UNIT 5 TECHNIQUES OF EVALUATION

Structure
5.1 Introduction
5.2 Objectives
5.3 General Techniques of Evaluation
5.4 What is Testing?
   5.4.1 What is a Test?
   5.4.2 Purposes of Testing
   5.4.3 Administration of a Test
   5.4.4 Interpreting Test Results
5.5 Self-Reporting Techniques
   5.5.1 Concept and Significance
   5.5.2 Evaluation through Self-Report
5.6 Observation Technique
   5.6.1 The Concept of Observation
   5.6.2 Types of Observation
   5.6.3 Assessing Pupil Characteristics through Observation
   5.6.4 Consolidating Observation Results
   5.6.5 Interpreting Outcomes of Observation
5.7 Concept of Peer Rating and its Significance
   5.7.1 Criteria of Peer Ratings
   5.7.2 Organisation and Interpretation of Peer Ratings
5.8 Concept of Projective Technique
   5.8.1 Where to Use Projective Technique?
   5.8.2 Use of Projective Techniques by the Teachers
5.9 Let Us Sum Up
5.10 Unit-end Exercises
5.11 Points for Discussion
5.12 Answers to Check Your Progress
5.13 Suggested Readings

5.1 INTRODUCTION

Evaluation of student behaviour is an integral part of any teaching task. Evaluation implies passing judgement on activities performed by individuals. Teachers are very often required to do so. It is, therefore, imperative for teachers to be well versed with the techniques of evaluation. Various techniques (subjective, objective and projective) for conducting evaluation exercises have been developed and are in use among educational practitioners.

This unit discusses the concept, significance, administration and utility of some of the most commonly used techniques of evaluation, viz., testing, self-reporting, observation, peer rating and the projective techniques.

5.2 OBJECTIVES

After going through this unit you will be able to:
- know about some of the techniques of evaluation,
- define a test,
- enlist purposes of testing,
- administer and interpret test results,
- explain the significance of self-rating techniques,
- conduct evaluation through self-ratings,
Techniques and Tools of Evaluation

- enumerate various types of observations and their significance in educational situations,
- assess pupil characteristics through observation,
- understand the importance of peer ratings,
- organise and interpret results of peer ratings,
- define projective techniques,
- enlist situations of the use of projective techniques.

5.3 GENERAL TECHNIQUES OF EVALUATION

Evaluation of students' behaviour is an integral part of teaching-learning. Teachers are very often required to pass their judgement on various tasks/activities performed by the students. It implies that teachers should be well versed with various techniques of evaluation. The techniques of evaluation may broadly be classified as subjective, objective and projective. Subjective techniques are generally based on the information supplied by the students or the impressions gathered by the teacher. The most commonly used subjective techniques include verbal or non-verbal conversations, self-report, observation, opinions of friends, neighbours, parents, relatives, teachers, colleagues, etc. The main criticism of this type of techniques is that the information elicited may not be accurate or realistic. However, attempts can be made to achieve accuracy.

Objective and Projective Techniques

The second type of techniques are termed as objective techniques. Under these techniques, testing situation, procedure and assessment norms are pre-determined so as to ensure that different test administrators/investigators would arrive at the same conclusions. Since some element of specificity is introduced, it is rated to be more valid than the subjective techniques. In fact, subjective methods are put to refinement, e.g., one may collect information from more than one person instead of only one. Even in this technique, certain hidden aspects of behaviour are not explicitly reflected if the testee is clever enough and wants to suppress them deliberately. To take care of this aspect another category of evaluation techniques is used which are known as projective techniques in which semi-structured or unstructured stimuli are presented and the testee is required to provide them with a structure. The reactions of testees are considered, analysed and interpreted to reflect his latent feelings and emotions.

All these three types of techniques of evaluation have got their advantages and limitations. Wisdom lies in their most appropriate and balanced use to arrive at dependable conclusions so as to help the child in his/her developmental process.

Check Your Progress 1

i) Name three general techniques of evaluation

ii) Which of these techniques is least valid?

