

Study Material for Sem 3 Paper 9 Unit 1

Assessment, Evaluation and Learning

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UNIT – I

PERSPECTIVES ON ASSESSMENT AND EVALUATION

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1.1. INTRODUCTION

The term Assessment has been widely used by educators to evaluate, measure, and document the academic readiness, learning progress, and skill acquisition of students throughout their learning in life. Different terminologies are there for assessment and evaluation such as Measurement, Tests, Examination, Appraisal and Evaluation. There are certain Learning theories which are having conceptual frameworks describing how information is absorbed, processed and retained during learning. Behaviourism is a philosophy of learning that only focuses on objectively observable behaviors and discounts mental activities. Piaget proposed that a child's cognitive structure increases in sophistication with development, moving from a few innate reflexes such as crying and sucking to highly complex mental activities. Constructivist learning theory stated that the process of adjusting our mental models to accommodate new experiences. Assessments are classified based on the different purposes, scopes, attribute measured, nature of information gathered, nature of interpretation and context.

1.2. LEARNING OBJECTIVES

After learning this unit, you will be able to

- describe the meaning Assessment and different evaluations
- state the purposes, principles and characteristics of quality assessment
- bring out the specialty of different learning theories like Behaviorist, Cognitivist and Constructivist of
- classify the assessment based on purpose, scope, attribute measured, nature of information gathered, nature of interpretation and context

1.2.1 Meaning of Assessment

In education, the term assessment refers to the wide variety of methods that educators use to evaluate, measure, and document the academic readiness, learning progress, and skill acquisition of students from preschool through college and adulthood. It is the process of systematically gathering information as part of an evaluation. Assessment is carried out to see what children and young people know, understand and are able to do. Assessment is very important for tracking progress, planning next steps, reporting and involving parents, children and young people in learning.

1.2.2 Meaning of Measurement

Measurement is actually the process of estimating the values that is the physical quantities like; time, temperature, weight, length etc. each measurement value is represented in the form of some standard units. The estimated values by these measurements are actually compared against the standard quantities that are of same type. Measurement is the assignment of a number to a characteristic of an object or event, which can be compared with other objects or events. The scope and application of a measurement is dependent on the context and discipline.

1.2.3 Meaning of Tests

A procedure intended to establish the quality, performance or reliability of something, especially before it is taken into widespread use.

1.2.4 Meaning of Examination

The act of examining or state of being examined (Education). Written exercises, Oral questions or practical tasks, set to test a candidate's knowledge and skill (as modifier): an examination paper.

1.2.5 Meaning of Appraisal

An assessment or estimation of the worth, value or quality of a person or thing. Impartial analysis and evaluation conducted according to established criteria to determine the acceptability, merit, or worth of an item.

1.2.6 Meaning of Evaluation

Evaluation is a broader term that refers to all of the methods used to find out what happens as a result of using a specific intervention or practice. Evaluation is the systematic assessment of the worth or merit of some object. It is the systematic acquisition and assessment of information to provide useful feedback about some object.

1.2.7 Interrelation among Assessment, Evaluation and Measurement

Though the terms assessment and evaluation are often used interchangeably (Cooper, 1999), many writers differentiate between them. Assessment is defined as gathering information or evidence, and evaluation is the use of that information or evidence to make judgments (Snowman, McCown, and Biehler, 2012). Measurement involves assigning numbers or scores to an "attribute or characteristic of a person in such a way that the numbers describe the degree to which the person possesses the attribute" (Nitco and Brookhart, 2011, p. 507). Assigning grade equivalents to scores on a standardized achievement test is an example of measurement.

1.3 PURPOSES OF ASSESSMENT

1.3.1 Teaching and Learning

The primary purpose of assessment is to improve students' learning and teachers' teaching as both respond to the information it provides. Assessment for learning is an ongoing process that arises out of the interaction between teaching and learning.

What makes assessment for learning effective is how well the information is used.

