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# UNIT 1 CONCEPT AND PURPOSE OF EVALUATION

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## 1.1 INTRODUCTION

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Reports of almost all the committees and commissions on education formed in India after independence, have talked about reforms in the examination system. The National Curriculum Framework-2005 has put forth its suggestions on evaluation reforms in Indian school system. You might be aware that implementation of Continuous Comprehensive Evaluation (CCE) was visualized as a revolutionary step towards reform in the examination system, though it became an issue of debate and recently, CBSE has reverted back to the traditional system of examination (refer Unit 12, Block 3 of this course).

Keeping the issues cited above, this Unit basically deals with the dimensions of assessment and evaluation being practiced in Indian school system. Being the introductory Unit of this course, it basically focuses on explaining the key concepts, like measurement, assessment, and evaluation. This unit will make you understand how assessment and evaluation is part of teaching-learning process, i.e. assessment as a part of teaching-learning process and evaluation as the end product of learning. We shall also explain as to how evaluation is associated with value-judgment and thus is differentiated from assessment. Various terms,

like tests, examination, appraisal, etc. which are being used commonly in the education system, has also been discussed in this Unit. This unit will also help you to understand various perspectives of assessment that has been discussed in Unit-2 of this Block.

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## 1.2 OBJECTIVES

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After completion of the Unit, you should be able to:

- define the concept of assessment and evaluation;
- differentiate among measurement, assessment, and evaluation;
- explain assessment and evaluation as a part of the teaching-learning process;
- discuss the role of assessment in enhancing learning;
- associate evaluation with value-judgment; and
- explain the terms tests, examination, appraisal, quantitative and qualitative description, and value judgment used in assessment.

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## 1.3 BASIC CONCEPTS

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For every teacher, it is important to understand the basic concepts of assessment and evaluation. You might have observed that many teachers use measurement, assessment, testing and evaluation interchangeably, but these terms have their specific meaning and significance. As a student teacher, it is therefore essential for you to understand the meaning, purpose and characteristics of all these terms so that you can use them appropriately. Let us discuss each term in detail.

### 1.3.1 Measurement

As a student teacher at the secondary level, you are expected to understand the meaning of the term ‘measurement’. **“Measurement is a process of assigning numbers to individuals or their characteristics according to specific rules.”** (Eble and Frisbie, 1991, p.25). This is very common and simple definition of the term ‘measurement’. You can say that measurement is a quantitative description of one’s performance. Gay (1991) further simplified the term as *a process of quantifying the degree to which someone or something possessed a given trait, i.e., quality, characteristics, or features.*

You can generalize these definitions as measurement provides a quantified description of any trait, characteristics, or ability. For example, Mohan has scored 58 marks in a particular examination and Ahmad has scored 59, their individual scores are the measurement of their performance on a particular test. Similarly you can use the examples of weight and height of learners in your class. If, you measure their height in centimeters and weight in kilograms, you are assigning numerals (i.e. 125 cm. or 45 kg.) using some specific rules (i.e. height in centimeters and weight in kilograms). You can perform the following activity in your class to understand the concept of measurement in a better way:

**Activity 1**

Identify few characteristics/traits of your learners in terms of their height, weight, achievement score, intelligence scores, etc. and complete the following table.

S. No.	Characteristics/ trait	Assigned numerals	Associated Specific Rule

If you analyze definitions of measurement given above (in the first paragraph of section 1.3.1 of this Unit), you may conclude with the following characteristics of measurement:

- Measurement assigns a numeral to quantify certain aspects of human and non-human beings.
- It is numerical description of objects, traits, attributes, characteristics or behaviours.
- Measurement is not an end in itself but definitely a means to evaluate the abilities of a person in education and other fields as well.
- Nature of measurement and assessment vary for various traits or attributes of the students to deal with.

By now you might have understood the concept of measurement. Let us discuss the scales of measurement :

**Scales of measurement :** Whenever we measure anything, we assign a numerical value. This numerical value is known as scale of measurement. *A scale is a system or scheme for assigning values or scores to the characteristics being measured (Sattler, 1992).* Like for measuring any aspect of the human being we assign a numeral to quantify it, further we can provide an order to it if we know the similar type of measurement of other members of the group, we can also make groups considering equal interval scores within the group. These are called as measurement in different scales. There are mainly four scales of measurement, namely;

- **nominal**
- **ordinal**
- **interval and**
- **ratio**

These scales have their distinguished characteristics and are hierarchical in nature (see Table-1), i.e. if you progress from nominal to ratio, you will be able to do more sophisticated measurement with more and finer details. The table given below summarizes all the levels of measurement. Let us discuss each scale with appropriate examples.

**Nominal scale:** In nominal scale, a number is assigned for characterizing the attribute of the person or thing. That caters no order to define the attribute as high-low, more-less, big-small, superior-inferior etc. In nominal scale, assigning a number is purely an individual matter. It is nothing to do with the group scores or group measurement. It is therefore, measurement in nominal scale has limited meaning, even if some experts do not consider it as a measurement. As discussed earlier, any student achievement related scores (scores in subjects) or other measurement like height, weight, etc. are the examples of nominal measurement. Statistics such as frequencies, percentages, mode, and chi-square tests are used in nominal measurement.

**Ordinal scale :** Ordinal scale is synonymous to ranking or grading. It includes the characteristics of a nominal scale and provides an order to the measurement, like; when we know the achievement scores of students in a group, we can arrange them either in ascending (lowest to highest) or descending (highest to lowest) order. We can also interpret the result like; who stood first, second, 10<sup>th</sup> in the group, even the last one in the group. In ordinal scale, we can use the statistics such as median (measures of central tendency), quartile and percentile measures, correlation in rank difference method, and non-parametric tests.

**Interval scale :** Interval scale carries all the characteristics of earlier scales like nominal and ordinal and added with an arbitrary zero point. That is, there is no absolute zero-point or true zero point. In this scale, we can group the scores into equal intervals like, scores within the intervals of : 0-5; 5-10; 10-15; 15-20; 20-25; 25-30 etc. This is also called as equal interval scale as the size of the classes are equal, i.e. size of the class 0-5 is 5; 5-10 is 5; 10-15 is 5; 15-20 is also 5. As there is no absolute zero point in this measurement and the existing zero value is an arbitrary one, that's why all types of measurement done in education and social sciences are usually done by the interval scale. The statistics like mean, standard deviation, product moment correlation, t-test and f-test can be used in interval scale.

**Ratio scale :** Ratio scale is called as the highest scale in measurement. It carries all the characteristics of earlier discussed scales with a true or absolute zero point. As there is absolute zero point in this measurement, we can say that zero height means no height. But in the case of interval scale, we can not say that zero intelligence means no intelligence. All types of measurements conducted in Physical Sciences such as Physics, Mathematics, etc. are done by ratio scale. Ratio scale are almost non-existence in psychological and educational measurement except in the case of psycho-physical measurement. All mathematical applications – addition, subtraction, multiplication and division can be done in ratio scale. All statistical techniques are permissible with ratio scale.

Let us try to understand it in more detail with the help of Table 1 given below.