5.4 WHAT IS TESTING?

A dictionary definition of the verb 'to test' states that it means the subjection to conditions that show the real character of a person or thing in a particular situation. Accordingly, testing should have two major ingredients, namely, an instrument containing a set of questions, exercises or other means of measuring the characteristics such as knowledge, skills, intelligence, aptitude, etc., of an individual or a group of individuals and the situations in which this instrument will function. This instrument is called a 'test' and is so designed that it controls situations in a manner helpful in eliciting a representative sample of an individuals' behaviour. Thus testing is a technique to measure one or more aspects of human behaviour through samples of verbal or non-verbal responses or by other behaviours of individuals as objectively as possible.
The outcomes of testing, place an individual in a unique position with regard to the particular characteristic. This kind of information generated through testing is helpful in comparing the individual's performance with either a set criterion or the performance of other individuals. Under both of these circumstances various important educational decisions can be taken in respect to individuals or the group. These educational decisions include classification, gradation, promotion, guidance, re-designing of teaching-learning strategies and evaluation devices etc. The teachers top the list of professional groups who most frequently employ testing techniques in their day to day work. It is obvious too because pertinent information facilitates wiser decisions in determining future events. It is the testing which helps in measuring human behaviour to provide such information.

5.4.1 What is a Test?

A test is a means to elicit and gather responses which would provide legitimate evidence about the extent of acquisition of a particular attribute such as knowledge, skill, intelligence, aptitude or the like, by an individual or a group. Thus a test presents a set of stimuli eliciting responses helpful in measuring a particular variable.

A test is a standardized situation that provides an individual with a score. The two key words used in this definition are: 'standardized' and 'score'. Here standardization means setting out of common testing procedures in advance so that all students are tested through same questions or problems in the same way. Providing for standardized situation includes (1) same set of questions for all students; (2) common and clearly stated instructions to all students; (3) balanced nature of questions, not biased towards a particular group of students; (4) adequate coverage of content; and (5) application of predetermined system of scoring to be applied uniformly. The term 'score' stands for the numerical indication of students' performance. The qualitative data can also be converted into the numerical form for the sake of precision which would facilitate establishing rules for the use of a particular test or to validate the effectiveness of tests in making decisions.

5.4.2 Purposes of Testing

Tests serve a variety of functions. Accordingly test results may be utilized for various purposes such as (1) assessment of the present status of an individual on a particular trait or variable; (2) expressing the probability of future success; (3) diagnosing the causes of lack of expected performance and suggesting remedial measures; (4) providing academic and vocational guidance; (5) classification i.e., comparing and categorising individuals or groups of individuals; (6) undertaking research to answer various questions; and (7) formulating generalisations and policy decisions. Findley (1963) has classified the purposes of testing into three major inter-related categories: (A) instructional, (B) administrative, and (C) guidance. These are explained below:

A) Instructional Purposes of Testing

1) Stimulation to teachers: When teachers are involved in the exercise of constructing a test, on one hand better quality of tests are likely to be generated and on the other hand teachers get clarity of the objectives of instruction. Teachers may return to the learning problems with enhanced vigour and creativity.

2) Feedback to teachers and learners: Based on the test results, teachers may infer about the success of instruction process adopted by them. Also they may provide more appropriate instructional guidance for individual students or the class as a whole. Well designed tests help students identify areas of specific weaknesses leading to self-diagnosis.

3) Motivation for learning: When students expect to be evaluated through properly constructed tests, they feel highly motivated to undertake detailed study of the subjects and pursue mastery of the content more diligently.

4) Useful means of overlearning: Overlearning takes place when concepts and skills are reviewed, interacted with or practised even after they have been mastered. Scheduled testing not only stimulates review (relearning and over learning) but also fosters overlearning through reacting to the questions pertaining to the completely mastered content. Studies indicate that such continued repetition does influence irrevocable retention performance. Thus testing is helpful in overlearning and remarkable retention. Overlearning should be emphasized in cases where mastery of basic facts is required. However, caution should be exercised to keep away the
negative effects of overlearning without understanding especially in the case of weaker students.

B) Administrative Purposes of Testing

1) Classification and Placement Device: Better decisions can be taken with regard to grouping of children by their ability levels as per the test results. Treatment is decided on the basis of such a classification.

2) Means for certification: Conventionally, tests have been used for certification purposes. Besides this, the tests on which standards of performance have been established, are used to serve as a means to judge competence and for awarding credit or authorisation. A common example of mastery or criterion reference test may be a proficiency test for recognition of various solids by their geometrical names and distinguishing them on the basis of their characteristics. The testees should be able to exhibit competence by solving all or almost all problems successfully. Thus tests can be fruitfully used for accreditation, mastery, or certification.

3) Means for improving quality of selection decisions: One important use of tests is to predict how well individuals will behave in other situations. Test results are therefore used to forecast future performance as well. Accuracy of prediction depends upon the quality of the test. This use is further extended to make decisions about selections. Since selection decisions involve rejection of some persons, the test used for classification purposes may not be suitable for selection. Also, different types of section tests are used for selecting persons for different specialized training courses, jobs and the like. Specially well designed tests are, therefore, required to assess special skills. Tests also serve as very good means of identifying gifted or retarded children.