1.3.2 System improvement

Assessment can do more than simply diagnose and identify students' learning needs; it can be used to assist improvements across the education system in a cycle of continuous improvement:

- Students and teachers can use the information gained from assessment to determine their next teaching and learning steps.
- Parents and families can be kept informed of next plans for teaching and learning and the progress being made, so they can play an active role in their children's learning.
- School leaders can use the information for school-wide planning, to support their teachers and determine professional development needs.
- Communities and Boards of Trustees can use assessment information to assist their governance role and their decisions about staffing and resourcing.
- The Education Review Office can use assessment information to inform their advice for school improvement.

- The Ministry of Education can use assessment information to undertake policy review and development at a national level, so that government funding and policy intervention is targeted appropriately to support improved student outcomes.

1.4 PRINCIPLES OF ASSESSMENT

a. Reliability

A test can be reliable but not valid, whereas a test cannot be valid yet unreliable. Reliability, in simple terms, describes the repeatability and consistency of a test. Validity defines the strength of the final results and whether they can be regarded as accurately describing the real world.

b. Validity

The word "valid" is derived from the Latin *validus*, meaning strong. The validity of a measurement tool (for example, a test in education) is considered to be the degree to which the tool measures what it claims to measure; in this case, the validity is an equivalent to accuracy.

c. Relevance and transferability

In education, the term relevance typically refers to learning experiences that are either directly applicable to the personal aspirations, interests or cultural experiences of students (*personal relevance*) or that are connected in some way to real-world issues, problems and contexts (*life relevance*).

Relevance is the concept of one topic being connected to another topic in a way that makes it useful to consider the first topic when considering the second. The concept of relevance is studied in many different fields, including cognitive sciences, logic, and library and information science. Most fundamentally, however, it is studied in epistemology (the theory of knowledge). Different theories of knowledge have different implications for what is considered relevant and these fundamental views have implications for all other fields as well.

Transferability in research is the degree to which the results of a research can apply or transfer beyond the bounds of the project. Transferability implies that results of the research study can be applicable to similar situations or individuals. The knowledge which was obtained

in situation will be relevant in another and investigators who carry out research in another context will be able to utilize certain concepts which were initially developed. It is comparable to generalisability.

Transferability in research is utilized by the readers of study. Transferability can apply in varying degrees to many types of research. Transferability doesn't involve broad claims, but invites readers of research to make associations between elements of research and their own experience. For example, lecturers at a school may selectively apply to their own class's results from a research indicating that heuristic writing exercises aid students at the university level. It is important that adequate thick description of the phenomenon under study is given to allow audience to have a proper understanding of it, thus enabling them to compare the instances of the phenomenon explained in the research document with those that they have seen emerge in their situations.

1.5 CHARACTERISTICS OF CLASSROOM ASSESSMENT

The different characteristics of classroom assessment are given below.

- **Learner-Centered**

The primary attention of teachers is focused on observing and improving learning.

- **Teacher-Directed**

Individual teachers decide what to assess, how to assess, and how to respond to the information gained through the assessment. Teachers do not need to share results with anyone outside of the class.

- **Mutually Beneficial**

Students are active participants.

Students are motivated by the increased interest of faculty in their success as learners.

Teachers improve their teaching skills and gain new insights.

- **Formative**

Assessments are almost never "graded". Assessments are almost always anonymous in the classroom and often anonymous online. Assessments do not provide evidence for evaluating or grading students.

- **Context-Specific**

Assessments respond to the particular needs and characteristics of the teachers, students and disciplines to which they are applied.

Customize to meet the needs of students and course.

- **Ongoing**

Classroom assessment is a continuous process. Part of the process is creating and maintaining a classroom "feedback loop". Each classroom assessment event is of short duration.

- **Rooted in Good Teaching Practice**

Classroom assessment builds on good practices by making feedback on students' learning more systematic, more flexible and more effective.

