3.0.0 INTRODUCTION

This chapter consisted of the procedure, which has been followed by the researcher in her investigation. The procedure is an important phase of research and the design of the study. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine the relevance to the research purpose with economy in procedure. In fact the research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data. It has the great bearing on the reliability of results arrived and as such constitutes the firm foundation of the entire edifice of research work. The quality of research depends not only on the adequacy of the research design, but also on the fruitfulness of the measurement procedure employed. Thus procedure of the study is of prime importance in attacking any research problem in a scientific manner.

Remenyi et al (2003)\(^1\) described methodology as the “overall approach to a problem which could be put into practice in a research process, from the theoretical underpinning to the collection and analysis of data”. On a similar note, Collis and Hussey (2009)\(^2\) identified methodology as the “overall approach to the entire process of the research study”. Research methodology, as per the above definitions, is focused around the problems to be investigated in a research study and hence is varied according to the problems to be investigated. Saunders et al (2009)\(^3\) presented the overall research methodology in the form of an “onion”, in which the thoughts with regard to the research problem lie in the centre and thus several layers have to be “peeled away” before coming to this central position. These layers are the important aspects to be considered in determining the research methodology for a particular research study.


Research design is the overall plan for connecting the conceptual research problem to the pertinent research. In other words the research design articulates what data is required, what methods are going to be used to collect and analyze this data, and how all of this is going to answer the research question. Both data and methods and the way in which these will be configured in the research project, need to be the most effective in producing the answers to the research question. The function of the research design is to ensure that the evidence obtained enables the researcher to effectively address the research problem as unambiguously as possible. In social science research, obtaining evidence relevant to the research problem generally entails specifying the type of evidence needed to test a theory, to evaluate the program or to accurately describe a phenomenon. However, researchers can often begin their investigations far too early because they have thought critically about what information is required to answer the study’s research question. Without attending to these design issues beforehand, the conclusions drawn risk being weak and unconvincing and consequently will fail to adequately address the overall research problem.

The length and complexity of research designs can vary considerably, but any sound design must at least contain the following things:

a) A clear statement of the research problem.

b) Procedures and techniques to be used to gathering information.

c) The population to be studied.

d) Methods to be used in processing and analyzing data.
Figure 3.0.0: Exhibiting the Hierarchy of Research Procedure

The procedure of the research followed by the researcher has been classified into the following heads:

- The method of the study
  - Selection of the subject sample
- Construction of the tools
- Selection of the tools
- Description of the tools
- Collection of data
- Administration of various tools
- Statistical techniques used
Figure 3.1.0: Showing Research Procedure of the Study

The figure 3.1.0 indicates that the research process consists of a number of closely related activities as shown through, but such activities overlap rather than following a strictly prescribed sequence. At times the first step determines the nature of the last step to be undertaken. If subsequent procedures have not been taken into account in the early stages, serious difficulties may arise which may even prevent the completion of the study. One should remember that the
various steps involved in a research process are neither mutually exclusive, nor separate and distinct.

3.1.0. METHOD OF THE STUDY

According to the nature of the problem the researcher carried out the present study on the lines of survey method and case study method which are kind of descriptive research studies. Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of phenomenon and wherever possible, to draw valid general conclusions from the facts discovered. The main goal of this type of research is to describe the data and characteristics about what is being studied. The idea behind this type of research is to study frequencies, averages and other statistical calculations. Although this research is highly accurate, it does not gather the cause behind a situation. Descriptive research is mainly done when the researcher wants to gain a better understanding of a specific topic. Descriptive research is the exploration of the certain existing phenomena, the details of which would not be known.

According to George, J. Mouly (1995), “no category of educational research is more widely used than the type known variously as the ‘survey’ the normative survey, status and descriptive researches. This broad classification comprises a variety of specific techniques and procedures all similar from the standard point of its purpose that is to establish the phenomena under investigation.”

The main objective of the present study was to perform a multidimensional study of learning disabled children or adolescents. For finding the learning disabled subject sample from the population ‘Survey Method’ was used. Survey studies are conducted to collect detailed description of existing phenomena with the intent of employing data to justify current conditions and practices or to make more intelligent plans for improving them. After getting the required sample of learning disabled children case study of each subject was done. A case study is an in depth study of a particular research problem rather

than a sweeping statistical survey. It is often used to narrow down a very broad field of research into one or a few easily researchable examples. The case study method is also useful for testing whether a specific theory or model actually applies to phenomena in the real world. It is useful design when not much is known about a phenomenon.

3.2.0 SELECTION OF THE SUBJECT SAMPLE

Selection of the sample is an integral part of every research project and its success depends upon the right selection of the sample. The study of entire population is neither possible nor advisable due to changeability. So, the use of sampling technique is must to determine the representative sample of the problem. In the present study the sample was selected according to the following aspects:

3.2.1 DESCRIPTION OF THE POPULATION

Population of the present study consisted of all the children studying in class IX and X in C.B.S.E, I.C.S.E., and U.P. board schools of Agra city (U.P.).

3.2.2 SELECTION OF SAMPLE

In the process of sample selection the first step was to survey the schools, (six each of the CBSE, ICSE and UP board) and to identify the learning disabled children of class IX and X by applying the learning disability identification questionnaire. By using purposive sampling method, units were selected from different schools surveyed, where the cases were identified.
Fig. 3.2.1: Exhibiting the Method of Sample Selection

Sample

Selection of Institution (Simple Random Sampling)

I.C.S.E. Board
- St. Paul’s Church College, Agra
- Ragendra Swarup Public School, Agra

C.B.S.E. Board
- Holy Public School, Agra
- St. Andrew’s Public School, Agra

U.P. Board
- Radhaballabh Inter College, Agra
- Soamibagh Higher Secondary School, Agra

Selection of Class IX and X

Administration of Learning disabled Questionnaire

Learning disabled children

50 Boys
50 Girls
3.2.3 SIZE OF THE SAMPLE

The main consideration in the selection of the sample was its adequacy and representativeness. In this study representativeness was ensured by adopting purposive sampling technique and adequacy by its size. School wise numbers of sample units on whom tests were administered and the number of usable returns has been presented in the table 3.2.1.

