UNIT 3: EVALUATION IN EDUCATION

UNIT STRUCTURE

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3.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- understand the meaning and types of Evaluation
- distinguish between Measurement and Evaluation
- understand the nature and principles of Educational Evaluation
- explain the steps and tools of Evaluation
- explain the significance of Evaluation in Education

3.2 INTRODUCTION

Evaluation plays a very important role in all areas of life. It helps people to assess and determine what is good and what is bad. As such Evaluation forms an integral and indispensable part of the process of education. It is seen that Education, as a process, is considered complete

only when it is accompanied by evaluation. Evaluation is an appraisal of changes in student behaviour as an outcome of learning. Such information is vital in education, because neither students nor teachers can progress effectively without adequate information about their progress towards goals.It is a continuous and comprehensive process of assessing student's progress towards the goals and objectives. The previous practice of holding examination at the end of academic year has been proved to be ineffective as well as defective. It has been widely realized and recognized that students' assessment should continue with the process of learning, which is a continuous process. Moreover, education being considered as a process of all round development; assessment of such development should include cognitive, affective, as well as psychomotor growth or change in student's behaviour. The modern concept and means of evaluation is also a part of the current trend in education to reform the faulty examination system. Evaluation involves collecting information, interpreting the information and making judgments about what is to be done in order to improve a child's behaviour. In this unit, you will be able to achieve a clear picture about the concept, importance, principles and types of evaluation in education.

3.3 MEANING AND DEFINITION OF EVALUATION

Evaluation is the process of supplying information for making decisions. Decision making or the act of selecting one out of many alternatives is based on making judgment or assigning values to alternatives. Such act of value judgment, again, is based on certain measurements, rules, objectives, or other criteria. The act of evaluation thus includes the tasks of collecting, organizing, analyzing, and processing information so that value judgment could be formed for making decisions.

The concept of evaluation in education is relatively new. Evaluation in education is a process of making judgement about the worth or value of the educative process and its outcome with reference to the objectives. It involves making judgments about the educational plans including goals and objectives; curriculum, methods, and personnel; decision about terminating,

continuing, or modifying various programs.Evaluation is also a process of making critical judgment about the extent to which change in behaviour of students has affected in the light of the set goals. However, it is not just an assessment or measurement of knowledge in a subject or subjects. It is, instead, a comprehensive assessment of students' motivation, aptitude, attitude, interest, values, skills, ideals, goals, and other traits of personality. So it can be said that evaluation is the assessment of physical, mental, characteristic, temperamental, behavioural, or the dynamic changes of the total personality of the individual.

The National Council of Educational Research and Training (NCERT), in its booklet,"The concept of evaluation in education" (1963), describes evaluation as the process of determining three important aspects:-

- The extent to which an objective is being attained,
- The effectiveness of the learning experiences provided in the classroom, and
- How well the goals of education have been accomplished.

Thus, three important elements are closely interwoven in the process of evaluation; they are: aims and objectives of education, learning experiences provided to attain the goals and objectives, and change in student behaviour as a consequence of the learning experiences provided. Evaluation is a process of analyzing the interrelation betweenthese three elements which can be diagrammatically presented as under:

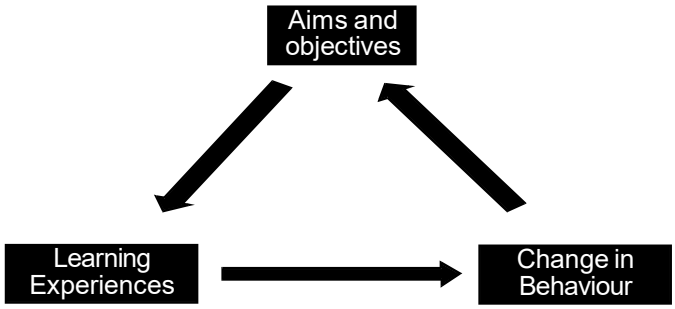


Figure 3. 1: The process of evaluation

The diagram above shows clearly that evaluation is always carried out with reference to the aims and objectives. Hence, educational evaluation or the process of making judgment about students' progress must refer to

the predetermined goals of education. Highlighting this fact, Ralph W. Tyler defined evaluation as, "the process of determining to what extent educational objectives are actually being realized by the programme of curriculum and instruction." In order to make the concept of evaluation more clearly, some important definitions have been presented below.

According to Bradfield and Murdock, "Evaluation is the assignment of symbols to phenomenon in order to characterize the worth or value of a phenomenon usually with reference to some social, cultural or scientific standard."

Cronbach defines evaluation as, "the collection and use of information to make decisions about an educational program."

In the views of James M. Lee, "Evaluation is the appraisal of pupil's progress in attaining the educational goals set by the school, the class and himself. The chief purpose of evaluation is to guide and further the students learning."