**Table 1 : Scales of Measurement**

Level	What is it?	Example	Possible Operations
<b>Nominal</b>	It classifies people or objects into various categories, classes or sets. One set or group is assigned one number for a common trait/ characteristics among all members of the group/set.	Male and female, assigning numbers like 1 for education, 2 for psychology, 3 for commerce, etc.,	These numbers could not be added, subtracted, ranked, or manipulated statistically.
<b>Ordinal</b>	It ranks people or objects according to the amount of a characteristic they have.	Ranking of learners according to their height from tallest to shortest, or on some trait from most to least or vice-versa.	Percentile ranks, age equivalence or grade equivalence can be used.
<b>Interval</b>	It ranks people or objects on a scale of equal units.	Achievement, performance, IQ score, etc are examples of this measurement. (IQ score 100 does not mean that this person is two times more intelligent than a person with IQ score 50).	Basic mathematical operations can be used for manipulation, which was not possible in previous two scales. Most statistical formulas can be applied on such measurement.
<b>Ratio</b>	It has all the properties of interval along with an absolute (true) zero point on scale.	Measurement of height, weight, speed, distance, etc. A distance of 100 meters is exactly twice to 50 meters.	All mathematical and statistical operations are possible here as it has a true zero point.

**Activity 2**

*Enlist few characteristics under each of the four levels of measurement, which you will measure among your learners.*

**Nominal :**

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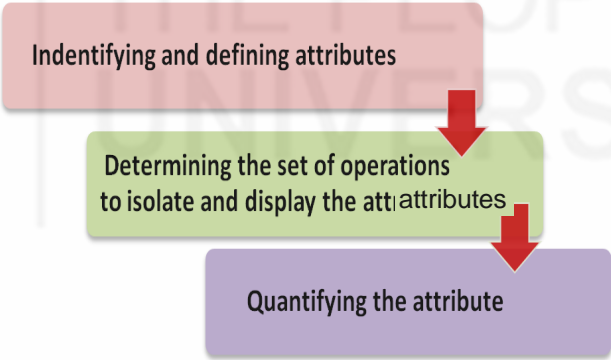
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<p><i>Ordinal :</i></p> <p>.....</p> <p>.....</p> <p>.....</p>
<p><i>Interval :</i></p> <p>.....</p> <p>.....</p> <p>.....</p>
<p><i>Ratio :</i></p> <p>.....</p> <p>.....</p> <p>.....</p>

**Process of measurement :** Measurement is a process which involves certain common steps in all the fields including education. As a teacher you should be aware of this process so that you can follow the same during teaching-learning process. Measurement process involves three steps as follows :

**Figure 1: Process of Measurement**



*(Source : Thorndike and Christ, 2010)*

Let us discuss each step in brief.

**Step-1 : Identifying and defining attributes**

As a teacher it should be clear to you that you never measure any thing or person, you always measure a quality or attribute of that thing or person. You may measure height or intelligence level of a person, temperature of boiling water, etc. there may be some attributes which are easily observable and measurable where as there may be some complex or abstract properties also, which are commonly termed as **constructs**. When you are going to measure any abstract construct like intelligence, honesty, etc. you have to identify certain characteristics

which you will use to quantify these constructs. For example, for measuring intelligence, you may measure performance of an individual on various abilities as described by multiple intelligence theory.

**Step-2 : Determining the set of operations to isolate and display the attribute**

The second step is to develop a procedure to find out and invent a set of operations which will isolate the attribute of interest and display it. There are attributes like length or weight for which you can use well standardized scales, but if you are measuring intelligence, or honesty or any dimension of personality, you have to determine the set of operations; this is called operationalizing the attribute or operational definition. For example, operational definition of intelligence may be like ‘in this measurement, IQ refers to the score obtained by an individual on a standard test XYZ.’

**Step-3 : Quantifying the attribute**

The third step of the measurement process is assigning numerals to quantify the aspect of measurement or the attribute. This quantification helps in communicating about the attribute more efficiently and precisely. If quantification has been done according to a set of rule (this is known as scale), you can apply mathematical operations for making the measurement more meaningful. For example, you can decide heights will be measured in centimeters or inches, in pounds or kilograms, etc. or you will use a five point or three point scale to measure any behavioral attribute.

Measurement helps you in assessment and evaluation. In coming sections, we will discuss about linkages between all these three.

**Check Your Progress 1**

- Note:** (a) Write your answers in the space given below.  
 (b) Compare your answers with the ones given at the end of this Unit.

1. What are the levels of measurement?

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2. Why do you measure some attributes required to be defined operationally?

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### 1.3.2 Assessment

Let us move towards another key concept i.e. assessment. Some teachers use assessment and evaluation interchangeably. For example, when you think of CCE, it is continuous comprehensive evaluation but under CCE you have to undertake formative and summative assessment. Therefore, it is essential to clarify the doubts and understand the term ‘assessment’. Let us understand the term assessment clearly so that we can differentiate between the two.

Assessment is “a systematic procedure for collecting information that can be used to make inferences about the characteristics of people or objects (AERA, et. al., 1999)”. Assessment is referred as “a process of collecting evidence and making judgments relating to outcomes”. It is said that assessment has a narrower meaning than evaluation but a broader meaning than measurement.

In its derivation, the word assess means “to sit beside” or “to assist the judge”, it reflects that assessment is a process of gathering data and fashioning them into an interpretable form; judgment can be made on the basis of this assessment.

If you think of classroom assessment, you can say that when a teacher observe the learners in the process of learning, collect feedback on their learning, improve his/her teaching-learning strategy to facilitate them for maximum learning, s/he is doing assessment.

In connection to measurement, you can say that measurement is a process of quantifying attributes, and assessment is the process of collecting the quantified information about the attributes and interpreting it. Let us see the following example:

<p>Ms. Preeti is a secondary school teacher. She conducted a unit test in all the sections of class IX in her school. It was a 20 marks objective type test. She collected and assessed all the answer scripts. She compiled the scores class wise and also made some groups like above average, average and below average. She returned the answer scripts with remarks like your performance is average/below average/above average. She also identified some topics where a large number of learners were not responded well or made mistakes. She decided to provide additional activities for those topics in order to facilitate learners.</p> <p>Based on above passage, mark in front of following statement, weather it was measurement or assessment?</p>		
1.	Preeti assigned 1 mark for correct answer and 0 for the wrong one.	
2.	Preeti calculated total score of each learner.	
3.	Preeti categorized learners’ performance as below average, average and above average.	
4.	Preeti identified the topics/areas where learners have not performed well.	

In the above example, you can easily identify that statements 1 and 2 belong to measurement and statements 3 and 4 belong to assessment.

Assessment is considered as a part of the teaching-learning process and often categorized as *assessment of learning*, *assessment for learning and assessment as learning*. Let us elaborate each category to understanding it.



**Assessment of learning:** It basically focuses on learners' achievement against some predefined outcomes and standards. Sometimes, it is referred to as summative assessment. Generally, teachers undertake this type of assessment at the end of a Unit or term or semester in order to grade or rank the learners.