4) Mechanism for quality control for a school or school system: Large scale administration of tests may yield local/state or national norms. Such standardized tests provide a basis for assessing curricular strengths and weaknesses.

5) Utility for Programme Evaluation and Research: Tests are generally used for undertaking programme evaluation and research. Educational surveys and experiments utilising the measures of outcomes help in ascertaining the utility of an innovative programme. It also helps in establishing better ways to help students learn, evaluating effects of new curricula and affecting improvements in school settings and elsewhere.

C) Guidance Purposes of Testing

Tests provide a means for diagnosing special aptitudes and abilities of individuals which form the basis for counselling. Students may be guided in choosing an appropriate course of study, college etc. The only thing is that we require good tests since tests of poor quality and even good tests misinterpreted, or used inappropriately, may cause more harm than good.

5.4.3 Administration of a Test

In the next unit you will study about the characteristics of a good test and you may notice that a good test would represent a comprehensive coverage of the subject matter resulting in a large number of items so as to ensure reliability. For practical considerations it is necessary to put a ceiling on the number of items and to provide a reasonable time limit (90 per cent students feel they have ample time). In order to derive full advantage of testing it is essential that the test should be properly administered.

In case of oral tests, the test administrator should: (i) establish a good report with the students; (ii) put questions in a natural and non-threatening way; (iii) encourage students to come out with the best answers; (iv) keep a record of pupil responses; and (v) administer the questions to individuals or to the group as mentioned in the instructions. For other types of tests, physical settings should also be cared for, such as tests should be given in quiet well-lit rooms having adequate space for each of the students. The tests should be announced well in advance so that students plan their work in terms of schedule of testing.

Test instructions play a very important role. Some instructions need to be passed on well in advance such as the merits of different types of study; relative emphasis to be placed on different aspects of subject matter; and the standards of grading that will be applied. Other sets of instruction would go with the test and should be clearly stated and be self-explanatory. These
will pertain to: (1) number and mode of questions to be attempted; (2) expected length of the answers and the weightage assigned; (3) whether or not students can go back through the test and answer the questions omitted in the first round; (4) whether or not they can use materials such as calculators, log tables, etc.; (5) where to attempt rough work; (6) whether or not they have to write on both sides of the paper; (7) explanations about using the special answer sheet employed; and (8) special materials required for testing etc., etc.

For the staff employed in test administration (the teachers mostly) a separate instruction manual should be developed which would enlist various activities - their timings and procedure for doing them. Ideally speaking a rehearsal of testing should be organized to ensure the testing routine through role playing. Alternatively, a briefing session should be organized to discuss the finer details of the testing programme.

Thus, proper test administration requires training and the test instructions constitute a very important part of the procedures.

5.4.4 Interpreting Test Results

Tests provide data which need to be scored. The results in terms of scores are then analyzed and interpreted. Both these processes go together. Analysis is worthless without interpretation and interpretation is impossible without analysis. Analysis is of two main kinds - quantitative and qualitative. The quantitative analysis involves use of statistics while the qualitative analysis can proceed through explanatory devices or case studies with or without application of statistics. Methods of analysis are being discussed with you in other chapters.

The first step in either kind of analysis is classification and tabulation. You, as the teacher, may find analysis of errors more useful in some contexts. Various steps of analysis are stated below:

1) Classification and tabulation of scores
2) Statistical analysis of scores
3) Graphical analysis and representation
4) Use of norms and standards
5) Analysis of errors

The above mentioned steps comprise a complete testing programme. However, you may like to use some of these in a particular situation depending upon the objectives and focus of the testing programme.

The aforesaid discussion leads to the conclusion that the raw scores of an individual or a group of individuals do not have such significances. For meaningful interpretation it is necessary to undertake some statistical analysis which may be in terms of relative ranks, standard scores, percentiles and percentile ranks, decile ranks and the discrepancies with the criterion etc. At times you may find qualitative analysis more appropriate since specific instances of qualitative analysis and interpretation of test responses illustrate the kind of observations that constitute the critical aspects that supplement numerical scoring. Hence, the qualitative and quantitative analysis may be used to supplement each other in interpreting the test scores.

