

**Tikrit University**  
**College of Education for Humanities**  
**English Department**



**PhD (Second Course) 2023-2024**

**Testing, measurement and evaluation**

**Measurment and evaluation**

**(3)**

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## **Concept of Measurement**

Measurement is the process of assigning symbols to the dimension of phenomenon in order to characterize the status of phenomenon as precisely as possible.

Measurement is the process by which a characteristic of an object, person or activity is perceived and understood on specific standards and is described in standard words, symbols or definite units.

## **Factors of measurement**

1-The object, person or activity any of which characteristic has to be measured.

2-The characteristic of that object, person, or activity which has to be measured.

3-The tools and devices of measuring such characteristic.

4-The person who measures it.

## **Qualitative Variables**

Some qualities of objects and persons are such which can only be perceived, but they cannot be measured in definite units for example , the complexion, caste, religion and sex of people. These qualities or characteristics are called qualitative variables. The level or class of the students is another example of qualitative variable. On the basis of this variable, they can be classified into the students of primary, middle and higher classes or levels. The students of higher classes can also be classified on the basis of their subjects, art, commerce, engineering , medical , etc. At this level, the subjects (disciplines) also function as qualitative variable.

## **Quantitative Variables**

**-Continuous variables:** those quantitative variables are included in continuous variables which can be of any quantitative value between any two continuous quantitative whole numbers for example; height of a person.

**-Discrete variables:** Those quantitative variables are included in discrete variables which are always measured in whole numbers ; for example the number of students in a class.

### **Types of Measurement**

**1-Nominal measurement:** in the measurement of this level , a particular characteristic of an object or person is seen, and on its basis is allotted the classification or symbol, for example, to name the students as boys or girls on the basis of sex, to name the students as urban or rural on the basis of place, to name the students as belonging to primary class, middle class, higher class, medical class or engineering class, on the basis of level of education.

**2-Ordinal measurement:** in the measurement of this level , the quantity of a characteristic of an object or person is measured, and is allotted a classification, name or symbol on the basis of quantity; for example, to classify the students as belonging to high intelligence, medium intelligence or low intelligence on the basis of quantity of their intelligence. Or to classify the students as belonging to first class, second class or third class on the basis of the marks obtained.

**3-Interval measurement:** in the measurement of this level, a trait of an object or person is measured in unit numbers and there is equal difference between any two continuous unit numbers; for example, to award the students with marks 40, 38, 52,etc in an examination.

**4-Ratio measurement:** the measurement of this level possesses all the characteristics of interval measurement, besides having the concept of true zero. The true zero is is the point at which the trait is completely

absent. From the concept of this zero, the obtained results can be compared and they can be given ratio value, so it is called ratio measurement. For example, if the weight of Ram is 60 kg and that of Shyam 20 kg , then it can be said that the ratio in their weights is 3:1.

### **Need for Measurement**

The following points explain the needs of measurement:

1-It measures the ability of students, finding out their interest and aptitude at the time of admission, and admit them on its basis.

2-It measures their intelligence and personality after admission and accordingly divide them into specific classes, and to assist in their personality development.

3-To find out from time to time the effect of teaching on the students (educational achievements or change of behavior).and to guide the students on its basis and to inspire them to learn.

4-It measures and evaluates the educational achievements of students from time to time and to provide them feedback.

5-To find out the hindrances in the educational progress of the students and remedy them.

### **Concept of Evaluation**

Is the assignment of symbols to phenomenon in order to characterize the worth or value of the phenomenon usually with reference to some social, cultural and scientific standards.

Evaluation is the process in which the analysis of the result obtained from measurement of a trait of an object, person or activity is done on the basis of certain social, cultural or scientific standards (norms), and the relative position of the object, person or activity is determined as relative to that trait.

## **Factors of evaluation**

Two processes have to be undertaken in evaluation - first ,the measurement and the second analysis of the information or data obtained from measurement. And we are aware that there are the following four factors of measurement

1-The object, person or activity any of which characteristic has to be measured.

2-The characteristic of that object, person, or process which has to be measured.

3-The tools and devices of measuring such characteristic.

4-The person who measures it.

There are two factors of analysis of the data or result received from the measurement, and we can assign them serial numbers 5 and 6 respectively, which are :

5-Those standards (Norms) on the basis of which the results of measurement are analyzed.

6-Those devices (logical, mathematical or statistical) with the use of which such analysis is carried out.

## **Differences between Measurement and Evaluation**

Measurement	Evaluation
1-Measurement does not express any clear assumption about a student.	1-Clear assumption about a student can be formed on the basis of evaluation.
2-It does not require much energy and time.	2-It requires more energy and time.
3-The scope of measurement is limited, only some dimensions of personality can be tested under measurement.	3-The scope of evaluation is wide, in it, the entire personality of a student is tested.

<p>4-It is content-oriented.</p> <p>5-It is a means, and not an end in itself.</p> <p>6-The purpose of measurement is to gather evidences.</p> <p>7-It may not be an essential part of education.</p> <p>8-It answers the question (how much) such that Sunanda has scored 56 marks in mathematics. This is measurement.</p> <p>9-Prediction cannot be made meaningfully on the basis of measurement.</p> <p>10-It acquaints with a situation. This is isolated from the entire environment.</p> <p>11-It indicates those observations which are displayed numerically.</p> <p>12-It can be conducted at any time.</p>	<p>4-It is objective-oriented.</p> <p>5-It is an end in itself.</p> <p>6-It is to deduce inferences from evidences, that is, its work is appraisement of evidences.</p> <p>7-It is the integrated or necessary part of education.</p> <p>8-It answers the question (what value) Sunanda(name of student) has scored 50% marks in mathematics and passed second division in the class, this is evaluation.</p> <p>9-It can predict meaningfully.</p> <p>10-It acquaints about the entire situation.</p> <p>11-Evaluation comprises of both quantitative and qualitative observation.</p> <p>12-It is a continuous process.</p>
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