Keys to Quality Classroom Assessment

Key 1: Clear Purposes

Key 2: Clear Targets

Key 3: Sound Design

Key 4: Effective Communication

Key 5: Student Involvement

Check your Progress-1

1. Explain the term assessment.

2. Give the definition of Palomba and Banta of assessment.

3. What are the fundamental elements of learner-centered assessment?

1.6 LEARNING THEORY

Learning theories are conceptual frameworks describing how information is absorbed, processed and retained during learning. Cognitive, emotional, and environmental influences, as well as prior experience, all play a part in how understanding, or a world view, is acquired or changed and knowledge and skills retained.

Behaviorists look at learning as an aspect of conditioning and will advocate a system of rewards and targets in education. Educators who embrace cognitive theory believe that the definition of learning as a change in behavior is too narrow and prefer to study the learner rather than their environment and in particular the complexities of human memory. Those who advocate constructivism believe that a learner's ability to learn relies to a large extent on what he already knows and understands, and the acquisition of knowledge should be an individually tailored process of construction. Transformative learning theory focuses upon the often-necessary change that is required in a learner's preconceptions and world view.

1.6.1 Behaviorism

Behaviorism is a philosophy of learning that only focuses on objectively observable behaviors and discounts mental activities. Behavior theorists define learning as nothing more than the acquisition of new behavior. Experiments by behaviorists identify conditioning as a universal learning process. There are two different types of conditioning, each yielding a different behavioral pattern:

- Classic conditioning occurs when a natural reflex responds to a stimulus.

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

- Behavioral or operant conditioning occurs when a response to a stimulus is reinforced. Basically, operant conditioning is a simple feedback system: If a reward or reinforcement follows the response to a stimulus, then the response becomes more probable in the future. For example, leading behaviorist B.F. Skinner used reinforcement techniques to teach pigeons to dance and bowl a ball in a mini-alley.

How Behaviorism impacts learning:

- Positive and negative reinforcement techniques of Behaviorism can be very effective.
- Teachers use Behaviorism when they reward or punish student behaviours.

1.6.2 Cognitivism

Jean Piaget authored a theory based on the idea that a developing child builds cognitive structures, mental "maps", for understanding and responding to physical experiences within their environment. Piaget proposed that a child's cognitive structure increases in sophistication with development, moving from a few innate reflexes such as crying and sucking to highly complex mental activities.

The four developmental stages of Piaget's model and the processes by which children progress through them are: The child is not yet able to conceptualize abstractly and needs concrete physical situations. As physical experience accumulates, the child starts to conceptualize, creating logical structures that explain their physical experiences. Abstract problem solving is possible at this stage. For example, arithmetic equations can be solved with numbers, not just with objects. By this point, the child's cognitive structures are like those of an adult and include conceptual reasoning.

Developmental Stage	Cognitive Process
Sensorimotor stage (birth - 2 years old)	The child, through physical interaction with the environment, builds a set of concepts about reality and how it works. This is the stage where a child does not know that physical objects remain in existence even when out of sight.
Preoperational stage (ages 2 - 7)	
Concrete operations (ages 7 - 11)	
Formal operations (beginning at ages 11 - 15)	

Piaget proposed that during all development stages, the child experiences their environment using whatever mental maps they have constructed. If the experience is a repeated one, it fits easily - or is assimilated - into the child's cognitive structure so that they maintain mental "equilibrium". If the experience is different or new, the child loses equilibrium, and alters their cognitive structure to accommodate the new conditions. In this way, the child constructs increasingly complex cognitive structures.

How Piaget's theory impacts learning:

- Curriculum - Educators must plan a developmentally appropriate curriculum that enhances their students' logical and conceptual growth.
- Instruction - Teachers must emphasize the critical role that experiences, or interactions with the surrounding environment, play in student learning. For example, instructors have to take into account the role that fundamental concepts, such as the permanence of objects, play in establishing cognitive structures.

1.6.3 Constructivism

Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences we construct our own understanding of the world we live in. Each of us generates our own "rules" and "mental models," which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences.