Patton explained evaluation as the "systematic collection of information about the activities, characteristics, and results of programs to make judgments about the program, improve or further develop program effectiveness, inform decisions about future programming, and/or increase understanding."

Thorpe (1980) described educational evaluation as "Evaluation is the collection, analysis and interpretation of information about any aspect of a programme of education, as a part of a recognized process of judging its effectiveness, its efficiency and any other outcomes it may have".

According to Bloom, "Evaluation is concerned with securing evidence on the attainment of specific objectives of instruction."

The definitions quoted above reveal that evaluation is a very comprehensive process. It helps to build an educational program, assess its effectiveness, and helps to improve it. Evaluation is a much wider concept than traditional examination which takes into account the cognitive, affective, and psycho-motor change in behaviour or learning outcomes. It is important to note at this point that there are two different situations in the context of educational evaluation; they are:-i) Evaluation In an Educational Program

(EIEP), and (ii) Evaluation Of an Educational Program (EOEP).



CHECK YOUR PROGRESS

Q 1: Define evaluation.

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3.3.1 Measurement, Assessment and Evaluation

It is important to distinguish Evaluation from other similar concepts such as Measurement and Assessment. Though these terms are used interchangeably at times, they convey different meanings.

Measurement is the act of assigning a quantitative meaning to a phenomenon or object or criterion) i.e. the length of the table, marks in a subject, etc. It is a process of assigning numbers to objects, or events to give quantitative meaning to a person or object. In educational scenario, quantitative measures help to determine a child's performance e. g. a student's score in Science is 40. This measure can provide no further interpretation or it cannot be said if he has passed or failed. Measurement stops at assigning the quantitative score or number but does not make any value judgement on the score or performance.

Assessment is a fact finding process aimed at describing the conditions that exists at a particular time. Assessment uses measurement to collect information. Simultaneously it organises the measurement data into interpretable forms. In education, assessment describes the progress of students towards an educational goal at a point in time. However, assessment does not provide any explanation or the underlying reasons for such progress. It neither offers any recommendations for further action or improvement. In education, assessment is the process of describing the nature and the extent of pupils' learning in reference to the

objectives of instruction.

Evaluation means adding value judgement to assessment. It makes judgement on the effectiveness, utility or desirability of a product, process or progress with reference to pre-defined and agreed upon objectives or values. Evaluation also includes recommendations for further improvement of the process or product. Thus, evaluation is a qualitative measure of a phenomenon. It judges the effectiveness, suitability, or goodness of the process or program being evaluated in order to reach meaningful decisions about that process or program.



LET US KNOW

Assessment is a fact finding process aimed at describing the conditions that exists at a particular time. Assessment uses measurement to collect information. Again, evaluation means adding value judgement to assessment.

3.4 NATURE OF EDUCATIONAL EVALUATION

Evaluation is the systematic process of making judgement about the adequacy, effectiveness, value, or worth of a phenomenon according to some criteria and purposes. Such judgment is based on the collection of relevant data and their comparison with the criteria and/or their effectiveness in terms of fulfilling the purposes. Valid or successful evaluationis characterized by exact and specific definition of what is to be evaluated, the goals of evaluation, specific standards or criteria against which evaluation is to be made, correct observations and measurements, and valid and logical conclusions. Following characteristics reveal the nature of evaluation.

- The concept of evaluation, which is relatively new in the field of education, is more scientific and comprehensive than examination or measurement.
- Evaluation is quantitative as well as qualitative measure of a phenomenon. It is the act of adding value judgement to an

assessment or measurement.

- Although evaluation depends on measurement, evaluation and measurement are not the same; measurement is only a part of evaluation. Measurement assigns quantitative score and evaluation makes value judgement on that score.
- Evaluation is a process of making judgement about the value or worth of something, and hence it is subjective.
- Evaluation is based on some social, cultural, or scientific standards and/or goals.
- Educational evaluation is closely associated with the goals and objectives of education, i.e. educational evaluation is based on educational objectives.
- Evaluation is a continuous and systematic process which takes into account all the three domains of students' behaviour: cognitive, affective, and conative or psycho-motor.
- Evaluation is not just a process of assessing knowledge in certain subjects; rather it is an elaborate assessment of students' motivation, aptitude, attitude, interest, values, skills, ideals, goals, and other psycho-physical traits of personality. In fact, evaluation is the assessment of physical, mental, characteristic, temperamental, behavioural, or the dynamic changes of the total personality of the individual.
- Evaluation is a continuous process unlike tests or examinations that are held periodically or at the end of academic session. Since evaluation is continuous, no value or measure should be considered final or absolute.
- Three vital elements are closely interwoven in the process of educational evaluation; they are: aims and objectives of education, learning experiences provided to attain the goals and objectives, and change in student behaviour as a consequence of the learning experiences provided.
- The basic nature of evaluation is philosophical and normative.

