

PGDE(TESL) Faculty of Education

Educational Measurement and Assessment

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Measuring Variables

- If something is to be measured, it should be a variable.
- Some variables can be directly observable (e.g., Weight, height) Others are not in that type (intelligent level of a student or Mathematics performance level of a student).
- A variable can be a continuous variable (e.g., height of a person) or a discrete variable(e.g., Number of students in the classroom).
- Most of the variables in the education field are continuous and not directly observable (e.g., Intelligence, Mathematics achievement).
- In Education we measure personality attributes such as academic achievement, intelligence, aptitude, attitudes, skills etc.

What is Measurement

- In Education we measure personality attributes such as academic achievements, intelligence, aptitude, attitudes, skills etc.
- Measurement is assigning numbers to an object or event according to a rule.

Stanly Smith

- Measurement is the assigning numbers to the results of a tests or other types of assessments according to a rule.

N. E. Gronlund

Educational Measurement is indirect

- Personality attribute that we measure in education can't be observed directly.(eg intelligence of a person)
- We observe behavior of a person which is assumed to be originated from a certain attribute and assign marks according to a rule to indicate the level of that attribute the person has.
- Physical attributes such as height, weight, income etc. can be directly observed and therefore can be directly measured.

Educational Measurement is comparable

- Educational measurement is not an absolute measurement. It is comparable to
 1. The instrument used for measurement.(same person gets different marks when different tests are used to measure same attribute)
 2. The person who did the measurement. (same person gets different marks when different persons do the measurement).
 3. The time that the measurement was done. (same person gets different marks when the measurement is done in different occasions).

Because of the measurement is comparable. there is not an absolute(True) zero in the scale.

The zero mark obtained by a student for his mathematics does not mean that he doesn't know any mathematics

Educational Measurement is not Precise

- When a physical thing is measured(eg. height of a person) entire quantity is measured.
- In Education and Psychology when an attribute is measured, whole the behaviors related to that attribute can't be measured. Only a sample of that behavior related to that attribute is measured.
- Eg. An achievement test measure only a sample of behavior(a sample of possible questions) related to the achievement of the relevant subject area.
- Because of this measurement is not hundred percent correct(not precise).

Measurement units are not equal always.

e.g. for a mathematics test marks we cant say exactly that

$$56-57=78-77.$$

Educational and Psychological Tests

- A Psychological or Educational Test is a procedure designed to elicit certain behavior from which one can make inferences about certain characteristics of an individual.

Carrol 1968

- Test is a particular type of assessment that typically consists of questions administered during a fixed period of time under reasonably comparable condition for all students.

N.E. Gronlund.

- Main characteristics of a test
 - It consists of a sample of behavior
 - Sample is obtained under a standardized condition.
 - Established rules are used for scoring the responses

Evaluation

- A systematic process of determining the extent to which educational objectives are achieved by pupils

Tyler 1950

- Evaluation is a systematic gathering of information for the purposes of making decisions.

Backman 1990

- Evaluation involves interpretation of what has been gathered through measurement in which value judgments are made.

James H. McMillan.

Characteristics of Evaluation

- Evaluation is a value judgment.
- Measurement is descriptive but evaluation is qualitative.
- For evaluate something there should be criteria
- Evaluation is normally done at the end of a teaching learning process.
- For the feedback purpose, contribution of evaluation is less.

Assessment

- Assessment has different meanings in different fields.
 - Determination of the rate or amount (as a tax)
 - Impose(as a tax) according to an established rate.
 - Make an official valuation of (property) for the purposes of taxation
 - Determine the importance size or value of(assess a problem)
- In Education it is used in different way.

- Assessment is collection synthesis and interpretation of information to aid teachers in decision making.

Airasian

- Assessment is a general term that include the full range of procedures used to gain information about students learning and the formation of value judgments concerning progress.

Linn and Gronlund

- Assessment is the process of obtaining information that is used to make educational decisions to give feedback to the students about his or her progress weakness to judge instructional effectiveness and curriculum adequacy and to inform policy.

AFE,NLME, NEA,America

Uses of Assessments

- To identify students' readiness for learning.
- To identify learning difficulties of students.
- To help students to identify their weaknesses and strengths and in that way help them to achieve learning objectives.
- To motivate students for learning.
- To identify the extent to which students have attained the learning objectives.
- To identify the extent to which students progress.
- To give necessary information to the parents about their children's progress.
- To identify the counseling needs of students.
- To group students for more effective learning.
- To get relevant feedback about teaching and curriculum.