Check Your Progress 2

i) Define a test.

ii) For what kind of administrative purposes is testing used?

iii) In what ways can testing be used for taking administrative decisions?
5.5 SELF-REPORTING TECHNIQUES

5.5.1 Concept and Significance

Self-reporting techniques require the respondent to react to items concerning his own behaviour or characteristics. The items generally require expression regarding likes, dislikes, fears, hopes, religious beliefs, ideas about sex and many other matters that reflect the way in which the person copes with his own needs and demand of his environment.

Self-reporting techniques are very commonly used for measuring the traits pertaining to interest, adjustment, attitude and personality etc. Sometimes a self-report test measures only one trait such as introversion - extroversion, security - insecurity or high anxiety - low anxiety. These can also be developed so as to measure a number of traits simultaneously. For example Cattell's sixteen Personality Factor Questionnaire yields 16 different scores. Self-reporting is obtained through a checklist, questionnaire or a rating scale format. Some of the well known self-reporting instruments are listed below:

- Woodworth Personal Datasheet
- The Minnesota Multiphasic Personality Inventory (MMPI)
- Edwards Personal Preference Schedule
- Minnesota Teacher Attitude Inventory (MTAI)

Self-report measures suffer from the problem of fakability or obtaining untruthful responses since many persons attempt to present themselves as most favourable while others tend to exaggerate their difficulties to be identified as most unfavourable. Besides, semantic problems and criterion inadequacy appear as serious drawbacks to successful personality assessment. These are, therefore, not used frequently except in certain research projects. While using these, two precautions are taken: (1) administering twice to the same individuals after a short interval of time with rearranged items on second administration and (2) introducing various 'lie' scales to check deceiving tendency.

In order to obtain more honest responses "forced choice technique" is used in which the subject is given a choice to be exercised for performances which appear to be equally good or equally bad, e.g., who exerted greater influence in establishing your basic value system - your father or your mother?

It may also be noted that simple, direct measures of adjustment such as a problem checklist have proved to be equally useful as highly sophisticated inventories, particularly in the case of normal personalities. In a problem checklist, the subject simply indicates, from a list of stated problems, which ones apply to him e.g. "needing money", "wanting more friends", etc. These can also be faked but have some diagnostic value. Self-reporting techniques have rather limited validity.

As a teacher you may be interested to know the source of getting standardized tests for your reference and use. Some of the important tests and their source of availability are mentioned below: Further details may however be available from the concerned organisations.

1) National Psychological Corporation, Rajamandi Market, Agra - 282 002
   1. Sherry & Verma: Personal Value Questionnaire (Hindi)
   2. S.P. Kulshreshta: Educational Interest Record (Hindi)
   3. S.P. Kulshreshta: Vocational Preference Record (Hindi)
   4. Baquer Meheri: Verbal Test of Creative Thinking (Hindi)
   5. Baquer Meheri: Non-verbal Preference Record Thinking (Hindi)
   6. L.N. Dubey: Hindi Achievement Test (8th Standard)
7. L.N. Dubey: Mathematics Achievement Test (8th Standard)
8. K.K. Agarwal: Scientific Aptitude Test for High School Students
9. Singh & Sharma: Teaching Aptitude Test (Hindi)
10. Shah & Bhargava: Levels of Aspiration Test

2) Psycho Centre, T-22 Green Park, New Delhi - 16
1. S.D. Kapoor: 16PF Personality Questionnaire
2. Jalota and Kapoor: Mandeley Personality Inventory (MPI)
3. Jai Prakash: Teaching Aptitude Test (TAT)

3) Mansayan, 32 Netaji Subhash Marg, New Delhi-2
1. Prayag Mehta: Achievement Motivation Test and Inventory
2. Bhagia: School Adjustment Inventory
3. Udai Pareek: Picture Frustration Test (Indian Adaptation)

4) Rupa Psychological Corporation, Varanasi-5
1. H.S. Asthana: Adjustment Inventory
2. M.C. Joshi: Group Test of Mental Ability
3. Joshi and Tripathi: Non-Verbal Test of Intelligence Testing
4. Kiran Sharma: Clerical Aptitude Test

5) Indian Psychological Corporation, Lucknow-7
1. Nirmal Bhagia: Problem Check List
2. S.P. Kulshreshtha: Introversion - Extroversion List

6) Agra Psychological Research Cell, Agra-4
1. Jai Prakash: General Science Test
2. V.B. Patel: Study Habit Scale
3. I.N. Dubey: Radical Conservative Attitude Scale

It would also be pertinent to note that the National Council of Educational Research and Training (NCERT) houses a National Test Development Library (NTDL). In this library a large variety of tests in print with commentaries thereon are available. Teachers may take advantage of consulting the NTDL whenever they need.