According to New South Wales Educational Standards Authority (NSWESA), assessment of learning:

- is used to plan future learning goals and pathways for students;
- provides evidence of achievement to the wider community, including parents, educators, the students themselves and outside groups; and
- provides a transparent interpretation across all audiences.

**Assessment for learning** is practiced by teachers during their teaching-learning process. Its main objective is to improve teaching and enhance learning by facilitating learners. It takes place along with teaching-learning process in the classroom. It is more frequent and mostly unstructured, also referred as 'formative assessment'.

According to NSWESA, assessment for learning:

- reflects a view of learning in which assessment helps students learn better, rather than just achieve a better mark;
- involves formal and informal assessment activities as part of learning and to inform the planning of future learning;
- includes clear goals for the learning activity;
- provides effective feedback that motivates the learner and can lead to improvement;
- reflects a belief that all students can improve;
- encourages self-assessment and peer assessment as part of the regular classroom routines;
- involves teachers, students and parents reflecting on evidence; and
- is inclusive of all learners.

**Assessment as learning:** When learners are asked to assess their performance on their own, they use various assessment techniques and strategies to assess themselves. This practice helps learners to identify their knowledge gaps, adopt appropriate learning strategy and use assessment as tool for new learning.

According to NSWESA, assessment as learning:

- encourages students to take responsibility for their own learning;
- requires students to ask questions about their learning;
- involves teachers and students creating learning goals to encourage growth and development;
- provide ways for students to use formal and informal feedback and self-assessment to help them understand the next steps in learning; and
- encourages peer assessment, self-assessment and reflection.

We will discuss them in detail in Unit-2 of this Block.

**Assumptions of assessment :** In educational assessment, there are some underlying assumptions, which you should know as a teacher so that you can do justice with your learners when you plan the assessment. Cohen and Swerdlik (2002) have suggested following assumptions:

- **Psychological and educational constructs exist** that is there are always some traits or characteristics which are to be measured.
- **Psychological and educational constructs can be measured.** There is a very quote of Cronbach (1990), which states “*if a thing exists, it exists in some amount. If it exists in some amount, it can be measured.*”
- **Although we can measure constructs, our measurement is not perfect.** Most of the educational and psychological constructs are related to human behavior which can not be measured accurately i.e. with 100% accuracy. There is always some chance of error during measurement.
- **There are different ways to measure any given construct,** for example, one can assess intelligence through a paper-pencil test or a performance test. Achievement can be measured with objective type tests, short answers type or essay type. It may be written test or oral presentation also.
- **All assessment procedures have strengths and limitations.** This means all assessment techniques and procedures which a teacher adopt are not perfect. Every procedure has its strengths and limitations. One procedure can measure one dimension whereas other can measure one or many dimensions together.
- **Multiple sources of information should be part of the assessment process.** In educational assessment, multiple sources of information should be used to arrive at a decision. Any important decision should not be based on result of any one test.
- **Assessment can provide information that helps you to make better decisions.** If a teacher/educator use appropriate tool/strategy to assess learners’ performance or any particular trait, its outcome helps him/her to make a better decision about the learners.
- **Assessment can be conducted in a fair manner.** Though some people may not agree with this assumption. This may be true that assessment can be conducted with honesty and sincerity. If you as teacher use well developed test and adopt suggested administrative procedure properly, there are high chances of fairness. It mostly depends upon the test administrator who conducts the assessment.
- **Testing and assessment can benefit our educational institutions and society as whole.** Many teachers may argue that testing and assessment should be out of the system but you will agree that assessment help you and your learners in teaching and learning. A teacher should adopt flexible approach while assessing keeping in mind the nature and need of the content, learner and context.

**Activity 3**

*Critically analyse the assumptions stated by Cohen and Swerdlik (2002).*

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**Components of Assessment**

Assessment as system has certain components or variables which help us to decide as to what kind of assessment strategy we can use. Harlen (2007) has suggested following components or variables of assessment as a system:

Figure 2 Components and variables of an assessment system (adopted from Harlen, 2007)

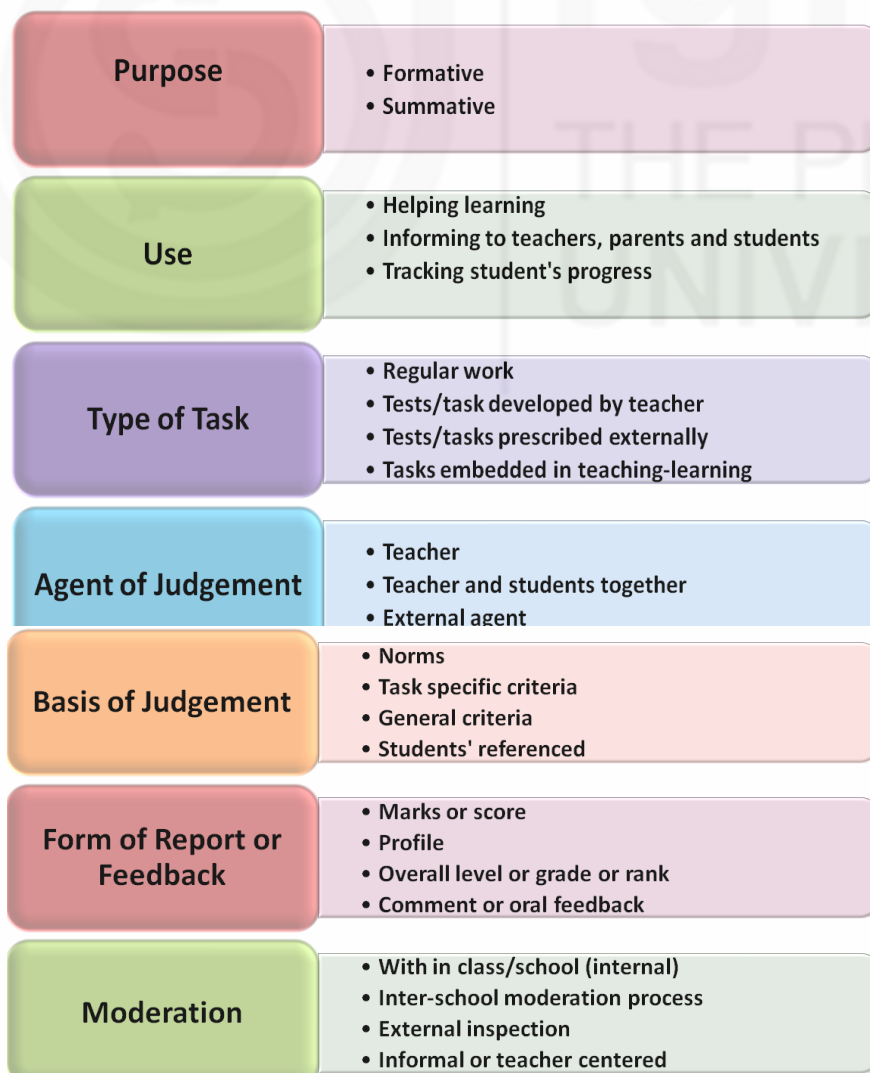


Figure 2 shows the components of assessment which help us to decide the use of assessment strategies in different situations. As depicted in Figure 2, the first and foremost component is to find out the purpose for which the assessment will be used. If it is for formative purpose, accordingly, suitable techniques are selected for the assessment. If it is for the summative assessment, the strategy for conducting an examination at the end of a term or semester or even an examination at the end of the session are conducted. The component ‘use’ explains that how the assessment strategy will help the learners, teachers, and also for the parents. Nature of task selected is also again another component of assessment. That includes, whether the task is a regular practice like formative assessment or a type of internal and external examination. The use of tests like developed by the teachers or standardized one are also linked with the nature of the task. As like, the other components which are responsible for adopting strategies for assessment are agent and basis of judgment, report and feedback, and moderation processes have also presented in the Figure.