The guiding principles of Constructivism:

- Learning is a search for meaning. Therefore, learning must start with the issues around which students are actively trying to construct meaning.
- Meaning requires understanding wholes as well as parts and parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts, not isolated facts.
- In order to teach well, we must understand the mental models that students use to perceive the world and the assumptions they make to support those models. The purpose of learning is for an individual to construct his or her own meaning, not just

memorize the "right" answers and repeat someone else's meaning. Since education is inherently interdisciplinary, the only valuable way to measure learning is to make assessment part of the learning process, ensuring it provides students with information on the quality of their learning.

How Constructivism impacts learning:

- Curriculum - Constructivism calls for the elimination of a standardized curriculum. Instead, it promotes using curricula customized to the students' prior knowledge. Also, it emphasizes hands-on problem solving.
- Instruction - Under the theory of constructivism, educators focus on making connections between facts and fostering new understanding in students. Instructors tailor their teaching strategies to student responses and encourage students to analyze, interpret and predict information. Teachers also rely heavily on open-ended questions and promote extensive dialogue among students.
- Assessment - Constructivism calls for the elimination of grades and standardized testing. Instead, assessment becomes part of the learning process so that students play a larger role in judging their own progress.

Check your Progress-2

1. What is meant by measurement?

2. Describe important level of measurement.

3. Enumerate the different types of measurements.

1.7 CLASSIFICATION OF ASSESSMENT

There are three types of assessment: diagnostic, formative and summative. Although there are three generally referred to simply as assessment, there are distinct differences between the three.

1.7.1 Prognostic Assessment

A prognostic assessment expands the findings of an assessment with analysis of abilities and potentials with a further dimension: the future development of the concerned person, as well as the necessary conditions, timeframe and limits.

Finding the right person for an executive position needs a reliable comprehension of the personality as well as the possibilities and limits concerning the personal development. Even an experienced and keen observer of human nature may get deluded, even recognized and proven test procedures may be incomplete or leading to wrong results – and misjudgments can become expensive in substantial and immaterial ways.

Six Goals of the Prognostic Personality and Abilities Assessment

Analysis of existing abilities and interests, including the not (yet) known ones and the development to be expected.

- If needed, a comparison with job description and profile of requirements.
- Basic conditions and needs for the development: how it can be enhanced and ensured.
- Period: how long the development will take until the defined goals can be reached.
- Limits of developmental possibilities, either referring to the defined goals (selection assessment), or generally, with a realistic time frame of 3 to 5 years.
- Quality assurance and sustainability: how the results can be monitored and ensured in the long term.

The prognostic assessment is suitable for all management levels including executive board and administrative council, but likewise for young people with the aim of a comprehensive potential analysis. Typically, the prognostic assessment is accomplished as an individual one-day-assessment. The objectives are defined individually.

1.7.2 Formative Assessment

Formative assessment provides feedback and information during the instructional process, while learning is taking place, and while learning is occurring. Formative assessment measures student progress but it can also assess your own progress as an instructor. A primary focus of formative assessment is to identify areas that may need improvement. These assessments typically are not graded and act as a gauge to students' learning progress and to determine teaching effectiveness (implementing appropriate methods and activities).

❖ **Types of Formative Assessment:**

- Observations during in-class activities
- Homework exercises as review for exams and class discussions
- Reflections journals that are reviewed periodically during the semester
- Question and answer sessions, both formal—planned and informal—spontaneous
- Conferences between the instructor and student at various points in the semester
- In-class activities where students informally present their results
- Student feedback collected by periodically

❖ **Diagnostic Assessment:**

Diagnostic assessment can help you identify your students' current knowledge of a subject, their skill sets and capabilities, and to clarify misconceptions before teaching takes place. Knowing students' strengths and weaknesses can help you better plan what to teach and how to teach it.