5.5.2 Evaluation through Self-Report

In spite of their shortcomings, self-reporting techniques are widely used to assess various traits or attitudes possessed by the individuals. These fall in the category of subjective techniques as the respondent’s bias is very hard to be eliminated. Yet these provide means for extracting the hidden treasure of one’s acquired accumulated complex behaviours and patterns of personality which would be still more difficult through other devices. The following suggestions and precautions are offered while using self-report techniques for evaluation purposes;

Suggestions
- Use the standardized inventories
- Use more than one questionnaire/inventory
- Administer twice with changed sequence of items
- Insert ‘lie’ scales
- Establish norms for local population

Precautions
- Place only due faith in the tools of this type
- Do not use the technique for which you are not well trained, e.g. use of MMPI by teachers in not advisable
- Seek the help of trained professionals in administration and interpretation
5.6 OBSERVATION TECHNIQUE

Observation is recognized as a technique of evaluating various aspects of overt/external human behaviour in controlled or uncontrolled situations and thus occupies an important place in descriptive educational research. This has little concern with what a respondent reports about himself or says in an interview. Since this technique provided for classification and records of certain happenings in real life situations, by one or more persons, it is termed as an objective technique. Its applicability ranges from most casual experiences to sophisticated laboratory experimentation.

5.6.1 The Concept of Observation

The act of observation signifies the process of capturing human behaviour as occurring in a particular situation. It is a means of obtaining first hand information as seen and experienced at a moment. It is a very systematic, well planned and purposeful activity. The specific information gathered by an expert through observation can be verified for reliability and validity. It provides immediate recording of events yielding both quantitative and qualitative data which help in arriving at appropriate decisions. Reliability of observation increases if observation is done by many individuals simultaneously or repeated by the same persons. Increased validity is ensured by keeping the setting as natural as possible, unaffected by the presence of the observer or his observation devices.

5.6.2 Types of Observation

Observation may be of two types - (i) participant and (ii) non-participant.

Participant Observation: In participant observation, the observer becomes more or less one of the group which is under observation. The observer has a dual role to play. He/She may share the situation as a visiting stranger, an attentive listener, an eager learner or as a full fledged participant observer. This kind of observation yields very flexible and more reliable results. It helps in disclosing minute, delicate and hidden facts more economically.

Non-participant Observation: In non-participant observation, the observer takes a position so that his presence is not disturbing the group. Non-participant observation helps in recording and studying the behaviour of a particular person or group in detail, in a given situation, or some specific characteristic of the group under observation. This technique is most useful in case of infants, children or abnormal persons.

Observations are also classified as structured and unstructured. Structured observations are much too formal and provide systematic data on a predetermined criteria under controlled situations. Interaction analysis of classroom verbal behaviour is an example of structured observation. In interaction analysis (Flanders System) teachers’ classroom behaviour is continuously recorded in terms of Teacher Talk, Pupil Talk, Silence and Confusion at intervals of 3 seconds in terms of the code numbers assigned to 10 possible categories of verbal behaviour. The sequence thus obtained is then analysed and interpreted for providing feedback to teachers for affecting improvements. Unstructured observation is mainly associated with participant observation in which the observer considers aspects of behaviour in terms of their context or situations of which they are a part.

5.6.3 Assessing Pupil Characteristics through Observation

Need for assessing pupil characteristics arises very often with regard to the non-cognitive development of pupils both for encouraging the desirable behaviours and putting under-check the problematic behaviours to maintain proper discipline. Besides this, there are cases of social disorders amongst children which need to be remedied so as to generate a school climate.
conducive to learning. Various characteristics such as regularity, punctuality, cooperativeness, industriousness, national identity, honesty, cleanliness, sportsman spirit are those best judged through observation.

Good and reliable observation requires proper planning, expert execution and adequate recording and interpretation. For proper planning of an observation, certain basic decisions are taken before-hand such as: identification of specific activities or units of behaviour to be observed, naming of the individual or group under observation, tools of observation, type and timings of observation, etc. While executing observation, care should be taken with regard to: creating proper conditions for observation, proper positioning and participation of observer, foolproof use of observation instruments and focussed systematic recordings of observations which should be as quick and spontaneous as possible. The recorded versions should be interpreted in the light of the specific objectives decided earlier.

The observer must take utmost care to minimize the influence of his/her biases, attitudes and values on the observation report.

