

UNIT – V:

ASSESSMENT IN PEDAGOGY OF COMMERCE AND ACCOUNTANCY

Measurement and Evaluation - Differentiate between Assessment and Evaluation – Standardization of Test, Principles and steps involved in the construction of achievement test – Blue Print and Question Pattern - Feedback Devices: Meaning, Types, Criteria, Guidance as a Feedback Devices: Assessment of Portfolios, Reflective Journal, Field Engagement using Rubrics, Competency Based Evaluation.

1.1 Measurement

Measurement is the quantitative outcome of instruction. It is a matter of determining how much or how little and how much greater. It is used to access the physical characteristics and external future features of man for example. E.g., Height, Weight etc., It is used to express how much a particular quantity is present. We can't measure any object we measure only characteristics like weight, Height, Weight. Assigning the numerical value for particular characteristics is known as Measurement. Thorndike and Hagen (1986) defined measurement as “the process of quantifying observations about a quality or attribute of a thing or a person”.

The process of measurement has three steps

1. Identifying and defining the character of a particular thing. eg. Temperature, Height, Weight.
2. Fixing the characteristics which are open and measurable.
3. Translating the observed the quantitative statement to Numerical Value.

Evaluation

Evaluation is more than testing and examining. It is measuring and analyzing the achievement of the student with their educational objectives. This result will help us to fix the future plan and methods to achieve the educational objectives. Evaluation is not only important to the students it is also important for teacher also. Importance of evaluation is bringing out solid evidence about student's present level and based on this evidence we can decide how much training is necessary to achieve their goals.

According to Kothari Commission, Evaluation is a continuous process. R.C.Sharma defines evaluation as a continuous and comprehensive process which takes place in the school and outside the school, and involves the participation of the pupils, teacher, parents and community with a view to make changes in the child and in the whole education process.

According to Dandekar evaluation is systematic process of determining the extent to which education objectives are achieved by pupils.

Assessment

Assessment is an integral part of teaching-learning process as it is a prime tool for monitoring the progress and shaping learning.

ROLE OF ASSESSMENT IN HISTORY

The main aim of assessment is to collect information of learner's achievement and progress and provide direction for ongoing teaching and learning process. Assessment can be done through both formal and informal activities. Assessment refers to the process of identifying, gathering and interpreting information about learners' mathematical learning. Assessment is the means, which deduces what learners know and what they do not. It suggests teachers, learners, parents, and policymakers something about what learners have learned and what more should be done in order to improve performances. Assessment has a comprehensive meaning just not limited to evaluation of student's performances.

Assessment can be used for following purposes:

Assessment for learning: Assessment for learning occurs during the learning process. Information obtained by this type of assessment is used by the teachers to modify their teaching strategies, and learners use it to make changes in their learning strategies. This approach of assessment helps teachers to appraise the learners to monitor their learning; and guide the instruction at process and provide feedback helpful to learners. It provides opportunities for learners to develop an ability to evaluate themselves; make judgments about their own performance and make necessary improvement.

Assessment as learning: Assessment as learning means an awareness of learners regarding how they learn and use that awareness to make necessary adaptations in their learning process. Therefore, they take an increased responsibility for their learning. It involves setting of goal, monitoring the progress and contemplating on results. It occurs throughout the learning process.

Assessment of learning: Assessment of learning refers to a review process which occurs at the end a learning unit. It provides measures of achievement for the purpose of grading. It informs learners, teachers and parents, as well as other stakeholders of the community about achievement at a certain point of time to provide information

regarding success.

Difference between Evaluation and Assessment

Assessment	Evaluation
Assessment is a process of Evaluation is described collecting and using data for the purpose of improvement.	Evaluation describes as an act of passing, Judgement basis of evidence.
Assessment pays attention to teaching and learning.	Evaluation focuses final outcome.
Assessment is done at the beginning of the inquiry.	Evaluation is usually done at the end.
It is Formative	It is Summative.
It is process oriented	It is judgemental
Provides feedback on performance and are as of improvement.	Determine to which objectives are achieved.
Based on observation and positive and negative points.	Based on the level of quality as per set standard.
Set by both the parties jointly.	Set by the evaluator.
It is absolute.	It is comparative.