3.5 RELATION BETWEEN MEASUREMENT AND EVALUATION

The concepts of Measurement and Evaluation are often confused to be the same and hence the terms are used interchangeably. Measurement and Evaluation, though similar, have different meanings. The concept of evaluation is much wider and more scientific than measurement. Measurement is only a part of evaluation. However, evaluation is based on measurement. Measurement is a numerical score of an object, subject, or some other characteristic, but evaluation is the act of adding subjective judgment or value to that score or measurement. For example, determining the length and breadth of a piece of cloth is an act of measurement; whereas, assessing the usefulness or adequacy of that piece of cloth to stitch a dress of definite size is an act of evaluation. Similarly, if in a test of Mathematics a student scores 45, this is a measurement of his knowledge in Mathematics. Now, if his score is compared with other students appearing the same test and he is given a rank or grade, then this is evaluation.

The definitions of measurement and evaluation as given by Bradfield and Murdock help in making the distinction between measurement and evaluation clear. According to them, "Measurement is the process of assigning symbols to dimensions in order to characterize the status of a phenomenon as precisely as possible" whereas, "Evaluation is the assignment of symbols to phenomenon in order to characterize the worth or value of a phenomenon usually with reference to some social, cultural or scientific standard."

Similarly, Munroe emphasizing another aspect of difference between measurement and evaluation wrote, "In measurement the emphasis is upon single aspect of subject-matter, achievement of specific skills and abilities, whereas in evaluation the emphasis is upon broad personality changes and major objectives of educational programme."

A comparative analysis of the features of measurement and evaluation may help us understand the difference between them:

TABLE 3.1: DIFFERENCE BETWEEN MEASUREMENT AND EVALUATION

Measurement	Evaluation
Measurement is the act of assigning numerical value to things and ordering them.	Evaluation is the act of making subjective value judgement about things on the basis of information obtained by measurement.
Measurement is objective, definite, and impersonal.	Evaluation is subjective, relatively indefinite, and personally meaningful.
Measurement is the quantification of objects or their characteristics.	Evaluation is a qualitative value judgement of the quantity.
Measurement determines the presence, absence, or intensity of some variable being measured.	Evaluation gives normative value and interpretation to measures besides determining the presence or absence of a variable.
Measurement is quantitative and numerical.	Evaluation is qualitative and normative value.
Measurement supplies information required for making evaluation.	Evaluation uses information supplied by measurement.
Measurement is a discrete process and its scope is limited.	Evaluation is an integrated process and an integral part of education. Its scope is comprehensive.
Measurement is concerned with immediate objectives and hence it is present oriented.	Evaluation is associated with long term goals of education; hence it is a continuous process.
Measurement is scientific in nature.	Evaluation is philosophic in nature.

The analysis presented above help us to understand the similarity-dissimilarity, and the relation between measurement and evaluation. Measurement and evaluation are two closely related concepts that are interrelated and interdependent.

3.6 PRINCIPLES OF EVALUATION

The process of evaluation must be based on certain important principles. These are:

- The first and foremost principle of evaluation is the determination or consideration of aims and objectives of evaluation. The evaluator must be very clear about the objectives of evaluation before conducting evaluation.
- The tools for conducting evaluation must be selected in accordance with the aims and objectives of evaluation. Because all tools may not be effective with the particular objectives of evaluation.
- Different tools and methods must be used for evaluation at its different stages since any single tool cannot make comprehensive evaluation of an individual or object.
- The evaluator must be well versed about the strengths and weaknesses of the various tools used in evaluation. Scrutinizing the validity and reliability of the tools is important in this regard.
- Since evaluation is a continuous process, no single result of evaluation should be considered to be final or absolute.
- Instead of conducting evaluation only for the sake of evaluation, it should be considered as a means of acquiring higher goals.
- The evaluator must be aware about the moral and ethical issues involved in the process of evaluation.



CHECK YOUR PROGRESS

Q 2: State two principles of evaluation.

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3.7 STEPS IN EVALUATION

A systematic programme of evaluation must follow the following steps:

- **Determining the objectives of evaluation:** Deciding what to evaluate is the first important step in the evaluation process. Evaluation starts with formulating and stating the objectives of evaluation clearly.