5.6.4 Consolidating Observation Results
Systematic collection of data through observation requires the use of check lists, rating scales, blank forms for tallying frequencies, scaled specimens and score cards. It may just happen that there is one observer using one such tool or one observer observing twice with the same individual or group using different tools. Alternatively, there may be more than one observer observing an individual or a group simultaneously or at different occasions using common or different tools. So we may encounter a variety of data through such observations. For meaningful interpretation of data, information gathered through various counts about an individual or group, or for a characteristic of an individual or group, through different tools need to be analyzed. Accordingly data have to be organized for individuals, groups or characteristics as the case may be. These organised data are then cross-checked for their accuracy on the one hand and for identifying points of similarities and contrast on the other. Use of properly constructed proformas for various tools prove to be of immense help in summarizing and quantifying the data collected through observation.

5.6.5 Interpreting Outcomes of Observation
Data consolidated on properly formulated proformas are subjected to interpretation. For scientific interpretation of observation data both inter-observer and intra-observer reliabilities should be ascertained by finding out the degree of agreement between the observations. The observations data is organised and consolidated in a systematic manner. Now these are scanned for each of the objectives. Significant points of similarities and contrast are identified. In some cases the sequence of events of human behaviour are also analysed. Most commonly occurring and most rarely occurring behaviours are noticed. Also the patterns of behaviour are derived from the observation data. Sometimes it is possible to convert the observation data into one which is amenable to descriptive or inferential statistics. Depending upon the purpose of observation, level of interpretation is pitched. While interpreting the facts and figures acquired through the observational recording, one should always keep in mind the various limitations of planning, sampling, tools and procedures adopted for the study. As such conclusions should be arrived at cautiously and judiciously.

Check Your Progress 4
i) What are the two basic kinds of observation technique?
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ii) Which kind of reliabilities should be ensured for proper interpretation of observation data?
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13
5.7 CONCEPT OF PEER RATING AND ITS SIGNIFICANCE

Ratings by teachers or superiors are very often used to evaluate the behavioural characteristics of individuals. With a view to understanding social problems of students, peer rating has emerged as a useful technique. Through peer ratings, certain personality traits of the subject are revealed through his preference for and against certain contacts with others. Rating of an individual's behaviour by his peers provide a sort of objective assessment of his reactions to situations which he confronts in his own life. Peer ratings help to place the individual and his social inter-relationship more realistically. It is, therefore, an approach to the problem of studying interpersonal relationships and the socio-emotional climate of a classroom. This technique plays an important role in revealing and evaluating the social structure of the group through the measurement of the frequency of acceptance or non-acceptance among the individuals who constitute the group. The technique is most commonly referred to as sociometry.

5.7.1 Criteria of Peer Ratings

Peer ratings (sociometric tests) may be devised for many types of groups and situations. Main considerations are that each one must be relevant to a specific life situation of the group, and each item or question must require each person in the group to make one or more definite selection revealing certain personal preference, rejection or value. The technique allows analysis of each person's position and status within the group with respect to a particular criterion. Some examples of criterion employed for peer ratings are as follows:

- Guess who is the best liked boy in the class? Who is the most generous boy? Who is the most selfish boy? etc.
- Select one of your colleagues you would most like as friend or partner in a particular activity.
- Name the pupil in your class with whom you would most like to sit at lunch; name second choice, name the two persons in order of preference, etc.
- Identification of persons possessing certain specified traits such as the opposites - "talkative - silent", "neat-unkempt".
- Identification of dominant individuals, cliques, cleavages (sex; racial, economic, etc.) and patterns of social attraction and rejection.
- Opinion test through "word pictures".

5.7.2 Organisation and Interpretation of Peer Ratings

A) "Guess Who" Technique

In "Guess Who" technique, respondents are asked to write names against each question such as:

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
</table>
| 1) Guess who is the best liked boy in the class
| 2) Guess who starts the most arguments
| 3) Guess who is the most cooperative boy in the class, etc.
| 4) There is a boy who is
| a) tall and witty
| b) interested in cricket
| c) most regular in class
| and guess who is this boy |

The simple way to analyse results is to count the number of times each student's name appears in the blanks. Such findings may be utilized for helping individual student and understanding the pattern of existing interpersonal relationships in the group.
B) Sociogram

Peer ratings about students they would most like as friends or partners in particular activities may be identified through a sociogram. The obtained results form a set of choices and these are plotted as a diagram (sociogram) showing the pattern of choices.