Types of Evaluation

We already know that evaluation is a continuous process. Evaluation is concerned with teacher, pupils and the content. Evaluation is related to the instructional activities, effectiveness for the curriculum material and learning difficulties of the pupils. The types of evaluations are

1. Formative Evaluation
2. Summative Evaluation

Formative Evaluation

The evaluation used during the instruction to improve the instructional process is known as formative evaluation. The Evaluation is concerned with the text, Supplementary materials and classroom activities. It is to provide immediate feedback to the students regarding the instructional material. In formative evaluation quiz, essay, practical etc., are used and the information is given to the students for restudy what they did not understand. It helps to identify learning problems, indicates the need for curriculum revision, new laboratories films etc.,

Summative Evaluation

After the learning or instruction has taken place judgement is made about the student teacher or curriculum with regard to the effectiveness of learning or instruction. This kind of evaluation is known as summative evaluation. Here evaluation is in terms of grades. It is concerned with the unit or several interrelated chapters and it is not to forget many related chapters or not to abandon any part. The data are collected for only grading and not used often. The main purpose of this evaluation is grading, promoting and issuing certificates. The procedure for summative evaluation and formative evaluation are same.

Diagnostic Test

A diagnostic test is used to find out the weakness and strength of the individual's performance. Diagnostic tests can be conducted in reading, writing and arithmetic skills. Diagnostic tests help to judge student's ability to follow our teaching procedure. This is conducted to suggested, plan and implements remedial measures. Diagnostic test is a form of pre-assessment that allows a teacher to determine students' individual strengths, weaknesses, knowledge, and skills prior to instruction. It is primarily used to diagnose students' difficulties and to guide lesson and curriculum planning.

Standardization of Test

Standardized tests are those which have been developed and defined by research studies. They are pretested field tested and experimentally tried out. No doubt they are superior to locally developed tests. The necessary condition for a standardized test is that it should have norms. The norms are used to interpret the results. Besides norms, the test is scored by using a key which designates the right answers. Tests made up and scored by teacher with a key about which we do not have norms are not standardized tests.

Advantages

1. High degree of validity and reliability.
2. Easy of administration and scoring.
3. Tests are of good quality as they are prepared by experts.
4. Interpretation of score is fairly easy as norms are furnished.

Disadvantages

1. Uniformity among the response
2. Giving importance for wider coverage not depth

Achievement Test

Achievement test may be defined as change in the behaviour of students in the desired direction. It is very important in the process of evaluation. N.M.Downie states that measures the attainment of an individual after a period of training is called an achievement test. In school various achievements were constructed to measure the learning level of students. Achievement tests look for to measure specific knowledge of learner. It is used to determine academic standard. It is considered a necessary evil in the system of examination. In recent days the achievement tests have been refined and developed to test the abilities and skill rather than the knowledge. These tests are universally used by teachers mainly for the following purposes:

To measure whether the learners have achieved the objectives of the planned instruction;

1. To monitor learners' learning and to provide ongoing feedback to both learners and teachers during the teaching-learning process;
2. To identify the learners' learning difficulties- whether persistent or recurring; and
3. To assign grades

Teachers help learners to enable them to develop some abilities, skills and attitudes. After teaching, learners' performance needs to be evaluated periodically. Teachers construct the tests to assess the achievement of learners.

Characteristics of Achievement test

- Measure the behaviour modification.
- It is a standardized test.
- It developed according to student's difficult level.

- It contains questions in all three domains.
- The teacher can understand the student's achievement through this test
- It helps to understand the strength and weakness of the student.

Preparing an Achievement Test:

Let us consider the necessary steps in preparing an achievement test:

- Planning of the test
- Preparation of a blue print
- Preparation of test items
- Preparation of scoring key and evaluation of the test

Step 1- Planning of the Test:

The first step for planning of the achievement test is to develop a design or framework. For this, you have to:

- A. Analyze the course content into different content units and decide the weightage that is to be given to each in the test;
- B. Decide the weightage to be given to different objectives being tested;
- C. Decide the weightage to be given to different forms of questions to be used in preparing a question paper;
- D. Decide the weightage to be given to time and marks for different forms of questions;
- E. Decide the weightage to be given to the difficulty level in the test. Let us see how we can prepare a good achievement test.

Weightage of the Content:

The content refers to the topics where the achievement test is to be conducted. This indicates the various aspects of content to be tested and the weightage to be given to each of these aspects

The weightage given to each unit is presented in Table 2.

Table 2: Weightage given to different units

Content	Marks	Percentage
Sub-topic-1	15	60
Sub-topic-2	10	40
Total	25	100

Weightage of Instructional Objectives: After deciding about the weightage to be given to different units, you have to consider the learning objectives. Your test is good only if it is able to evaluate the achievement of learning objectives decided by you. You can allocate appropriate weightage to various objectives like knowledge, understanding, application, skill, etc. For example, for the above case, you may give weightage of 12%, 8%, 24%, 32%, 16% and 8% for knowledge, understanding, application, analysis, synthesis, evaluation respectively. The weightage given to different objectives is presented in Table 3.