- **Defining the objectives in behavioural terms:** The second important step in educational evaluation is defining the objectives in behavioural terms. This is important because broad or vaguely stated objectives cannot be measured and evaluated. For example, if we want to evaluate "study skills" then it needs to be defined by listing what the students are expected to acquire. Without such behavioural definition of objectives evaluation cannot proceed successfully.
- **Selecting and fixing criteria or standards for evaluation:** Evaluation is always done by comparing observations or data with predetermined criteria or standards. Hence, it is important at this stage to select and fix such criteria or standard for making evaluation.
- **Selection and development of tools and techniques for data collection:** Selecting appropriate tools and techniques for collecting relevant data is the next important step in evaluation. The evaluator may have to develop his own tool and technique if available tools do not fit into his purpose of evaluation.
- **Collecting and recording data:** In this step collection of data using selected tools and their recording in appropriate form is done.
- **Analysis and interpretation of data:** After collection of data and their recording, those are analysed using various statistical and other proceduresso that the data could be interpreted and valid conclusions can be arrived at. The collected data are then compared with the previously determined standards or criteria for evaluation.
- **Evaluation and decision making:** In the final step of evaluation, decision about the value of the product or process being evaluated is taken and judgment is made about their adequacy or effectiveness on the basis of analyses, interpretation and comparison with the standards, criterion, and/or goals.

3.8 IMPORTANCE OF EVALUATION IN EDUCATION

Evaluation is an integral part of teaching-learning process. It is as important as objectives and curriculum of teaching and learning. Evaluation

provides with the most important feedback concerning suitability of objectives and curricula, extent to which objectives have been obtained, effectiveness of teaching and the methods, and other important elements of the process of teaching and learning. The report of the Kothari Commission (1964-66) realizing the importance of evaluation observed, "The new approach to evaluation will attempt to improve the written examination so that it becomes valid and reliable measure of educational achievement and to devise techniques for measuring those important aspects of the student's growth that cannot be measured by written examinations."

Some important points about the importance of evaluation may be stated as under:

- Evaluation appraises the success and failure of education. It assists in the improvement of education system. Evaluation helps in knowing the extent of learner's progress towards goals and the success and failure of the methods and learning experiences in achieving the goals.
- Evaluation analyses and reviews the goals and objectives of education. Evaluation starts with clarifying the goals and objectives of education and their statement.
- Traditional examination system is defective and fails to make proper evaluation of students. Evaluation makes continuous and comprehensive assessment of learners which is more scientific.
- Evaluation is important in view of its role in discovering individual differences among students. Such discovery of differences among students helps to shape objectives, curricula, and methods to suit different categories of students.
- Evaluation helps in promotion, placement in various courses and career, and grading of students. It helps modifying learning experiences or curriculum in order to attain the objectives of education.
- Evaluation makes comprehensive appraisal of desired changes in student behaviour and provides valuable insights about the needs,

possibilities, strengths, and weaknesses of students. Such information about students makes instruction effective and useful.

- Learning experiences or the curriculum is the means to attain the objectives of education. Through the study of different subjects and activities learner's behaviour takes shape along desirable lines. If the learning experiences fail to bring desirable changes in behaviour then it should be understood that the selection of subjects and activities have been defective. Thus evaluation helps in making necessary modification in the learning experiences or the curriculum.
- Evaluation provides a basis for guidance. Evaluation provides a total picture of the individual which helps to guide him in educational and vocational field. Thus, success of educational, vocational and personal guidance depends on proper evaluation of students' strengths, weakness and other personality characteristics.



CHECK YOUR PROGRESS

Q 3: Why evaluation is important in education?

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3.9 TOOLS AND TECHNIQUES OF EVALUATION

Successful evaluation is based on accurate and complete data about individuals and their characteristics. Data or information may be collected from a variety of direct or indirect sources. However, it is of vital importance to adopt systematic techniques to collect required data that are usable, valid and reliable. Various instruments, devices, or other means are used to collect different types of data for evaluation. Such instruments used for collecting data are called tools. Different tools are required for collecting different types of data for various purposes. The evaluator may need to use more than one tool in combination to meet his specific purpose. A technique is a practical method or procedure applied to some particular

task.Techniques of evaluation consist of tools used to collect data concerning particular outcomes of learning. Examples of evaluation techniques include anecdotal report, interview, case study, observation etc. whereas tools of evaluation include tests, question papers, observation schedules, questionnaire, rating scale, checklists, cumulative record etc.

Some important tools and techniques of evaluation may be presented as under:

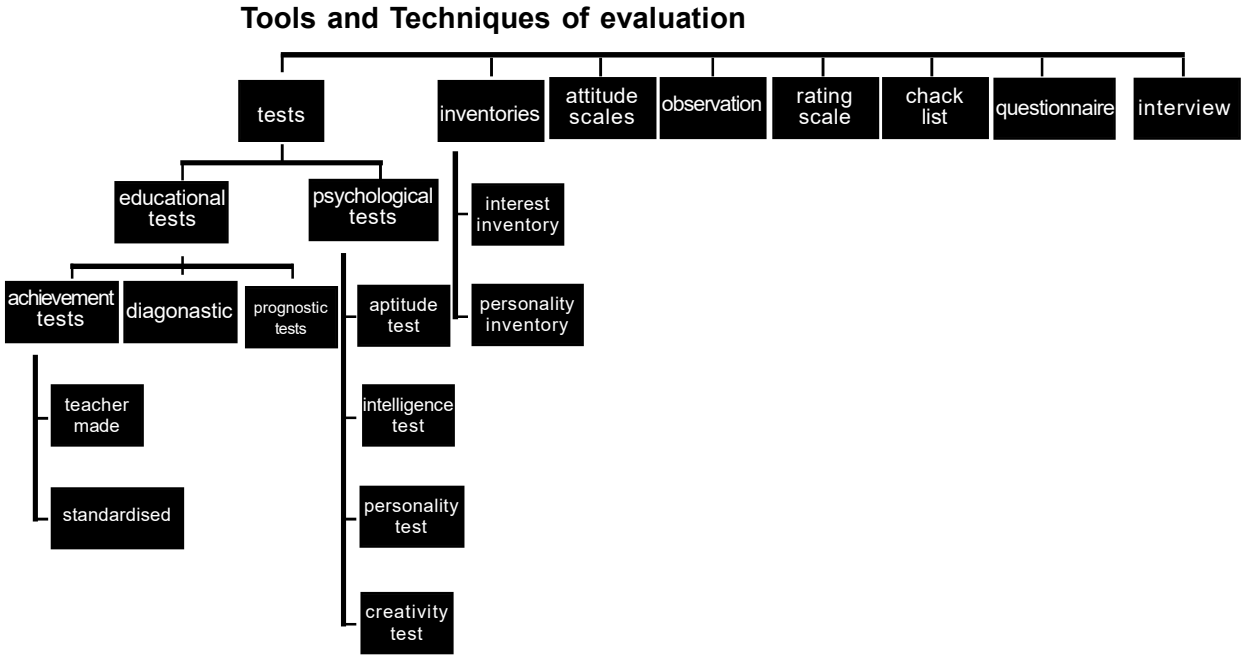


Figure3. 2: Tools and technique of evaluation

Tests: Tests are widely used tools in educational and psychological evaluation. A test is a collection of some questions to be answered or tasks to be performed by the testee to measure educational achievement or psychological traits of an individual or a group. Different tests can be administered individually or in groups. Educational tests again are classified as achievement, diagnostic, and prognostic tests.

An achievement test measures the knowledge or skills in an area or subject attained by individuals after a specific period of instruction or training. Achievement tests may be oral, written, and performance based. These tests may again be constructed by the classroom teacher himself, for his immediate and local needs (teacher-made test); or may be

constructed by test-specialists or experts following standard procedure (standardized test) .(For more details about teacher made and standardized test, refer UNIT-viii)

Tests that are used to diagnose the strengths and weaknesses of students in particular subjects are known as diagnostic tests. For example, tests may be used to determine if a learner is facing difficulty in Maths, or in History, and if 'yes' then why? Such tests are called diagnostic tests. Diagnostic tests assess students' understanding of a subject, area or skill. Prognostic tests are used to make predictions. Prognostic tests help to identify or categorize people with special talents or qualities in the future. In education such test predicts how well a person is likely to do in a certain school subject or task.

Psychological tests are used to measure various psychological characteristics or traits. Tests for measuring aptitude, intelligence, personality, creativity etc. are important among psychological tests. A test of aptitude attempts to predict the capacities or the degree of achievement that may be expected from an individual in a particular activity. Tests of creativity are used to measures creative potentialities of people. In addition to the tests of intelligence and personality, psychological tests help to measure the ability of individuals to perform tasks in various fields such as engineering, medical, musical, reading, clerical, spatial, numerical, dextrous, and many others.

Inventories: Inventories are instruments that attempt to assess one or more aspects of an individual's behavior. Inventories contain certain questions or statements concerning some personal characteristics, liking, disliking, interest, hobby etc which are written in the first person. Testee require to respond to such questions or statements in terms of 'true' or 'false', 'agree' or 'disagree'. Inventories are self-reporting tools. Depending upon the objectives, inventories are classified as interest, adjustment, and personality inventories. Examples are: Strong interest inventory, Bell Adjustment inventory, Minnesota Multiphasic Personality inventory etc. Inventories are economic, simple, and objective tools. However, one has to be careful in using inventory data as data obtained may be biased or

superficial. Another problem with inventory is that it is very difficult to validate.

Attitude scales: An attitude scale is a tool used to measure attitude of people towards some issue, object or subject. An attitude is a learned emotional response set for or against some object, individual, issue or other phenomenon. It is a mental or neural readiness of an individual to respond or to act either in positive or in negative way towards something. Attitude scale provides a basis for assigning a numerical value to a person's attitude. It is a tool designed to produce scores indicating the intensity and direction (positive or negative) of a person's feelings about an object or event. Attitude scales consist of statements and the respondent is asked to respond to the statements and on the basis of his responses a score is allotted for each item which indicates his position. The most popular attitude scales are the Thurston's scale, Likert's scale, and Guttman scale.