![Sociogram Diagram]

Fig. 5.1: Sociogram Showing Pattern of Choices

In the above figure which depicts a sociogram showing choices of work partners, you will notice student 7 as an isolate being chosen by none of the students; student 10 is especially popular in the group receiving first choice nominations of four other students. Students 2, 4 and 8 (and also 3, 5, 9, 10) form a close knit clique. The student liked by most students is known as a 'star'. Here no.10 is a star as he has maximum first choices. Sociometry also helps us study the reciprocity of relationships among the members of the group. Between nos. 3 and 10, reciprocity is both sided while for no.1 and 10 it is one-sided only. Many other such interesting relations can be seen in the patterns of choices. Usually, an individual's sociometric score is simply the number of mentions he receives or percentage of mentions he receives from others in the group. “Target technique” described by Northway (1940) can also be applied to sociograms where four concentric circles are drawn around the choices. Acceptability scores, based on total number of choices received by each person are divided into four groups. The highest are placed in the centre and the lowest on the outside of the target. Each individual is represented on the target according to acceptability score.

Two major principles to be followed in obtaining peer ratings are as follows:

- Ratings of variables to be ranked must be simple and directly understandable to students. Ratings should pertain to students’ world and asked in a very simple language.
- Raters must be assured of anonymity that no one in the class will see their ratings. This will help elicit honest responses and will protect feelings of students receiving 'bad' ratings. Raters are knowledgeable i.e., have valid evidence of what they say.

Check Your Progress 5

Name two commonly used techniques used for peer ratings?

5.8 CONCEPT OF PROJECTIVE TECHNIQUE

Psychologically, projection is an unconscious process whereby an individual attributes certain thoughts, attitudes, emotions or characteristics to other persons or objects in the environment. He expresses his needs to others in an environment and draws incorrect inferences from an experience. Projective technique provides the subject with a semi-structured or unstructured stimulus situation giving him an opportunity to impose upon it his own private needs and his own perceptions and interpretations. Projective techniques require the subject to describe or interpret objects other than himself/herself and these are based on the hypothesis that an individual's responses to an unstructured stimulus are influenced by his needs, motives, fears, expectations and concerns. Interpretations are drawn on the basis of the completeness provided by the testee to the type of stimulus presented to him/her.
The several forms of projective technique are pictures, ink blots, incomplete sentences, word associations, one's own writings and drawings etc., which are intended to elicit responses that will reveal the respondent's personality structure (feelings, values, motives, characteristics, modes of adjustment and complexes). He/she is said to project the inner aspects of his/her personality through his/her interpretations and creations. His/her needs, wants, desires, aversions, fears and anxieties get reflected involuntarily. Projective techniques are the means to dig out the intricacies of human behaviour which are below the surface and are incapable of exposure by subjective and objective techniques such as observation, peer ratings and self-rating questionnaires etc.

Most commonly known projective techniques are the Rorschach Ink Blot Test and Thematic Appreception Test (TAT). The Rorschach Ink Blot Test provides an insight into the nature of mental disorder on the one hand and hidden feelings, emotions and desires on the other which the testee would not have normally desired to be known to others. It consists of a set of ten inkblots: five made in shades of black and grey only, two contain bright patches of red in addition to shades of grey and the remaining three employ various colours. In this the subject is shown one blot at a time and is asked what he sees in it. The Thematic Appreception Test (TAT) consists of the pictures of people in various settings. It has a set of thirty cards and one blank card which are used in various combinations as per the age and sex of the subject. In TAT the subject is told to make up a story about each picture in turn. In actual clinical practice, a set of ten selected cards is used for the particular case. TAT is helpful in identifying the presence or absence, as well as strength, of one or more motives to be used for diagnosing the problems. Other projective techniques include Children Appreception Test (CAT), Draw a man Test, Word Association Test, etc. Artistic products of structured type or completely unstructured, like finger paintings can also be used as projective techniques.

One of the major advantages of projective techniques is that they are not difficult to administer. These can be used for persons of all ages, ethnic groups and intelligence levels. Projective techniques are ingenious efforts to measure personality variables. They are said to measure the "whole personality". The projective techniques are however, difficult to interpret for which sustained training is necessary. Despite their widespread use by clinical and school psychologists, projective techniques are relatively unstandardized, ordinary measure of reliability are difficult to obtain and equally suspect are the validity indices. Yet their popularity may be attributed to "faith validity" and a certain mystique assumed by the users.