**Check Your Progress 2**

- Note:** (a) Write your answers in the space given below.  
(b) Compare your answers with the ones given at the end of this Unit.

3. Compare the role of a teacher in assessment of learning and assessment for learning.

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4. What are the major components of assessment system? Do you observe them when assessing your learners’ performance?

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**1.3.3 Evaluation**

Let us discuss about evaluation, which is a broader concept as compared to measurement and assessment. Evaluation is “*a systematic process of collecting and analyzing data in order to determine whether, and to what degree, objectives have been, or are being, achieved* (Gay, 1991)”. It leads to decision making.

As a teacher, you should understand that “*the purpose of evaluation is to make a judgment about the quality or worth of something.* (Ebel and Frisbie, 1991)”

In assessment you try to find out, the level of achievement or performance of a learner. But in evaluation your focus is, how good is the performance or the level of performance. You can say that evaluation is a process of value judgment. It is also used to refer to the product or outcome of the process. You can say that “measurement and assessment are the means and evaluation is the end”. In the process of evaluation, measurement is the first step, assessment comes next and when value judgment is added to it, it becomes evaluation.

Let us further elaborate the concept of evaluation. According to Beby (1977), evaluation as “*the systematic collection and interpretation of evidence leading as a part of process to a judgment of value with a view of action*”. If you analyze this definition, you can identify four key elements of evaluation as follows:

- Systematic collection of evidence
- Its interpretation
- Judgment of value
- A view of action

Let us try to understand the above terms used.

**Systematic collection** implies that whatever information is gathered, should be acquired in a systematic and planned way with some degree of precision.

Information gathered systematically should be carefully analysed and **interpreted**; superficial observations may lead to wrong interpretation.

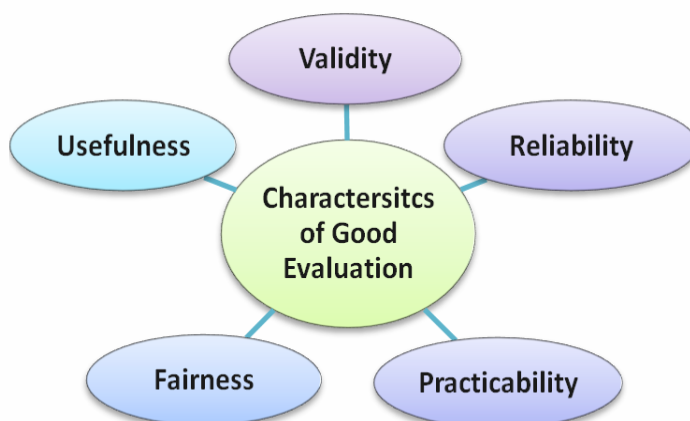
**Judgment of value** takes evaluation far behind the level of mere description of what is happening, but requires judgments about the worth of an endeavor.

**A view of action** means every decision has a specific reference to action. It may be conclusion oriented or decision oriented.

### Characteristics of good evaluation

As a teacher whenever you are involved in the evaluation process, you should ensure that evaluation should have following characteristics, which are often termed as “elements of a good evaluation”. See Figure 3 :

**Figure 3: Characteristics of Good Evaluation**



Let us discuss each characteristic for our clear understanding :

**Validity:** A valid evaluation is one which actually tests what is set out to test i.e., one which actually measures the behaviour described by the objective (s), under scrutiny.

**Reliability:** It is a measure of consistency with which the question, test or examination produces the same result under different but comparable conditions. A reliable evaluation mechanism is independent of the characteristics of individual evaluator.

**Practicability:** Evaluation procedure should be realistic, practical and efficient in terms of their cost, time taken and ease of application.

**Fairness:** Evaluation must be fair for all learners. This can be possible by accurate reflecting of range of expected behaviors as desired by the course objectives.

**Usefulness:** Evaluation should be useful for all learners. Feedback from evaluation must be made available to learners and help them to prove their current strengths and weaknesses.

We will discuss in detail the various aspects of criteria of a good tool in Unit-6 of Block-2 of this Course.

### **The Purposes of evaluation**

According to Oguniyi (1984), educational evaluation is carried out from time to time for the following purposes:

- To determine the relative effectiveness of the programme in terms of students' behavioural output.
- To make reliable decisions about educational planning.
- To ascertain the worth of time, energy and resources invested in a programme.
- To identify students' growth or lack of growth in acquiring desirable knowledge, skills, attitudes and societal values.
- To help teachers to determine the effectiveness of their teaching techniques and learning materials.
- To help motivate students to learn more as they discover their progress or lack of progress in given tasks.
- To encourage students to develop a sense of discipline and systematic study habits.
- To provide educational administrators with adequate information about teachers' effectiveness and school need.
- To acquaint parents or guardians with their children's performance.
- To identify problems that might hinder or prevent the achievement of set goals.

- To predict the general trend in the development of the teaching-learning process;
- To ensure an economical and efficient management of scarce resources.
- To provide an objective basis for determining the promotion of students from one class to another as well as the award of certificates.
- To provide a just basis for determining at what level of education the possessor of certificate should enter a career.

**Check Your Progress 3**

**Note:** (a) Write your answer in the space given below.  
(b) Compare your answer with the one given at the end of this Unit.

5. What are the common characteristics of evaluation?

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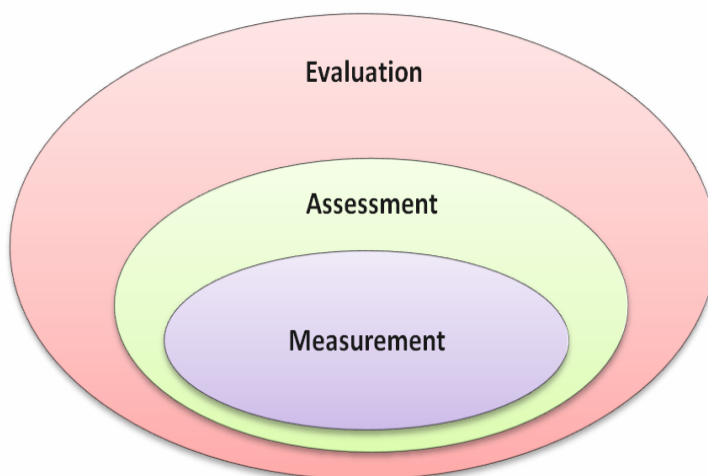
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### 1.4 RELATIONSHIP AMONG MEASUREMENT, ASSESSMENT AND EVALUATION

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While going through the discussion about measurement, assessment and evaluation in previous section, you must have realized that all the three are associated with each other. Evaluation may be considered as an umbrella term which includes measurement and assessment (Figure 4).

