A Formal Assessment of the students' performance, behaviour, talent,etc.

Appraisal systems exist in an organization to improve the efficiency by ensuring that individuals perform to the best of their ability, develop their potential and earn appropriate reward. This in turn improves the organization's performance.

Types Of Appraisal:

1. Ranking appraisal

2. Grading

3. Goal Achieving Appraisal

4. Behaviour Based Appraisal

5. Trait Based Appraisal

Difference Between True Ability And Observed Ability

• Ability means Physical or Mental Power to do or Accomplish something.

TRUE ABILITY:

True Ability is what the person is actually capable of achieving. It may or may not be visible in the actual score obtained in the exam. Written tests do not accurately capture a candidate's TRUE Ability. They only test the theoretical knowledge.

OBSERVED ABILITY:

Observed Ability is what other people conclude about the person's capability of achieving something. It is visible in the actual score obtained in the exam.

Principle Of Assessment

1. Principle of Continuity
2. Principle of Comprehensiveness
3. Principle of Explicity and Transparency
4. Principle of Child Centred
5. Principle of Completeness
6. Principle of Objectivity/Aim Fulfillment
7. Principle of Flexibility
8. Principle of Learning Experiences
9. Principle Of Change and Improvement
10. Principle of Fairness
11. Principle of Reliability
12. Principle of Validity

Principle of Evaluation

❑ Determining and clarifying what is to be evaluated.

❑ Evaluation Techniques should be selected according to the purpose to be served.

❑ Various Techniques of Evaluation should be utilized.

❑ Knowledge of Benefits and Limitations of each tool.

❑ Evaluation is a means to an end not an end itself.

Behaviorist, Cognitivist And Constructivist Perspectives

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Behaviorism

Behaviorism is a learning theory that focusses on the observation of the environment and the response to it. In behaviorism, learning is demonstrated by response to external stimuli. It focusses on the idea that all behaviors are learnt through interaction with the environment.

Behaviorism began in 1913 by J.B. Watson. In behaviorism, learning is demonstrated through action and must be observable and reflected in behavior. Behaviorist theory focusses on how people learn and form habits. Individuals get conditioned by their interaction with the environment, leading to the development of a habit.

EXAMPLE:

A teacher asks students to construct 5 sentences from a present tense context.

Stimulus: Constructing Sentences.

Response: Correct Construction of Words.

Learning: The Repetition causes the students to learn grammar.

Method:

1. Lecture

3. Rote Learning

2. Drill and Practice

4. Multiple Choice Tests.

STIMULUS   +   RESPONSE   ➡️   LEARNING

STRENGTH AND WEAKNESS OF BEHAVIORISM:

STRENGTH	WEAKNESS
1. Positive Reinforcement 2. Motivation plays an important role in behavioral learning.	1. Teacher-Centred 2. Repetition may become boring. 3. Ignores thought processes.

Cognitivism

Cognitivist theory developed as a reaction to behaviorism and gained popularity in 1950s by Jean Piaget. According to Cognitivism, learning by an individual happens when they process the information and stimulus that they receive. It is a learning theory that focusses on how information is received, organized, stored and retrieved by the mind. It uses the mind as an information processor like a computer. Cognitive theory attempts to explain human learning by understanding the internal mental process. The teacher's role in cognitivism learning theory is to guide students through the problem solving process, while allowing them to use their own thinking.

For Example- when students receive thought provoking questions, it guides their brains to look deeper into their present knowledge to find solutions.

METHOD

1. Lecture

2. Visual tools: Mind Maps, Charts, etc. to facilitate memorization for learning

3. Multiple choice and easy Assessment

STRENGTH

1.Improves Confidence
2.Develops problem solving skills
3. Encourages long term memory

WEAKNESSES

The learner learns a way to accomplish a task , but it may not be the best way, or suited to the learner or situation

CONSTRUCTIVISM

Constructivism says that people construct their own understanding and knowledge of the world , through experiencing things and reflecting on those experiences. Giambattista Vico coined the term constructivism. Not a new idea, the ideas of constructivism can date back to the insides of Socrates, however , it really came to light when Piaget's theory of intellectual growth was released.

Learners communicate with each other, and share their understandings, feelings , knowledge, and experience to come up with new knowledge. The teacher becomes the facilitator and the learners are encouraged to interact , exchange views, experience and knowledge that is based on their needs(still with the teacher's intervention).

Example: Case studies, research projects, problem based learning, brain storming, group work, discovery learning.

