



MEASUREMENT AND EVALUATION: INTRODUCTORY CONCEPTS

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ABSTRACT:

In the fields of behavioral sciences, especially in education and psychology, measurement and evaluation perform important roles. Emphasis, in the present time, is given much on practical fields than on theories. Various streams of behavioral sciences tend to study human behaviors along with issues and problems associated with it. The fields of education and psychology undertake greater initiatives to measure such behaviors of human being. Again, for conducting the teaching-learning process as per the curriculum in educational institutions, a teacher has to follow a well-structured programme. In this respect the teacher has to adopt a specific teaching methodology. However, when the teacher wants to know the effectiveness of his teaching strategy, progress of the students, to what extent the predetermined objectives are achieved, individual achievement of students and some other related information, he/she has to take resort to two processes --- measurement and evaluation.

KEYWORDS:

MEASUREMENT, EVALUATION, CLASSIFICATION.

- ❖ **Concept of Measurement:** The term measurement is associated with our daily life. For gaining an idea about height, weight or other physical characteristics of an object we need to know measurement. For example, if we want to buy rice or sugar from a grocery or clothes from a garment shop, we should have ideas about measurement. We have to know how much rice or sugar we want to buy or we need to know the size of the dress. Similarly, in the field of education and psychology if we want to know about a student's ability, interest, attitude etc., we should have knowledge about measurement. Besides, measurement also helps in the guidance and counselling process of a student to choose a proper career in life. So it can be said that measurement helps to identify the quantity, capacity or degree of something by assigning number or symbols to people, objects or events.
 - v) various tools.
 - vi) To develop or modify instructional programmes adopted by a teacher for the students.
 - vii) To determine various points of similarities and differences between two groups (i.e. control group and experimental group) and also within the group in the fields of educational and psychological research.
 - viii) To conduct guidance and counselling in order to know the potentialities of students and also to guide them to choose proper career in life.
- ❖ **Characteristics/ Features of Measurement:** Some notable characteristics of evaluation are discussed below ---
 - i) **Absence of Absolute Zero Point**
 - ii) **Indefinite Units**
 - iii) **Symbol Assigning**
 - iv) **Attainment of Objectives**
 - v) **Beyond Direct Measurement**
- ❖ **Aims and Objectives of Measurement:** In the fields of education and psychology measurement has several aims and objectives. Some of them are as follows ---
 - i) To classify pupils for placing them in different categories as per their abilities and achievements.
 - ii) To select pupils in various fields of establishments, employing various techniques like interview, aptitude test, achievement test etc.
 - iii) To draw comparison between the characteristics of individuals or groups so that individual differences can be pointed out.
 - iv) To improve methods of teaching- learning using
 - v) **Need/Importance of Measurement:** Some of the basic needs or importances of measurement are as follows ---
 - i) Measurement in education helps to measure the ability as well as their interest and attitude of the students.
 - ii) Measurement is a necessary part of guidance and counselling.
 - iii) Measurement plays an important role in the

- process of improving instructional procedures.
- iv) Intelligence and personality of an individual can be measured through various methods of measurements.

❖ **Steps in Measurement:** The steps which are generally followed for the purpose of measurement are given below in brief ---

- i) Defining or Determining the Measuring Traits or Aims and Objectives.
- ii) Selection of Proper Measurement Tools or Methods.
- iii) Application of the Measurement Tools or Techniques.
- iv) Results and Records.

Evaluation

Concept of Evaluation: The term 'evaluation' is closely related to measurement. It is a more comprehensive term and serves a vital role in teaching-learning process. Evaluation is a process through which outcomes of a programme is observed or examined to see if they are satisfactory with reference to the pre-determined objectives. Evaluation also refers to a set of processes that are used to know or determine if the student fulfils a predetermined criterion. It is actually a systematic process of determining to what extent instructional objectives have been achieved.

❖ **Aims and Objectives of Evaluation:** Notable aims and objectives of education are ---

- i) To diagnose the strengths and weaknesses of students.
- ii) To analyse pupils' needs and possibilities.
- iii) To test the progress of skills and attitudes of students.
- iv) To relate measurement to the goals of the instructional program.
- v) To evaluate the teacher's competence.
- vi) To assist the teacher to be acquainted with the nature of learning and progress of the students.

❖ **Characteristics/ Features of Evaluation:** Some notable characteristics of evaluation are discussed below.