Figure 4 Measurement, Assessment and Evaluation



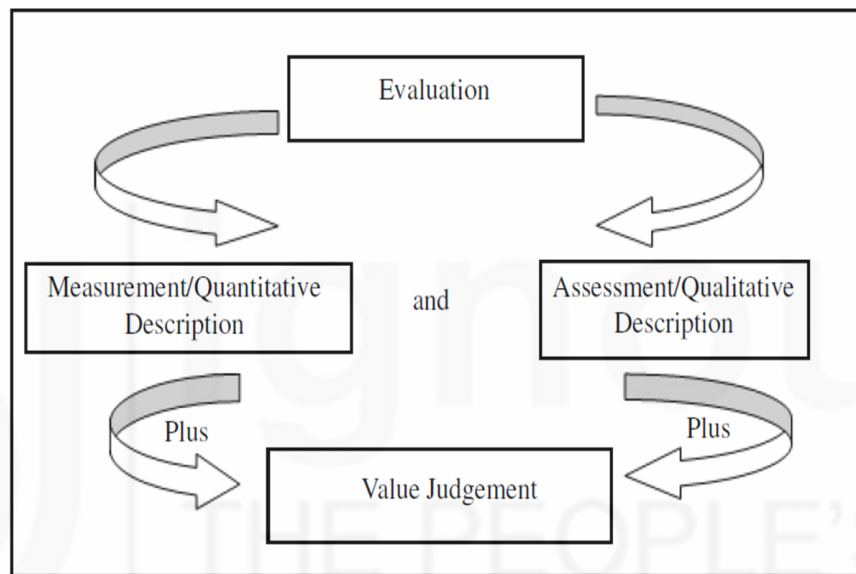
This relationship can be further explained as measurement focuses mainly on quantifying the variable, assessment bring in qualitative descriptions and when value judgment is added to these, it becomes evaluation. For example:

Ramesh has scored 65 marks in Mathematics in the final year examination, which is above average performance but he has not performed well on test items related to Trigonometry. Ramesh has improved significantly with compared to his half-yearly examination.

In this, 65 marks measurement indicator, like above average performance, identification of area of improvement comes under assessment and judgment of his performance in relation to half yearly examination is evaluation.

Let us see this in the following figure:

**Figure 5: Relationship between Measurement, Assessment and Evaluation**



(Source: BES-002: Teaching Learning and Assessment, IGNOU, 2013)

Figure 5, depicts the following :

1. Evaluation = Measurement + Value Judgment
2. Evaluation = Assessment + Value Judgment
3. Evaluation = Measurement + Assessment + Value Judgment

From the above three concepts of evaluation, now it is clear that without value judgment there is no evaluation.

**Check Your Progress 4**

**Note:** (a) Write your answer in the space given below.  
 (b) Compare your answer with the one given at the end of this Unit.

6. Differentiate between Measurement, Assessment and Evaluation.

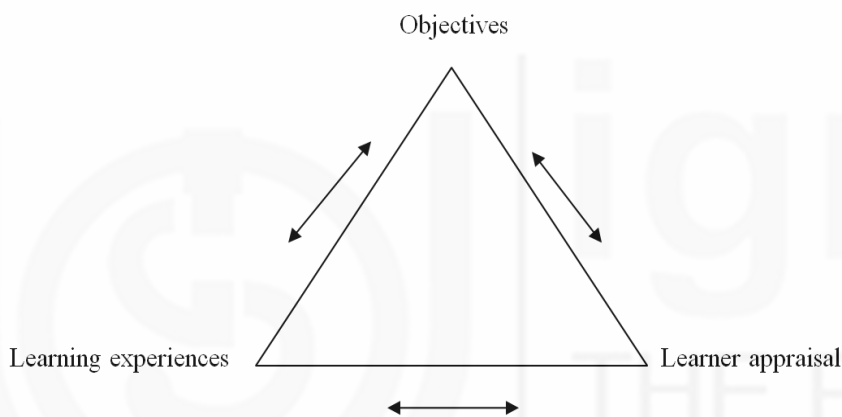
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## 1.5 TEACHING-LEARNING PROCESS AND EVALUATION

The main purpose of classroom teaching is to influence learners' behavior in the desired direction. The desired direction is guided by the educational objectives formulated by the school and the teacher. Therefore, you should be conscious of the goals and aims of education. More specifically, you should formulate learning objectives for various lessons and units in the systematized and rearranged syllabus in the subject of study. Secondly, you should be in a position to construct effective learning experiences on the basis of student learning and the modes of effective communication channels. Finally, you should determine the extent to which these objectives are to be achieved. Hence, three major elements in the education process are objectives, learning experiences and learner appraisal. The simple representation of the educational process is shown as follows:

**Figure 6: Representation of Educational Process**



The above representation is a dynamic one and shows interaction among three major elements as shown by directional arrows. Objectives refer to one's intention of desired behavior that learners should acquire. The term learning experiences, refers to those activities and experiences that the learners undergo in order to acquire the desired behaviours.

You have to play an important role in providing learning experiences which involve interaction of students and content. You may use various teaching methods and techniques for providing learning experiences to the learner. The learning experiences lead to behavioural changes in learners. So, learning involves modification in the behaviour of a learner through learning experiences. In order that there may be an appreciable learning on the part of students, it is important that teaching must be effective. You should provide situations for close interaction of students with content by using appropriate teaching methods and techniques. Hence effective teaching leads to successful learning experiences.

Besides teaching, the learning experiences can also be brought about through a number of ways such as the library, laboratory readings, radio, films, film strips, science clubs, field trips or such other learning situations in real life.

**Learning appraisal** is concerned with ascertaining the extent to which the objectives have been met. The representation of the educational process shows the linking of each other element. Let us explain the linkage of three major elements of the educational process. Beginning with objectives, the arrow pointing to learning experiences indicates that objectives serve as a guide for the selection

or creation of learning experiences. For example, if a geometry course is aimed at developing deductive thinking abilities in learners, then learning experiences require work other than geometry content. This may include home assignment to work on newspaper editorials, advertisements and also individual projects. The point is that the nature of one's objectives will be an important determinant of the learning experiences that constitute the operational programme. The arrow pointing from objectives to learner appraisal indicates that the primary focus of appraisal is on gathering evidence on the extent to which the objectives of the programme have been attained. Just as objectives provide specification for establishment of learning experiences, they also furnish specifications for learner appraisal. For example, the development of deductive thinking among students, might require in its appraisal of learning, the evidence regarding students' proficiency to apply deductive principles to the analysis of a variety of material in life situations, which may be outside the field of geometry.

Now, the arrow pointing from learning experiences to learner appraisal is indicative of the fact that learning experiences provide examples for the development of appraisal tasks. The objectives that the students are engaged in, during the learning phase of the programme, should furnish ideas for appraisal situations. Thus, the arrow pointing from learning experiences to learner appraisal, indicates that learning experiences furnish ideas and suggestions for learner appraisal task may not be identical but contain an element of novelty for the learner.