According to constructivism, 5E's describe the phases of learning:

1.ENGAGE

2.EXPLORE

3.EXPLAIN

4.ELABORATE

5.EVALUATE
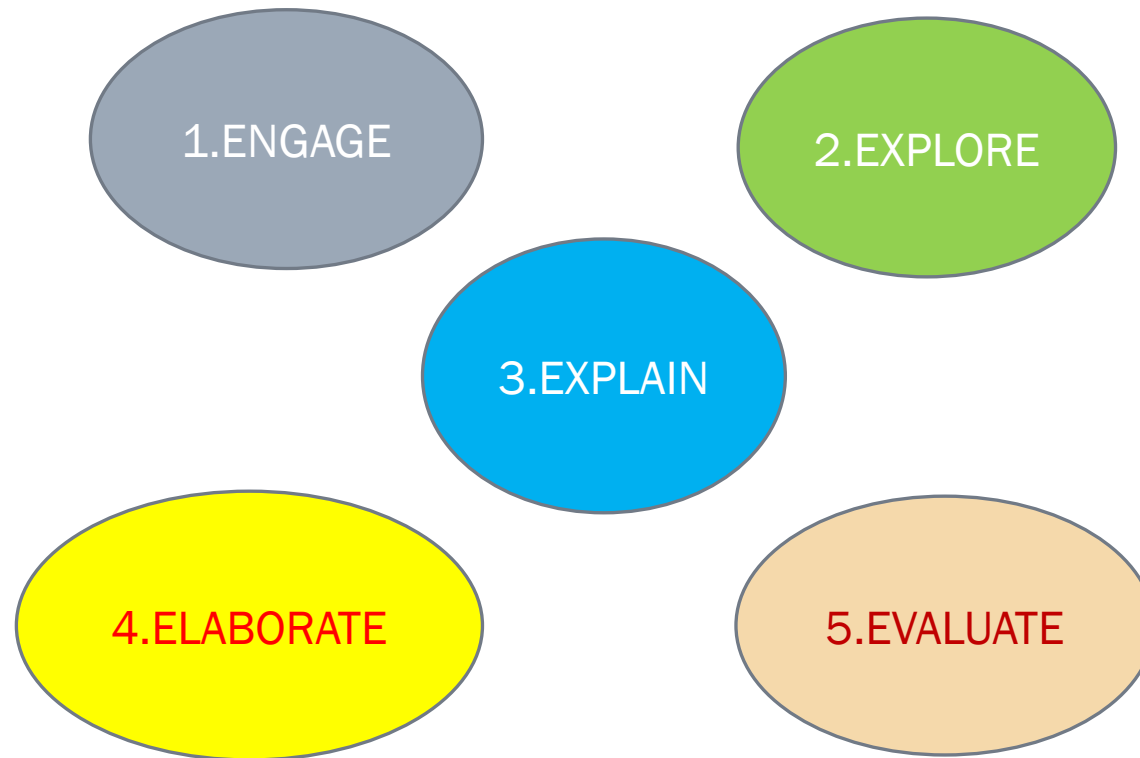
METHOD

1. Discovery

2. Collaborative/Group work

3. Self-guided Learning based on personal experience

4. Peer grading/review

STRENGTH	WEAKNESS
1. Most memorable learning experiences.	During initial stages students may experience confusion or frustration.
2. Group involvement.	Different students learning at different paces need to keep track of.
3. Allows students to create their own knowledge.	Hard to relate to new subject if there is no prior knowledge.
4. Comes from students own personal experiences and situations.	Difficult to grade/evaluate.

CONCLUSION:

Behaviorism- New behaviors or changes in behaviors are acquired through associations between stimulus and response.

Cognitivism- Learning occurs through internal process of information.

Constructivism- We construct our own knowledge of the world based on individual experiences.

Classification of Assessment

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On the basis of Purpose:

1. Prognostic

2. Formative

3. Diagnostic

4. Summative

Prognostic

Prognostic assessments act as a means of estimation and prediction of the future career to analyze potential and abilities. They become very important at different stages in a student's academic life-

- School Enrolment

- Repetition of a year

- Switching Classes/Schools

- Transfer to a different type of school

- Transfer to a higher school

For example: Predicting that if a student is interested in Biology then he/she may become a doctor in the future.

Formative

It is a planned ongoing process used by all teachers and students in the teaching learning process. The goal is to monitor student learning to provide ongoing feedback using observation, homework and help them identify their strengths and weaknesses and target areas that need improvement. It should be flexible and continuous.

EXAMPLES:

1. In class discussions

2. Guess questions

3. Low Stakes Group Work

4. Weekly Quizzes

Diagnostic

Diagnostic assessments are designed to help teachers to support student learning by identifying what students know and what they can do in different fields. They are a form of pre assessment where teachers can evaluate students' strengths, weaknesses, knowledge and skills. It can be done through Universal screening, Classroom observations and Progress Monitoring.