A **Thurston's scale** (also known as Thurstone technique of scaled values) consists of items in the form of statements which the respondent has to agree or disagree. Items with which the respondent agrees are scored. Each item has a predetermined value and the respondent's score on the scale forms the median score of the items with which he agrees. The item scores are determined by asking a number of judges to rank each item on the scale using an eleven-point scale reflecting the attitude that is being measured. The final score of each item is the median of the judges' individual scores.

Likert scales (also known as the method of summated ratings) consist of statements followed by five or seven responses with numerical scale values. Respondents have to indicate the extent of their agreement with each item by choosing any one alternative. The sum of the scores for each item is their score on the scale.

The **Guttman attitude scale** consists of a set of hierarchical statements relating to the attitude being measured. These statements reflect an increasing intensity of attitude. The point at which the respondent disagrees with a statement reflects the respondent's scale position.

Another popular way of attitude scaling is the semantic differential method, developed by Osgood, Suci, and Tannenbaum. In this scale

respondents rate the concepts on a bipolar scale (usually seven-point). The two ends of the scale are defined by pairs of adjectives with supposedly opposite meanings (e.g. good/bad, wright/wrong, etc.)

Observation: Observation is a very popular and useful technique of data collection for evaluation. It is the act of watching the behaviour of an individual or a group, events, or noting down physical characteristics in natural or actual setting. The results of observations are recorded using different means and are preserved. Observation helps to measure and evaluate external or overt behaviour of individual. Observation can be natural or controlled; observation is natural when it is conducted in natural situations without manipulating the environment and without the knowledge of the subjects being observed, and observation is controlled when the environment is controlled by the observer and the subjects are informed that they are being observed. Natural observation is advantageous because of the fact that people behave naturally if they do not know that they are being observed. However, natural observation is not always possible or feasible and hence controlled observations must also be used.

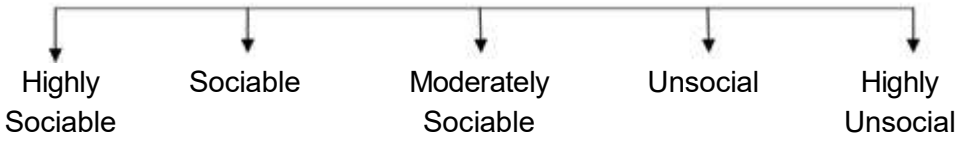
Observations can also be participant or non-participant. In participant observation, the observer becomes one among the people whose behaviour is observed and he takes part in their activities while observing them. In non-participant observation, the observation is conducted from a distance without interfering in the natural setting and activities of the individuals being observed.

Observation must be systematic and carefully planned. The main advantage of observation technique is that it allows to collect data where and when an event or activity is occurring. However, observation is susceptible to observer bias. Moreover, people try to perform better when they know they are being observed.

Rating scale: Rating scales consist of some statements expressing opinion or judgment concerning some situation, object, or character on a scale of values. It consists of some points indicating the observable trait in its different degrees. The rater is asked to rate his choice on a 3, 5, or 7 point scale.

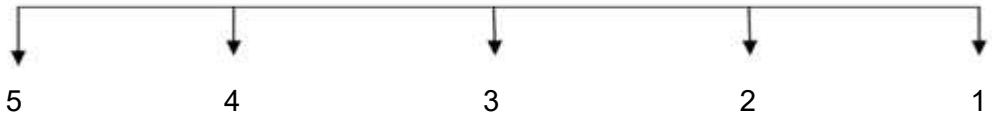
Though there are different forms or types of rating scales, the Numeric and Graphic rating scales are most commonly used. An example of an item in aGraphic rating scale is given below:

Q. How sociable is Madhu?



The same item in a Numeric rating scale would be as under:

Q. How sociable is Madhu?



Though rating scales are very popular and widely used tools of evaluation, they have several limitations. These limitations include: Halo effect, or the tendency to rate on the basis of previous performance or general impression about the person to be rated;Generosity error or the tendency of raters'to be too generous while rating; Leniency error or the tendency to assign higher rate to people known to the rater; on the contrary sometimes awareness about this error makes raters rate lower than they should actually do; Central tendency error or the tendency to rate around the average; and other such errors.

Check list: Check list is a simple tool of evaluation. It contains a list of behaviours or questions and the respondent needs to check 'yes' or 'no' against the question or behaviour. It is a very useful tool for identifying the presence or absence of knowledge, skills, or behaviours.

Questionnaire: A questionnaire is a set of questions concerning some social, psychological or educational topic or issue. A questionnaire may either be administered face to face or mailed. Collecting information about the object or subject to be evaluated is the purpose of using questionnaire. Questionnaire may be administered individually or in groups.