The two arrows pointing from learner appraisal to objectives and to learning experiences are especially important. In the case of the former, the arrow signifies that appraisal procedures should furnish information about the extent to which the objectives are being attained. In addition, appraisal information can furnish valuable information that may result in the modification of some objectives and the elimination of others. The appraisal helps in providing a solution to the following questions:

- Should the objectives be modified or perhaps eliminated?
- Are the objectives realistic for the particular group of learners?
- Are necessary references available for achieving the objectives?

The arrow-pointing from learner appraisal to learning experiences, is suggestive of two important notions. First, it provides information about the extent to which learning experiences appear to be working well. Hence appraisal procedure can suggest the modification or elimination of learning experiences. A second important idea suggested by the arrow pointing from appraisal to learning experiences is that tasks, experiences and problems developed by evaluation specialist may be suggestive of new learning experiences. The incorporation of moral and imaginative appraisal materials into the learning phase of a programme has contributed significantly to the improvement of learning experiences.

The last arrow, which points from learning experiences to objectives, denotes that learning activities can result in encounters involving teachers, learners and learning materials which in turn may suggest new objectives.

### **Role of evaluation**

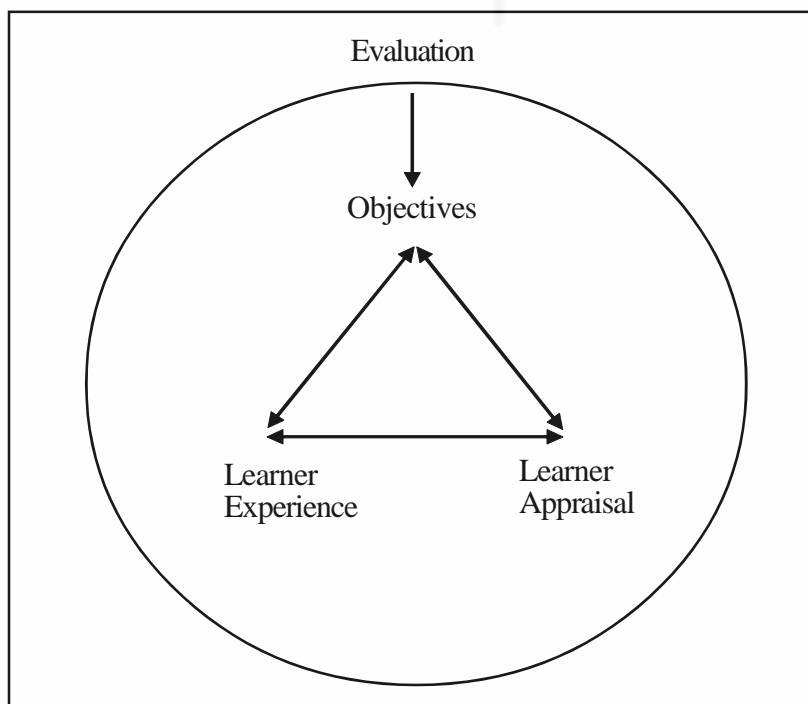
Evaluation plays an important role in the teaching-learning process. In learning, it contributes to formulation of objectives, designing of learning experiences and assessment of learner performance. Besides this, it is useful to bring improvement

in teaching and curriculum. It provides accountability to the society, parents, and to the education system. Let us discuss its role briefly.

- a) **Teaching:** Evaluation is concerned with assessing the effectiveness of teaching, teaching strategies, methods and techniques. It provides feedback to the teachers about the quality of their teaching and the learners about their learning.
- b) **Curriculum:** The improvement in courses/curricula, text and teaching materials are brought about with the help of evaluation. Evaluation provides feedback to the curriculum, whether it can be practiced, learner friendly, designed as per the need of the learners and also its effectiveness in terms of achieving the aims of the curriculum.
- c) **Society:** Evaluation provides accountability to society in terms of the demands and requirements of the employment market.
- d) **Parents:** Evaluation mainly manifests itself in a perceived need for regular reporting to parents.

In brief, evaluation is an important requirement for the education system. It fulfils various purposes in systems of education like quality control in education, selection/entrance to a higher grade or tertiary level. It also helps one to take decisions about success in specific future activities and provides guidance to further studies and occupation. Some of the educationists view evaluation virtually synonymous with what was previously defined as learner appraisal, but evaluation has an expanded role. It plays an effective role in questioning or challenging the objectives. This does not mean that you can casually criticize programme objectives. You should question or challenge programme objectives only after careful study of the relationship between a programme's objectives and the need for which the programme was designed. Evaluation helps in the design and modification of learning experiences on the basis of feedback received by learner appraisal. A simple representation explaining the role of evaluation in the teaching-learning process is shown in Figure 7 as follows :

**Figure 7: Representation of the Role of Evaluation in the Teaching-Learning Process**



**Check Your Progress 5**

**Note:** (a) Write your answer in the space given below.  
(b) Compare your answer with the one given at the end of this Unit.

7. What are the four important aspects of evaluation?
- a) .....
  - b) .....
  - c) .....
  - d) .....

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**1.6 ASSESSMENT FOR ENHANCING LEARNING**

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While going through the discussion in Section, 1.3.2, you might have understood that assessment is part of teaching-learning process, and one of its major roles is enhancement of learning. As part of the teaching-learning process, assessment may be defined as *the process of gathering, recording, interpreting, using and communicating information about a child’s progress and achievement during the development of knowledge, concepts, skills and attitudes.*

Role of assessment for enhancing learning is discussed in a draft document of National Council for Curriculum and Assessment (NCCA) in 2004, as follows:

*Assessment is central to the process of teaching and learning. It is used to monitor learning processes and to ascertain achievement in each area of the curriculum. Through assessment the teacher constructs a comprehensive picture of the short-term and long-term needs of the child and plans future work accordingly. Assessment is also used to identify children with specific learning difficulties so that the nature of the support and assistance they need can be ascertained and appropriate strategies and programmes put in place to enable them to cope with the particular difficulties they are encountering.*

*Assessment assists communication about children’s progress and development between teacher and child, teacher and parent and teacher and teacher.....*

*(Primary School Curriculum, 1999, p.17, as quoted in draft document of National Council for Curriculum and Assessment (NCCA), February, 2004)*