➤ **Types of Diagnostic Assessments:**

- Pre-tests (on content and abilities)
- Self-assessments (identifying skills and competencies)
- Discussion board responses (on content-specific prompts)
- Interviews (brief, private, 10-minute interview of each student)

1.7.3 Summative Assessment

Summative assessment takes place after the learning has been completed and provides information and feedback that sums up the teaching and learning process. Typically, no more

formal learning is taking place at this stage, other than incidental learning which might take place through the completion of projects and assignments.

Types of Summative Assessment

- Examinations (major, high-stakes exams)
- Final examination (a truly summative assessment)
- Term papers (drafts submitted throughout the semester would be a formative assessment)
- Projects (project phases submitted at various completion points could be formatively assessed)
- Portfolios (could also be assessed during its development as a formative assessment)
- Performances
- Student evaluation of the course (teaching effectiveness)
- Instructor self-evaluation

1.8 SCOPE

1.8.1 Teacher-Made vs. Standardized Assessments

In the broadest sense, assessments may be classified into two categories: teacher-made and standardized. Teacher-made assessments are constructed by an individual teacher or a group of teachers in order to measure the outcome of classroom instruction. Standardized assessments, on the other hand, are commercially prepared and have uniform procedures for administration and scoring. They are meant for gathering information on large groups of students in multiple settings (Karmel and Karmel, 1978). The same has been explained in detail in Chapter III.

1.9 ATTRIBUTE MEASURED

a. Achievement

Academic performance should be measured in multiple manners and methods such as: teacher observation, benchmark assessments, student portfolios, rubrics, progress monitoring tools, standardized assessments and other local assessments. “Using multiple assessments helps educators determine what is working and not working... and eventually can lead to better outcomes for students.”

b. Aptitude

The terms intelligence, ability and aptitude are often used interchangeably to refer to behaviour that is used to predict future learning or performance. However, slight differences exist between the terms. The tests designed to measure these attributes differ in several significant ways.

➤ How can one be improve Aptitude?

Although studies seem to suggest that aptitude test scores cannot be improved, other research shows that that may not be the case. Tests such as the Scholastic Aptitude Tests contain many questions that are content-specific, particularly in math areas. Performance on these specific types of items is trainable.

Some experts feel that short-term cramming might not affect aptitude test scores. However, long-term instruction in broad cognitive skills might improve general test performance. Cognitive theory and research suggest that learning ability can be improved by training students in learning strategies. Improving academic aptitude may be possible through a systematic curriculum that complements direct training in learning strategies with both the development of general thinking approaches and the application of those approaches over a variety of different tasks and content areas.

What has been learned about training to improve aptitude can be summarized as follows:

- * Attempts to train aptitude must go well beyond practice and feedback. What's needed is intensive training in strategies involved in task performance along with higher level monitoring and control strategies involved in guiding performance and in transferring skills to new areas.

- * Educational efforts to improve aptitude need to be long-term.

- * Abilities of students and methods of training interact. Attempts to train strategies must fit the tested aptitudes of students.

- * Practice and feedback can be effective when students are already proficient in the ability to be trained.

* Intrusive training may be harmful to high aptitude students.

* Training ability works best when treatment utilizes some of the student's other strengths.

* Some aspects of intellectual aptitude may be more easily trained than others.

c. Attitude

Most simply put, attitudes are likes and dislikes. Social psychologists have given various definitions of the concept. Most of them view attitudes as inclinations or predispositions. According to **Gordon W Allport** defined an attitude to be a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. **Milton Rokeach** defined it as a relatively enduring organization of beliefs around an object or situation predisposing a person to respond in some preferential manner.

Our response to an object is often in line with what we believe about and how we feel toward that object. Attitudes are, thus, said to have a knowledge/belief (cognitive) component, an emotional or affective component and a Conative or behavioral component.