- i) **Continuity**
- ii) **Comprehensiveness**
- iii) **Systematic Process**
- iv) **Co-operation and Collaboration**

v) **Remedial Nature**

vi) **Diagnosis**

❖ **Principles of Evaluation:** The process of evaluation should always be carried out with effectiveness and proper techniques. For conducting the process of evaluation some principles should be adhered to:

i) **Clear Statement:** The evaluator or the teacher should have clear ideas about the purpose of evaluation. S/he must formulate instructional objectives and define them clearly in terms of student's observable behaviour. The intended learning outcomes should be sketched clearly before selecting the achievement measures.

ii) **Variation in Evaluation Technique:** An evaluator cannot evaluate all aspects of achievement using a single technique. Various techniques like objective tests, essay tests can be employed for better evaluation.

iii) **Appropriateness of Evaluation Technique:** Evaluation techniques vary in case of measuring performance or characteristics. It means that while one evaluation technique is appropriate for some uses, it may be inappropriate for other uses. So an evaluator must be concerned of the appropriateness of the technique at the time of selecting it.

iv) **Limitations of Evaluation Techniques:** Whatever technique or instrument is used in evaluation (be it simple observation techniques or highly developed standardized tests), they have their own limitations. There may be measurement errors, sampling errors etc. in educational and psychological measurements. So the evaluator should always be aware of the limitations of various evaluation techniques before employing them.

v) **Specificity of Goal:** The evaluation techniques are not used only for accumulating data. Rather it is used for some useful purposes, especially for taking decision about the pupils.

❖ **Need/ Importance of Evaluation:** In the field of education as well as psychology evaluation is required for a wide range of purposes. Some of the basic needs or importances of measurement are as follows:

- i) Evaluation helps to fulfill classroom objectives.
- ii) It provides assistance to students in their problems of adjustment.
- iii) It diagnoses the learning difficulties of students.
- iv) Evaluation helps to attain success in the teaching-learning process.

- v) Evaluation helps to know a teacher about the interest, attitude, aptitude and abilities of the students.
 - vi) Evaluation helps to know whether instructional objectives have been properly achieved or not.
 - vii) It helps to design better educational programmes.
- ❖ **Steps in Evaluation:** The steps which are generally followed for the purpose of evaluation in the field of education are given below in brief ---
- i) Identification and explanation of the general objectives.
 - ii) Identification and explanation of the specific objectives.
 - iii) Analysis of the content of the subject-matter.
 - iv) Appropriate planning for learning activities for students.
 - v) Evaluation of the students' behaviour or performance through testing.
 - vi) Use of results as feedback.
- ❖ **Differences between Measurement and Evaluation:** The differences between measurement and evaluation are as follows ---

Points of Differences	Measurement	Evaluation
1. Definition	Measurement is the process of gaining knowledge about physical qualities of objects such as height, weight, length, density, volume etc. It is a scientific process of knowing the attributes of an object.	Evaluation is the process of judging the worth and value of an individual's achievement and characteristics. Evaluation involves collecting and analyzing information about a programme's activities, features and outcomes.
2. Scope	Measurement has limited scope. A few dimensions of personality can be tested under measurement.	Evaluation has comprehensive scope. All dimensions of personality can be tested under evaluation.
3. Nature	It is scientific in nature.	It is philosophical in nature.
4. Purpose	The basic purpose of measurement is to collect evidences.	The purpose of evaluation is to draw inferences from evidences.
5. Time	Measurement is a time saving process. It requires less energy and time.	Evaluation does not save time since it consumes much time and energy during the conduction of its process.
6. Clarity of Assumption	Measurement does not focus on any clear assumption about a student.	Evaluation helps to form clear assumption about a student.
7. Content vs. Objective	Measurement is much more content-centered.	Evaluation is much more objective-centered.

❖ **Relationship between Measurement and Evaluation:** The relationship between measurement and evaluation can be described below:

- i) Both measurement and evaluation are used for the assessment of internal qualities like aptitude, attitude, intelligence and I,Q. of students.
- ii) Measurement is a quantitative judgement of determining how much an individual's performance has been while evaluation is a qualitative judgement of how good or satisfactory a pupil's performance is.
- iii) Both measurement and evaluation stimulate learning which further helps in motivating student, teacher, providing feedback etc.
- iv) Measurement and evaluation improve teaching by reviewing the effectiveness of teaching arrangements.

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