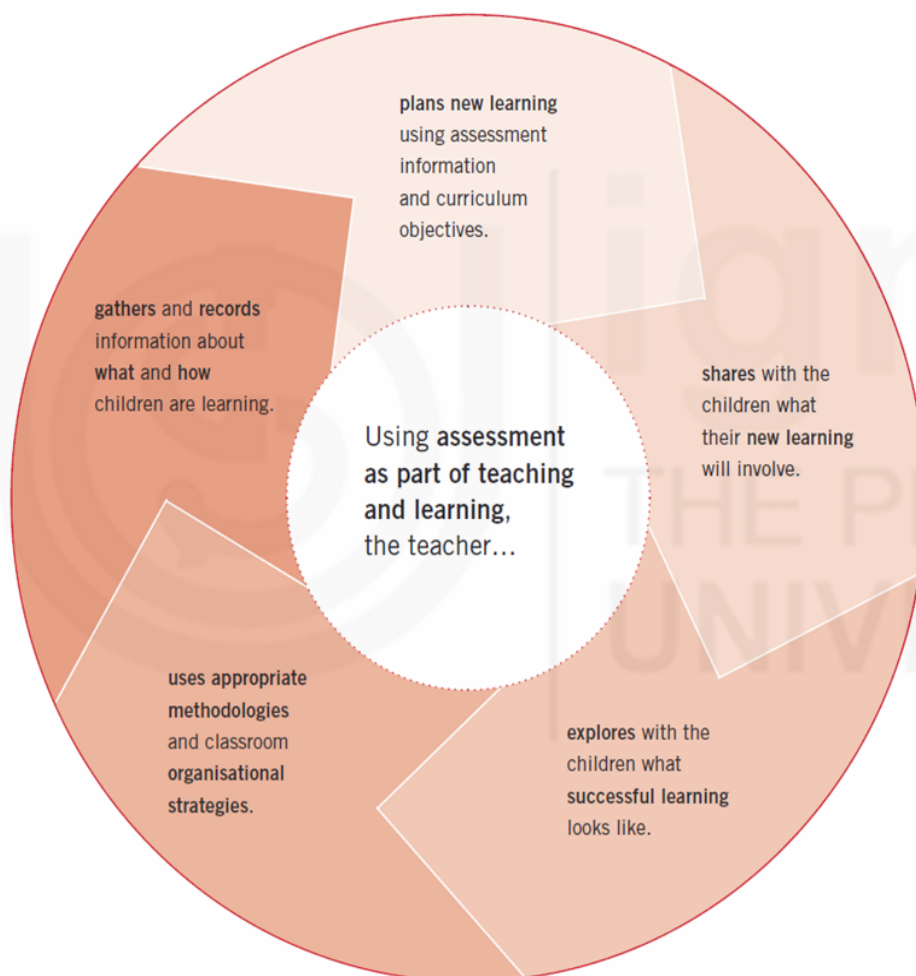
If you analyze the above paragraph, you can easily identify the key determinants of assessment for enhancement of learning. Few are as follows:

- Assessment is part of the teaching-learning process.
- Assessment helps in monitoring learning and ensuring minimum achievement in every area.

- Assessment helps teachers in planning teaching-learning according to short-term and long-term needs of the learners.
- Assessment helps in identifying specific learning difficulties of the learners so that teachers can plan and adopt suitable strategy and technique to support such learners.
- Assessment helps in maintaining continuity in communication between teachers, learners and parents so that required interventions can be given at appropriate time to enhance learning.

Let us see as to how teachers can use assessment as part of the teaching-learning process for enhancing learning. Refer to Figure 8.

**Figure 8 Assessment as part of the Classroom Practice**



*(Source: [www.ncca.ie](http://www.ncca.ie) retrieved on 02/07/2017)*

Your main focus while using assessment as part of the teaching learning should be to answer three basic questions:

- What is the current learning-level of your learners?
- What are they going to learn?
- How will you link next learning with their previous learning and experiences?

If you are able to find out the answers for these questions through assessment, you can use it effectively for enhancing learning of your learners.

**Check Your Progress 6**

- Note:** (a) Write your answer in the space given below.  
(b) Compare your answer with the one given at the end of this Unit.

8. How does assessment help in enhancing learning?

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**1.7 OTHER TERMS RELATED TO ASSESSMENT AND EVALUATION**

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There are many terms which as a teacher you encounter while dealing with assessment and evaluation. Let us discuss in brief, the common terms for you to understand.

**1.7.1 Appraisal**

Appraisal is not a new term in industry. Annual performance appraisal is a key component for many industries where employee’s performance is assessed based on self- appraisal submitted by him and authenticated by seniors. In past few years, this system has been adopted in education sector also. In simpler terms appraisal can be defined as follows :

*“Appraisals are judgments of the characteristics, traits and performance of others. On the basis of these judgments we assess the worth or value of others and identify what is good or bad. In industry performance appraisal is a systematic evaluation of employees by the supervisors. Employees also wish to know their position in the organization. Appraisals are essential for making many administrative decisions: selection, training, promotion, transfer, wage and salary administration etc.”*

From the above definition, appraisal of a learner can be explained as the work profile that the learner has performed in the previous classes or the work that the learner has completed in the class where he/she is continuing at present.

As questions on teachers’ quality and performance in Indian schools are being raised time and again in various reports, the appraisal is gaining momentum in Indian school sector. Many private schools/chain of schools have made it compulsory for each teacher to submit annual self-appraisal before moving to the next session/continuation/promotion.

In India, schools systems like Kendriya Vidhyalaya Sangathan (KVS), Navodaya Vidhyalaya Samiti (NVS) and some States have already adopted a self-assessment mechanism for annual performance assessment. In an Appraisal Performa, you can find few common columns under which information is required from teachers. The columns are as follows :

- **Personal information:** In this, teacher provides his/her personal details, employment details, etc.
- **Self-assessment:** Teachers are asked to write about their duties (which they have performed), their targets and achievements, any shortfall (if they were not able to achieve fully the desired target with justification), their special/outstanding contribution to school/organization (if any), areas which they have indentified for improvement in next session, etc.
- **Appraisal by reporting authority (Head master/Principal, etc.):** Under this section, the reporting authority analyses the self-assessment report submitted by the teacher and provide remarks (generally in the form of grades) on various dimensions like accomplishment of planned work/ work allotted, quality of work output, analytical ability, accomplishment of exceptional work/unforeseen task performed, etc.
- **Appraisal by reviewing authority:** The self-appraisal report submitted by the teacher and remarks/grades provided by the reporting authority are reviewed by higher authorities like manager of the school or education officer designated by the concerned system.

### 1.7.2 Test

Test is a very common term used in various ways. You may find use of test as a tool or a technique. It is also considered as a most commonly used method for measurement of educational and psychological attributes. In dictionary meaning of test you can find that “test is a series of questions on the basis of which some information is sought” (Singh, 2002).

Test is also defined as a method to determine individuals’ ability to complete certain tasks or demonstrate mastery of a skill or knowledge of content. It is also considered as a tool or systematic procedure for measuring a sample behaviour by posing a set of questions in a uniform manner designed to measure any quality, ability, skill or knowledge.

Bean (1953) defined test as “*an organized succession of stimuli designed to measure quantitatively or to evaluate qualitatively some mental process, trait or characteristics.*”

If you analyze all these definitions, you can easily indentify the following characteristics:

- Tests have some organized stimuli (test items) in an organized sequence to test some specific trait/attribute.
- Test can be used as tool for quantitative measurement as well as qualitative assessment.
- Test is a systematic tool to measure sample behaviour.

If you go through various tests being used for assessment and evaluation, you may find a variety of tests. All these tests can be classified on various criteria. Few common criteria have been summarized in Figure 9.