Having an idea or belief about the object is the minimum condition for having an attitude with regard to it. When the object of which you have an idea becomes associated with pleasant or unpleasant events or with your aspirations and goals, you attach a corresponding affect or an emotional tinge to that object. This *affected* belief energizes and directs your response with regard to the object. *An attitude may thus be understood as an idea or belief charged with emotion predisposing an individual to act in a particular way to persons, things, situations, issues, etc.*

1.10 NATURE OF INFORMATION GATHERED (QUALITATIVE & QUANTITATIVE)

Research methods are split broadly into quantitative and qualitative methods.

a. Quantitative Research

Quantitative research is perhaps the simpler to define and identify. The data produced are always numerical, and they are analysed using mathematical and statistical methods. If there are no numbers involved, then it's not quantitative research. Some phenomena obviously lend themselves to quantitative analysis because they are already available as numbers. Examples include changes in achievement at various stages of education, or the increase in number of senior managers holding management degrees. However, even phenomena that are not obviously numerical in nature can be examined using quantitative methods.

Sources of Quantitative Data

The most common sources of quantitative data include:

- **Surveys**, whether conducted online, by phone or in person. These rely on the same questions being asked in the same way to a large number of people;
- **Observations**, which may either involve counting the number of times that a particular phenomenon occurs, such as how often a particular word is used in interviews, or coding observational data to translate it into numbers; and
- **Secondary data**, such as company accounts.

Our pages on Survey Design and Observational Research provide more information about these techniques.

b. Qualitative Research

Qualitative research is any which does not involve numbers or numerical data. It often involves words or language, but may also use pictures or photographs and observations. Qualitative analysis results in rich data that gives an in-depth picture and it is particularly useful for exploring **how** and **why** things have happened.

Sources of Qualitative Data

Although qualitative data is much more general than quantitative, there are still a number of common techniques for gathering it. These include:

- **Interviews**, which may be structured, semi-structured or unstructured;

- **Focus groups**, which involve multiple participants discussing an issue;
- **'Postcards'**, or small-scale written questionnaires that ask, for example, three or four focused questions of participants but allow them space to write in their own words;
- **Secondary data**, including diaries, written accounts of past events, and company reports; and
- **Observations**, which may be on site, or under 'laboratory conditions', for example, where participants are asked to role-play a situation to show what they might do.

Our pages on Interviews for Research, Focus Groups and Observational Research provide more information about these techniques.

1.11 MODE OF RESPONSE

a. Oral Response and Written Assessments

Student oral responses are longer and more complex, parallel to extended written response questions. Just as with extended written response, one evaluates the quality of oral responses using a rubric or scoring guide. Longer, more complicated responses would occur, for example, during oral examination or oral presentations. Written assessments are activities in which the student selects or composes a response to a prompt. In most cases, the prompt consists of printed materials (a brief question, a collection of historical documents, graphic or tabular material, or a combination of these). However, it may also be an object, an event, or an experience. Student responses are usually produced "on demand," i.e., the respondent does the writing at a specified time and within a fixed amount of time. These constraints contribute to standardization of testing conditions, which increases the comparability of results across students or groups (a theme that is explored later in Chapters Four and Five).

b. Selected-Response Tests

Characteristics

Selected-response tests are so named because the student reads a relatively brief opening statement (called a *stem*) and selects one of the provided alternatives as the correct answer. Selected-response tests are typically made up of multiple-choice, true-false, or matching items. Quite often all three item types are used in a single test. Selected-response tests are sometimes

called "objective" tests because they have a simple and set scoring system. If alternative (b) of a multiple-choice item is keyed as the correct response and the student chose alternative (d), the student is marked wrong, regardless of how much the teacher wanted the student to be right.

Advantages

A major advantage of selected-response tests is efficiency -- a teacher can ask many questions in a short period of time. Another advantage is ease and reliability of scoring. With the aid of a scoring template (such as a multiple-choice answer sheet that has holes punched out where the correct answer is located), many tests can be quickly and uniformly scored.

Disadvantages

Because items that reflect the lowest level of Bloom's Taxonomy (verbatim knowledge) are the easiest to write, most teacher-made tests are composed almost entirely of knowledge-level items (a point we made initially in Chapter 7). As a result, students focus on verbatim memorization rather than on meaningful learning. Another disadvantage is that, while we get some indication of what students know, such tests tell us nothing about what students can do with that knowledge.

c. Supply - Response Tests

i. Fill -in-the- Blank

Fill -in-the- Blank with a word bank is just another form of matching and only test the lower cognitive levels.