5.8.1 Where to Use Projective Technique?

As clarified above, the projective techniques are useful in bringing out covert behaviour patterns though indirectly, which are either not revealed through the use of subjective and objective techniques or are concerned with very deep rooted motives and emotions which the respondent would not like to be exposed to. Children and adults unwilling to discuss their problems may be administered projective techniques. Some of the situations most appropriate for the use of projective techniques are stated below:

- Identifying the subject's real concerns, his conception of himself and the way he views his human environment.
- Diagnosing the behavioural problems of students.
- Studying the personality of children who are unable or unwilling to discuss their problems directly.
- Verification of the patterns of personality emerging out of subjective or objective techniques.
- Studying the home and school adjustment of adolescents.
- Studying personality or adjustment patterns of more sensitive subjects or of those who tend to give biased responses on tests.
- Clinical usages.
- Testing illiterate persons of different language backgrounds.

5.8.2 Use of Projective Techniques by the Teachers

Projective techniques by their very nature require properly trained personnel to administer and interpret them. It is necessary for teachers like you to be aware of projective techniques and to be able to assess if there was any use in employing any of them to study various kinds of
personality disorders and maladjustments among students. Teachers should not casually venture into using projective techniques unless properly trained for them. These should be used only by clinical psychologists or school psychologists who have had intensive training in the use of these methods. In view of the complexity associated with the application of projective techniques these should be employed in case of students showing the signs of very severe emotional problems. It should be noted that projective techniques are most successfully used for eliciting suppressed desires, feelings, ambitions, attitudes and emotions, guilt and complexes etc.

Check Your Progress 6

i) Name three important projective techniques of evaluation.

ii) Mention two important uses of projective techniques.

5.9 LET US SUM UP

After going through the proceeding sections you would have noticed that various techniques of evaluation are employed to assess various aspects of human behaviour including the personality. These techniques may be classified as subjective, objective or projective, depending upon the elicited responses. Tests are important tools used for classification, gradation, promotion, guidance and research. Self-report is an acceptable method of studying the individuals' choices and preferences. Participatory and non-participatory observation and peer ratings provide objective measures of the characteristics of individuals as noted and experienced by others. Severe maladjustments and behaviour disorders need to be studied through projective techniques which clinically examine the deep rooted motives, emotions and feelings as the causes of expressed behaviours using the semi or unstructured stimuli. You may also like to appreciate that the projective techniques are good tools to examine the secret of one's personality and provide clinical guidance. A word of caution to you is not to indulge in the use of projective techniques unless you have proper training as highly trained personnel are required to administer and interpret projective tests. You have also learnt the procedure of employing various techniques of evaluation in classroom situations.

5.10 UNIT-END EXERCISES

1) What do you mean by a test? Mention its important purposes.

2) Plan and execute participant observation during an educational tour and report your results about the most humane and the most notorious students.
3) Administer a small tool of peer ratings to identify the groups of 2 or 3 students who would like to join together for understanding the responsibility of collecting money for flood relief operations.

4) List out a few classroom/school situations where the use of projective techniques could be most desirable.

5.11 POINTS FOR DISCUSSION

You may like to dwell upon and try to find answers to some of the following points:

i) Why do we use large number of evaluation techniques?

ii) Can certain evaluation techniques be used in conjunction? If so, mention some school situations and the relevant sets of techniques.

iii) What are the relative merits and demerits of participatory and non-participatory observation in studying human behaviour?

iv) How much faith can be placed in a sociogram?

v) Why do we require highly trained persons to administer and interpret projective techniques?

5.12 ANSWERS TO CHECK YOUR PROGRESS

1) i) Subjective, objective and projective techniques
   ii) Subjective technique

2) i) Test is a standardized situation that provides an individual with a score
   ii) a) Stimulation to teachers
       b) Feedback to teachers and learners
       c) Motivation for learning, and
       d) Useful means of overlearning
   iii) a) Classification and placement
        b) Certification
        c) Selection
        d) Quality Control, and
        e) Programme evaluation
   iv) a) Classification and tabulation of data
        b) Statistical analysis of scores
        c) Graphical analysis and representation
        d) Use of norms and standards
        e) Analysis of errors
3) a) Use of standardized inventories  
b) Use of more than one questionnaire  
c) Administering it twice with changed sequence of items  
d) Insert 'lie' scales  
e) Establish norms for local population.  
4) i) Participant observation and non-participant observation  
   ii) Inter-observer and Intra-observer reliabilities  
5) "Guess who" technique and sociogram  
6) (Mention any three)  
   i) Rorschach Ink Block Test, Thematic Appreception Test (TAT), Children Appreception Test (CAT). Draw a Man Test and Word Association Test.  
   ii) Identifying the subjects real concerns and diagnosing the behavioural problems.

5.13 SUGGESTED READINGS


Stodola Quentin & Stordhal Kalmer, (1972), Basic Educational Tests and Measurement; New Delhi; Thomson Press (India Limited).