**Figure 9: Common Criteria of Tests**

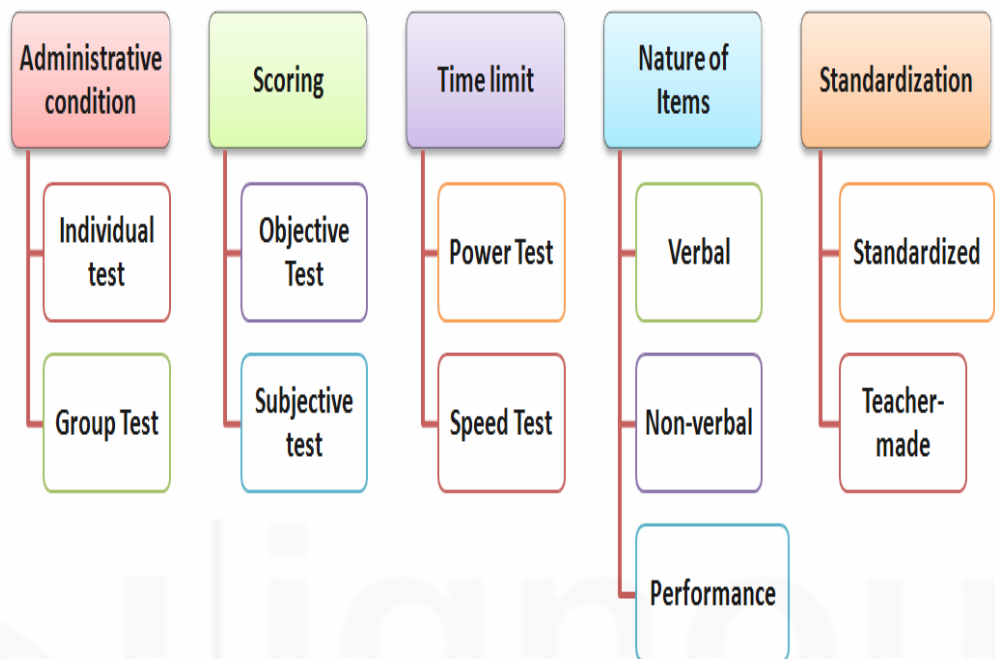


Figure 9 analyses certain common criteria of developing and use of tests. As shown in the figure, we can say that a test can be administered individually or in group. The scoring procedures in objective and subjective tests are different. Time limits for power and speed test is also another concern. Generally, more time is provided for power test but very less time is provided for speed test to complete the task. Nature of items in the tests can also vary such as the items are may be verbal, non-verbal or performance based items. On the basis of the purpose of test use, it may be standardized or teacher-made.

You can find many more classifications like based on attributes, etc. Characteristics of a good test and steps of test construction and standardization have been discussed in Unit 9, 10 and 11 of Block 2 of Course, BES-127.

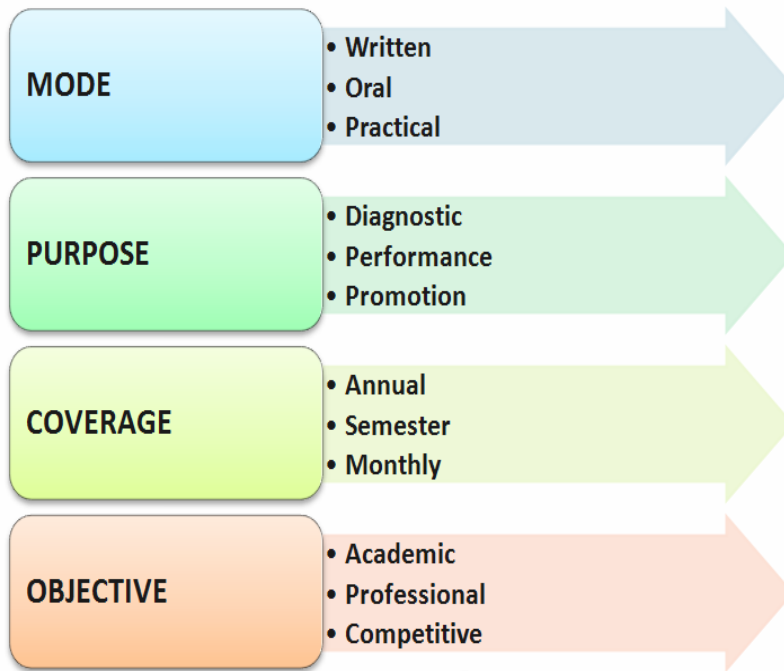
**1.7.3 Examination**

Examination is considered as a formal system to know how much one has achieved or where one stands in comparison to others. It is basically a test to see how good somebody is at something.

Generally examination is considered in two senses : one, to know about how good one is, and other, to know the shortcomings, or, where is one lacking? Example of first is semester or annual examination, and example of other is unit test, diagnostic tests, etc. Both have their importance in educational setting as both are complementary to each other. You must have realized that examinations are some formal sort of testing mechanism, where syllabus, format of test-paper, medium, nature of test items, duration, scoring pattern, etc. are pre-decided and mostly standardized one. Examination may be classified in various types based on certain criteria, like:



Figure 10: Types of Examination



**Check Your Progress 7**

**Note:** (a) Write your answer in the space given below.

(b) Compare your answer with the one given at the end of this Unit.

9. How will you differentiate test from examination?

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**1.8 LET US SUM UP**

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In this Unit we discussed common terms like measurement, assessment and evaluation. Measurement is defined as a process of quantifying the degree to which someone or something possessed a given trait, i.e., quality, characteristics, or features. The characteristics of measurement and also four scales of measurement i.e. nominal, ordinal, interval and ratio are discussed to help you in adopting appropriate measurement tool and technique. The Unit also discussed about assessment as a systematic procedure for collecting information that can be used to make inferences about the characteristics of people or object. A brief discussion about assessment for learning, of learning and as learning will help you to understand these aspects. We have also discussed that evaluation is value judgment. The relationship of measurement, assessment and evaluation has been explained with help of examples. Role of evaluation in teaching learning-process and assessment for enhancing learning is also explained in this Unit.

The Unit ended with brief discussion on various associated terms like appraisal, tests, examination, etc. This unit will help you to understand and comprehend the coming units of the block and course as well.

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## 1.10 ANSWERS TO CHECK YOUR PROGRESS

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1. The four levels of measurement are : nominal, ordinal, interval and ratio.
2. Nature of measurement and assessment vary for various traits or attributes of the students. It is therefore measuring some attributes required to be defined operationally.
3. In assessment of learning, the role of teacher is very much dominating as it is a teacher-centered approach whereas in assessment for learning, the role of teacher is very much friendly, supportive, and teacher acts as a facilitator for the learners.
4. Self exercise (Refer Figure-2).
5. Reliability, Validity, practicability, fairness, objectivity and usefulness.
6. Self exercise (Refer Figure-5).
7. Teaching-learning process, curriculum, society and parents.
8. Assessment helps in monitoring learning, identify the specific learning difficulties, and feedbacks/comments help to modify learning of the students.
9. Refer 1.7.2 and 1.7.3.