Table 3: Weightage to instructional objectives

Objectives	Marks	Percentage
Knowledge	3	12
Understanding	2	08
Application	6	24
Analysis	8	32
Synthesis	4	16
Evaluation	2	08
Total	25	100

Weightage given to different forms of questions: The next step is to decide about the weightage to be given to different forms of questions. Generally, in an achievement test, a teacher has to include different types of items (essay, short answer or objectives). The

weightage given to different forms of questions is presented in Table 4.

Table 4: Weightage given to different forms of questions

Forms of questions	Weightage given
Essay Type	28
Short Answer Type	56
Objective Type	16
Total	100

The fourth step in the preparation of question paper is to give weightage to marks and time for different forms of questions. The allotment of marks and time to different forms of questions is presented in Table 5.

Table 5: Weightage given to marks for different forms of questions

Form of questions	Marks per question	No. of question	Marks	Percentage
Objective type	0.5	14	07	28
Short answer type	02	7	14	56
Long answer type	4	1	4	16
Total		22	25	100

Estimation of Time: For teacher-made achievement tests, only the experience of teachers should be enough for the estimate of time. You should try to analyze and estimate the time for different types of questions. Here we have taken hypothetically the total duration of 1 hr. For different forms of questions, weightage given to time are presented in Table 6.

Table 6: Weightage given to time for different form of questions

Form of questions	Time per question (in minutes)	Total no. of questions	Total Times (in minutes)
Objective type	01	14	14
Short answer type	05	07	35
Long answer type	11	1	11
Total		22	60

The next step is to give weightage to difficulty levels of the items, which is presented in Table 7.

Table 7: Weightage to difficulty level of questions

Difficulty Level	Marks	Percentage
Easy	5	20
Average	15	60
Difficult	5	20
Total	50	100

Preparation of a Blue Print:

A blueprint is a three-dimensional chart showing different types of items with marks for each topic/unit and each of the objectives. It shows the respective weightage of marks for different objectives, and topics and various types of items as prescribed by the school or in the syllabus or decided by the paper-setter. These specifications have been discussed in the earlier steps of planning of the blue-print.

Based on the above steps the final blueprint is developed. With the help of such a table of specifications, you will be able to ensure the needed coverage of units in the syllabus and assessment objectives. The final blueprint is presented in Table 8.

Table 8: Blueprint (Table of Specifications)

Objectives	Knowledge			Understanding			Application			Analysis			Synthesis			Evaluation			Grand Total
	O	SA	L	O	SA	L	O	SA	L	O	SA	L	O	SA	L	O	SA	L	
Unit 1	2 (4)			1 (2)			2 (4)	2 (1)				4 (1)	2 (1)			2 (1)			15
Unit 2	1 (2)			1 (2)				2 (1)			4 (2)		2 (1)						10
Total Marks	3	0	0	2	0	0	2	4	0	0	4	4	0	4	0	0	2	0	25
Grand Total	3			2			6			8			4			2			

Note: Figures within the brackets indicate the number of questions and figures outside the brackets indicate marks.

Entries made in this blueprint are only for illustration. You have to decide about these while preparing the blueprint. However, it must confirm, to weightage indicated in the design to the various objectives (**12%, 8%, 24%, 32%, 16%, and 8%**), content units (**60% and 40%**) and form of questions (**E=16%, S.A. = 56%, O.T. 28%**) as reflected in this table of specification or blueprint.

Preparation of Test Items/Questions:

Test items from the very basis of testing. A test constructor should have good knowledge of the subject. The test items should be clear, unambiguous and according to the objectives. Different types of items - essay, short-answer and objective types - should be prepared in sufficient numbers. Items of varying difficulty should also be prepared. Experienced teachers are able to estimate difficulty level by their judgment. Some items from question banks can be taken up.

Preparation of Scoring Key and Evaluation of the Test:

After preparation of test items, a review is done on the basis of blueprint requirements to assess the quality of items. It is time to be confirming the validity, reliability and usability of the test. Try out helps us to identify defective and ambiguous items, to determine the difficulty level of the test and to determine the discriminating power of the items. Then only unambiguous and objective based items are retained.

To maintain the objectivity and validity of test, you have to provide proper instructions for marking. Objective type tests have key answers. Their answers and corresponding marks should be given. Short answer questions are also quite specific in nature and possible points or ideas in answers should be mentioned with their corresponding marks. Essay type questions are lengthy and need specificity for uniform marking. Important steps or points of answer should be explicitly mentioned along with their corresponding marks. The above guidelines for marking questions make our testing more reliable. These achievement tests are used normally at the end of term/year as a part of summative assessment. Care should be taken that summative assessment and unit tests have adequate contribution to overall assessment of the learners.