Questionnaires may be classified into two types: closed and open. A questionnaire requiring the respondent to answer in short or to

select one from the given alternatives is known as a closed type of questionnaire. Closed type of questionnaires are very useful for collecting certain special types of data. Closed questionnaires are relatively objective, scoring is easy and fast, and answering to such questionnaire is easy for the respondents.Open questionnaires require long and open answers from the respondents in their own language. Such questionnaires can delve deep into the issue and provide freedom to the respondents to answer in any length and way. However, analysing and interpreting the open answers is a difficult task.

Chief advantages of questionnaire include their economy, ability to cover wide sample, freedom to respondents, etc. However, questionnaire is very time consuming tool and there is no check if respondents misunderstand or omit some questions. Moreover, the rate of return of mailed questionnaires is very low.

Interview: Interview is a means of face to face and direct communication for collecting required data. Advantage of interview over questionnaire is that the problem of misunderstanding or omitting any question by the respondent can be avoided. Once the interviewer establishes rapport with interviewee and creates conduciveenvironment for interview it becomes easy to collect all important data from the interviewee. Another big advantage of interview is that body language of the respondent supplies additional information about the subject.

Interviews may be classified into structured and unstructured types. A structured interview follows predetermined and standardized steps. Same questions are asked to all the interviewees in the same predetermined sequence and the interviewer cannot change, add, or delete any question. Unstructured interviews are flexible and the questions or their sequence may be changed by the interviewer according to the requirement. He may add or delete questions if needed. Such flexibility helps in establishing proper rapport with the interviewee which helps in collecting required information. Unstructured interview is variously known as 'focussed', 'depth', or 'non-directive' interview.

Interview is a very important tool characterized by flexibility and high response rate which can elicit deep and sensitive information. However, interview is costly, time consuming, invades privacy of the respondents, and suffers from inhibitions due to face to face presence of interviewer. Moreover, information obtained from interview is difficult to interpret.

Educational tests: Most important tools of educational evaluation are educational tests. Educational tests may be classified as under:

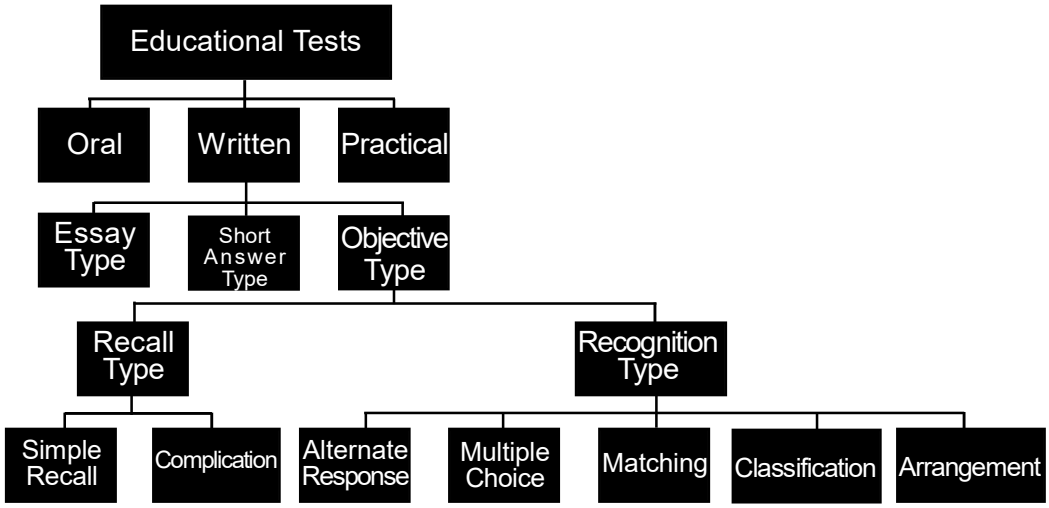


Figure 3.3: Classification of Educational Test



CHECK YOUR PROGRESS

Q 4: What is likert scale?

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Q 5: What is a questionnaire?

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3.10 TYPES OF EVALUATION

The process of evaluation has been classified into different types on the basis of its goals, functions, and on the basis of its reference points. A brief discussion about the important types has been presented below:

Formative evaluation: This type of evaluation proceeds along the process of teaching and learning. Formative evaluation helps in providing necessary feedback to students and teachers while teaching learning continues. Such feedback about the ongoing process helps to adjust teaching and learning to improve achievement. Formative evaluation provides teachers and students with continuous feedback. Examples of formative evaluation are: unit tests, weekly or monthly tests, etc.

Summative evaluation: Summative evaluation is terminal in nature. This type of evaluation is done at the end of academic session or year to assess the extent of progress made towards the objectives of instruction. This evaluation helps in making decisions about promoting or retaining students, grading and/or certifying them.