Rules

Rule I: Position in the blank at the end of the statement.

Poor Item

A ----- is used to keep food cold.

Better Item

To keep food cold use a -----

Rule II: Limit the number of blanks in a statement.

Poor Item

A ----- sends -----of electrical current through -----.

Better Item

Pulses of electrical current are sent through wire by a (n) -----

Rule III: Keep blanks the same length

Poor Item

American flag is composed of ----- and -----.

Better Item

American flag is composed of ----- and -----.

ii. Short-Answer Tests

Characteristics

Instead of selecting from one or more alternatives, the student is asked to supply a brief answer consisting of a name, word, phrase, or symbol. Like selected-response tests, short-answer tests can be scored quickly, accurately and consistently, thereby giving them an aura of objectivity. They are primarily used for measuring foundational knowledge.

Advantages

Short-answer items are relatively easy to write, so a test, or part of one, can be constructed fairly quickly. They allow for either broad or in-depth assessment of foundational knowledge since students can respond to many items within a short space of time. Since students have to supply an answer, they have to recall, rather than recognize, information.

Disadvantages

This item type has the same basic disadvantages as the selected-response items. Because these items ask only for short verbatim answers, students are likely to limit their processing to that level, and these items provide no information about how well students can use what they have learned. In addition, unexpected but plausible answers may be difficult to score.

iii. Essay Tests

Characteristics

The student is given a somewhat general directive to discuss one or more related ideas according to certain criteria. One example of an essay question is "Compare operant conditioning theory and information-processing theory in terms of basic assumptions, typical research findings, and classroom applications".

Advantages

Essay tests reveal how well students can recall, organize, and clearly communicate previously learned information. When well written, essays tests call on such higher-level abilities as analysis, synthesis, and evaluation. Because of these demands, students are more likely to try to meaningfully learn the material over which they are tested.

Disadvantages

Consistency of grading is likely to be a problem. Two students may have essentially similar responses, yet receive different letter or numerical grades. These test items are also very time consuming to grade. And because it takes time for students to formulate and write responses, only a few questions at most can be given.

Formative vs. Summative Evaluation:

Formative evaluation involves "collecting, synthesizing and interpreting data for the purpose of improving learning or teaching (Airasian, 1997, p. 402). Thus, formative assessments support learning and are not graded. "Rather, they serve as practice for students, just like a meaningful homework assignment" (Dodge, 2011) and can provide valuable information to teachers for improving student performance. Summative evaluations, on the other hand, "are given periodically to determine at a particular point in time what students know and do not know . . ." (Garrison and Ehringhaus, 2007). They are often used for assigning grades.

1.12 NATURE OF INTERPRETATION

Norm-Referenced, Criterion-Referenced and Standards-Referenced Frameworks

- **Standardized assessments** may be norm-referenced, criterion referenced, or standards referenced.

- **Norm-referenced assessments** compare individual scores to those of a norm-reference group, generally students of the same grade or age. They are designed to demonstrate "differences between and among students to produce a dependable rank order" (Bond, 1996, p.1) and are often used to classify students for ability-grouping or to help identify them for placement in special programs. They are also used to provide information to report to parents.
- **Criterion-referenced assessments** determine the specific knowledge and skills possessed by a student. In other words, identify "the kind of performances a student can do in a domain, rather than the student's standing in a norm group" (Nitco and Brookhart, 2011, p. 369). Standards-based assessments involve comparing students' scores to "clearly defined levels of achievement or proficiency" (Nitco and Brookhart, 2011, p. 514), such as state or national standards.
- **Self-Reference** occurs in natural or formal languages when a sentence, idea or formula refers to itself. The reference may be expressed either directly through some intermediate sentence or formula or by means of some encoding. It is studied and has applications in mathematics, philosophy, computer programming and linguistics. Self-referential statements are sometimes inconsistent. Self-referenced feedback (i.e. information on improvement or decline by comparing student achievement with his or her own past achievement) has been recommended in the assessment reform.