Examples:

1. Quiz/Test

2. Conference/Interview

3. Student Surveys

4. Performance Task

Summative

It is used to measure students' knowledge after a subject has been taught. Summative assessments are accurate, reliable and technical that aim to evaluate student learning and academic achievement at the end of a term, year or semester by comparing it against a benchmark.

EXAMPLES:

1. End of term or midterm exam

2. End of unit or chapter test

3. Standardized tests for school level

4. Final projects

5. Final presentations

On the basis of Scope:

Teacher Made – These tests are prepared and administered for testing classroom achievement of students, Evaluating the method of teaching adopted by the teacher and other curricular programmes of the school. It may also be employed as a tool for formative assessment.

TYPES:

1. Written

2. Oral

3. Practical

USES:

❑ To help a teacher know the knowledge level of class

❑To help in formulating new strategies for teaching and learning

❑To diagnose student's learning difficulties and to suggest necessary remedial measures

❑It can be used as a tool for formative , diagnostic and summative evaluation

❑To certify, classify or grade the students on the basis of given scores.

Standardised Assessment-

Standardised assessments are formal assessment that have been designed to measure a child's ability compared to other children of his/her age. It is a form of test that requires all test takers to answer the same questions in the same way and is then scored in a Standard or consistent manner.

This makes it possible to compare the relative performance of individual students or group of students.

Types:

➢ Achievement test

➢ Aptitude test

➢ College admission test

➢ Entrance test

➢ Psychological test, etc.

On the basis of Attribute Measured:

1. Achievement – Achievement tests measure acquired knowledge or skills. It can be measured with grades, CGPA, Percentage, etc. Example: A math exam, A martial arts class, etc.

2. Aptitude – An aptitude test is designed to determine your potential for success in a certain area. For example: NEET, JEE, NIFT exams.

3. Attitude – Attitude tests aim at measuring an individual's emotional, intellectual and behavioral tendencies and interests. The purpose is to quantify people's beliefs to make informed decisions.

On the basis of Nature of Information Gathered

Qualitative:

Qualitative assessment is focused on understanding how people make meaning of and experience their environment or world. It is descriptive in nature, flexible style, open ended.

Example:

- Case study

- Personal Experiences

- Direct observation

- Essays

- Artefacts

Quantitative:

Quantitative assessments are based on facts and associated data. It is a measure of value or counts and is expressed in numbers. It is numerical, rigid and close ended.

Example:

- Questionnaire

- Quizzes

- Survey, etc.

On the basis of Mode of Response:

<u>Oral:</u> In oral assessments, students speak to provide evidence of their learning. The benefits include better retention of concepts, improved communication skills, better academic performance and immediate feedback from instructors. Example- Debate, Presentations, Group Discussions, etc.

<u>Written:</u> In written assessments the ability of the student to express his/her knowledge in a written format is assessed. The benefits include evaluation of writing skills, creativity among students, etc. Example- Written tests, Essay writing, etc.

<u>Selection:</u> In this a student reads short questions and selects a suitable response to it. This method is efficient, time saving and easy. Example- Multiple choice questions, True/False questions, Match the following, etc.

<u>Supply:</u> This type of assessment requires students to supply his/her knowledge or skills to provide answers to questions. It can include responses ranging from a single page to multiple pages.

Example- Short answer questions, One word questions, etc.

On the basis of Nature of Interpretation:

❖ Criterion referenced – Performance of students is measured on the basis of some criteria or standard like the cut off score of an exam. Criteria means the characteristics by which the quality of something may be judged.

❖ Norm referenced – It is a type of standardized test in which the Performance of students is compared with other students. This method determines how a student has scored in comparison to other students taking the assessment.

EXAMPLE:

Suppose a student scores 60% marks in the English test and the cutoff (Passing Marks) is 45% then the student has passed the test because he meets the criteria of 45% marks. This is Criterion Referenced Assessment. Now, if the average score of the entire class is 55% then the student has scored at the top of the class that is he has performed well according to the Ranking System. This is Norm Referenced Assessment.

On the basis of Context:

Context refers to the environment or setting in which something exists.

- Internal – Internal Assessment is the process in which the teachers and schools judge the students' performance. It is conducted by someone within the organization. For example- Internal Exams conducted by school/college, etc.

- External – External Assessment is prepared by people from outside the organization. It is done to give students the required degree or certificate for which he/she has applied. For example- External Exams conducted by different boards/universities.