- A brief comparison between formative and summative evaluation:
- Formative evaluation considers evaluation as a process; summative evaluation considers it as a product.
- Formative evaluation is done simultaneously with the process of teaching and learning; summative evaluation is done at the end of teaching and learning.
- Formative evaluation gives immediate feedback to teacher and students; summative evaluation does not give immediate feedback.
- Formative evaluation helps in necessary revision of objectives, methods or curriculum while the process of teaching and learning continues; summative evaluation assesses the adequacy of objectives and effectiveness of learning at the end of teaching learning process.
- Formative evaluation is generally criterion based and continuous; summative evaluation is norm based and terminal.

Evaluation may also be classified on the basis of their determinant (with which the scores or results of evaluation are compared). When an individual is evaluated by comparing his performance with the performance of the group to which he belongs, then that is called **norm-referenced evaluation**. Norm-referenced evaluation gives information about the relative standing of individual in a group. In criterion-referenced evaluation,

performance of each individual is compared to a pre-determined set of criteria or a standard rather to the other members of the group. Criterion-referenced evaluation assesses if an individual has attained mastery over a certain skill or skills. This evaluation helps in making decision about "pass" or "fail" and certification.

Evaluation may also be classified on the basis of two different levels: **Programme level evaluation** i.e. evaluation of a programmewhether the implementation of the programme has been successful or not; and **Student Level evaluation** i.e. evaluation of a student about his performance in a programme of study.

Evaluation has also been classified on the basis of their function. When evaluation is used to diagnose specific area of weakness of students or their understanding of a subject, area or skill, such evaluation is known as diagnostic evaluation.Similarly when students are evaluated with the purpose of placing them in the proper course or career, evaluation is known as placement evaluation.



3.11 LET US SUM UP

After going through the units, we learnt the following:

- The relatively new concept of evaluation in education is a process of making judgement about the worth or value of the educative process and its outcome with reference to the objectives.
- Measurement and evaluation, though similar, have different meanings. Measurement is a numerical score, but evaluation is the act of adding subjective judgment or value to that score or measurement.
- Evaluation process must follow certain principles and systematic steps.
- For successful evaluation various data collection tools must be used. These tools include: tests, inventories, attitude scale, observation, rating scale, checklists, questionnaire, interview etc.
- Evaluation could be of different types including formative, summative,

diagnostic, placement, norm-referenced or criterion referenced, etc.

3.12 FURTHER READING

1) Bloom, B.S. (1956): Taxonomy of Educational Objectives. Handbook I, Cognitive Domain, David McKay Co. Inc,New York
2) Gupta, S.P. (2009): Modern Measurement and Evaluations with Statistics, Sharda Pustak Bhavan, Allahabad
3) NCERT (1963): The Concept of Evaluations in Education, New Delhi.
4) Stanley & Hopkins (1966): Education and Psychological Measurement and Evaluation, Prentice Hall Pvt. Ltd. Eaglewood Cliff, New Jersey
5) UGC (1972): Examination Reforms: A Plan of Actions, New Delhi

3.13 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: Evaluation is a qualitative measure of a phenomenon. It judges the effectiveness, suitability, or goodness of the process or program being evaluated in order to reach meaningful decisions about that process or program.

Ans to Q No 2:

- The first and foremost principle of evaluation is the determination or consideration of aims and objectives of evaluation. The evaluator must be very clear about the objectives of evaluation before conducting evaluation.
- The tools for conducting evaluation must be selected in accordance with the aims and objectives of evaluation. Because all tools may not be effective with the particular objectives of evaluation.

Ans to Q No 3: Evaluation forms an integral and indispensable part of education. Evaluation provides important feedback concerning suitability of objectives and curricula, extent to which objectives have been obtained, effectiveness of teaching and the methods, and other important elements of teaching-learning process. Such information is vital in education, because neither students nor teachers can progress effectively without adequate information about their progress towards

goals.

Ans to Q No 4: Likert scale is used to measure attitude. It consists of statements followed by five or seven responses with numerical scale values. Respondents have to indicate the extent of their agreement with each item by choosing any one alternative. The sum of the scores for each item is their score on the scale.

Ans to Q No 5: A questionnaire is a set of questions given to respondents in order to collect data concerning some social, psychological or educational topic or issue.



3.14 MODEL QUESTIONS

Short Questions (Answer each question in around 150 words)

Q 1: What is the difference between measurement and evaluation?

Q 2: What is halo effect?

Q 3: Distinguish questionnaire and inventory.

Long Questions. (Answer each question in around 300-500 words)

Q 1: Discuss the nature of educational evaluation.

Q 2: Write briefly about the principles of evaluation.

Q 3: Discuss the steps involved in evaluation.

Q 4: Write about the different types of evaluation.

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