1.13 CONTEXT (INTERNAL AND EXTERNAL)

Internal assessment is set and marked by the school (i.e. teachers). Students get the mark and feedback regarding the assessment. External assessment is set by the governing body, and is marked by non-biased personnel. Some external assessments give much more limited feedback in their marking.

The students' performances are measured periodically in different context during the period of the course. Student's performance in slip tests, weekly tests, monthly tests with behaviour are being taken into account besides assignments and project work while calculating the internal mark. At the same time, the performance of the students at the end of the course has been measured which is called as external. In other way it is called as formative and Summative evaluation.

Check your Progress-4

4. What is meant by measurement?

5. Describe important level of measurement.

6. Enumerate the different types of measurements.

1.14. LET US SUM UP

So far you have learnt the Meaning of Assessment as the term Assessment has been widely used by educators to evaluate, measure, and document the academic readiness, learning progress, and skill acquisition of students throughout their learning in life. You have also understood the difference and interrelationships in meaning between Measurement, Test, Examination, Appraisal and Evaluation. There are different principles of Assessments such as Validity, Reliability, Relevance and transferability. It is understood that learner centeredness, Teacher-Directed, Mutually Beneficial, Formative Assessment, Context-Specific, Ongoing and Rooted in Good Teaching Practice are some of the characteristics of classroom assessment.

You have also learnt certain Learning theories such as Behaviorist, Cognitivist and Constructivist and its impact on learning. Further you have seen the different developmental stages like Sensorimotor, Preoperational, Concrete operations and Formal operations. It is also understood that Behaviorism is a philosophy of learning that only focuses on objectively observable behaviors and discounts mental activities. At the same time, Constructivism is a philosophy of learning founded on reflecting on our experiences we construct our own understanding of the world we live in. You have also learnt the different classifications of

Assessments such as purpose, scope, attribute measured, Nature of Information gathered, Mode of Response, Nature of Interpretation and Context.

1.15 ANSWERS TO ‘CHECK YOUR PROGRESS’

1. Assessment is carried out to see what children and young people know, understand and are able to do.
2. Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development.
3. Formulating Statements of Intended Learning Outcomes, Developing or Selecting Assessment Measures, Creating Experiences Leading to Outcomes and Discussing and Using Assessment Results to Improve Teaching and Learning.
4. a).Standards-Referenced or Standards-Based Assessments b). Performance Assessments c). Portfolio-Based Assessments and d). Common Assessments
5. Summative assessments are used to evaluate student learning at the conclusion of a specific instructional period-typically at the end of a unit, course, semester, program or school year.
6. Standardized assessments are designed, administered, and scored in a standard or consistent manner. They often use a multiple-choice format, though some include open-ended, short-answer questions.
7. System and school accountability, Teacher evaluation and compensation, Instructional improvement and Learning-needs identification
8. Assessments give teachers in-process feedback on student learning, which can help them make instructional adjustments during the teaching process, instead of having to wait until the end of a unit or course to find out how well students are learning the material.
9. Measurement is the assignment of a number to a characteristic of an object or event, which can be compared with other objects or events.
10. It helps one decide how to interpret the data from that variable and decide what statistical analysis is appropriate on the values that were assigned.
11. Nominal Measurement, Ordinal Measurement, Interval Measurement and Ratio Measurement

1.16 UNIT END EXERCISES

- Describe the meaning of Assessment
- Give the different definitions of Assessment
- What are the Components of Assessment
- Explain the different types of Assessment followed in schools
- Describe the different designs of Assessment
- How assessment will improve the teachers and schools?
- Explain the meaning of Measurement.
- What are the Components of level of Measurement?
- Explain the important level of Measurement and types of Measurement.

1.17. SUGGESTED READINGS

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