Table 3.2.1 Showing School Wise Selection of Units

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of The School</th>
<th>Total Number of Students</th>
<th>Selected Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>No. of I.D. Children found in Class IX and X</td>
</tr>
<tr>
<td>1</td>
<td>Radha Krishna Sanatan Dharma Inter College</td>
<td>87</td>
<td>10 00 10</td>
</tr>
<tr>
<td>2</td>
<td>Sant Ram Krishna Kanya Inter College</td>
<td>65</td>
<td>11 01 12</td>
</tr>
<tr>
<td>3</td>
<td>Ratan Muni Jain Inter College</td>
<td>185</td>
<td>07 09 16</td>
</tr>
<tr>
<td>4</td>
<td>Fatehchand Inter College</td>
<td>74</td>
<td>04 08 12</td>
</tr>
<tr>
<td>5</td>
<td>Radha Ballabh Inter College</td>
<td>68</td>
<td>00 04 04</td>
</tr>
<tr>
<td>6</td>
<td>M.D. Jain Inter College</td>
<td>182</td>
<td>00 06 06</td>
</tr>
<tr>
<td>7</td>
<td>University Model School</td>
<td>176</td>
<td>05 06 11</td>
</tr>
<tr>
<td>8</td>
<td>Holy Public School</td>
<td>140</td>
<td>02 03 05</td>
</tr>
<tr>
<td>9</td>
<td>Agra Public School</td>
<td>150</td>
<td>02 03 05</td>
</tr>
<tr>
<td>10</td>
<td>Ess Ess Convent</td>
<td>125</td>
<td>04 07 11</td>
</tr>
<tr>
<td>11</td>
<td>Ess Ess Public School</td>
<td>51</td>
<td>01 02 03</td>
</tr>
<tr>
<td>12</td>
<td>St. Andrew's Public School</td>
<td>135</td>
<td>03 03 06</td>
</tr>
<tr>
<td>13</td>
<td>Holeman Institute</td>
<td>120</td>
<td>02 03 05</td>
</tr>
<tr>
<td>14</td>
<td>Ragendra Swaroop Public School</td>
<td>140</td>
<td>04 02 06</td>
</tr>
<tr>
<td>15</td>
<td>St. Conrad's Inter College</td>
<td>143</td>
<td>03 01 04</td>
</tr>
<tr>
<td>16</td>
<td>St. Paul's Church College</td>
<td>160</td>
<td>01 01 02</td>
</tr>
<tr>
<td>17</td>
<td>St. Peter's College</td>
<td>130</td>
<td>00 01 01</td>
</tr>
<tr>
<td>18</td>
<td>St. Patrick School</td>
<td>110</td>
<td>01 00 01</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2241</td>
<td>60 60 120</td>
</tr>
</tbody>
</table>
3.2.4 JUSTIFICATION OF THE SAMPLE

Some children, despite having an average or above average level of intelligence have real difficulty acquiring basic academic skills and these difficulties go with the growing age of these children from childhood to adolescence. In the present study a sample of class IX and X students is taken which will give a comprehensive and comparative account of the developmental changes in the learning disabled boys and girls.

3.3.0 CONSTRUCTION OF THE QUESTIONNAIRE FOR THE IDENTIFICATION OF LEARNING DISABLED CHILDREN

A meaningful and applicable research needs reliable, suitable, interpretive, economic and usable tests to meet the requirement of the study. Most educational researches lead to the gathering of data by means of some standardized tests or self constructed tool. Tool serves as important purpose in empirical research by providing a good base to the researches for collecting data.

As there was no readymade tool available to identify the learning disabled children the researcher has developed learning disabled identification questionnaire. The scale consisted of 77 statements which have nine subscales with five point scale items. These are related to learning skills such as listening, Reading, Writing, Speaking, Mathematical Reasoning, Thinking, Gross and Fine Motor Skills, Social Emotional Domain and Spelling.

3.3.1 PROCEDURE OF THE TOOL DEVELOPMENT

1. IDENTIFICATION OF THE DIMENSIONS OF TOOL

After consultation with supervisor and the literature available on learning disabled children, researcher has identified the dimensions of the tool. Dimensions of learning disabled identification questionnaire are Listening, Reading, Writing, Speaking, mathematical Reasoning, Gross and Fine Motor Skills, Social Emotional domain and Spelling.
2. **DEFINING THE OBJECTIVES OF CONSTRUCTED TOOLS**

The objective of the development of learning disabled children questionnaire is to identify the learning disabled children in order to make the multi-dimensional study of the identified learning disabled children.

3. **POOLING THE ITEMS**

After the intensive study about the learning disabled children and by the responses of the experts and the teachers, the investigator got engaged in pooling the items. The investigator examined the pooled list and categorized the items. Repetition were removed and made all the statements brief and easy to understand. The investigator selected relevant items related with the objective of the study.

4. **PREPARATION OF THE FIRST DRAFT**

Equipped with various suggestions the researcher selected and wrote the items. Some of the items were modified and some dropped after comparing their level of difficulty. Reshuffling among the sequencing of items was also done to provide a draft following precautions were taken:

a) Easy and clear language

b) Objective centered questions

5. **TRYOUT OF THE FIRST DRAFT OF THE TOOL**

The main purpose of the tryout was to note down the difficulty encountered by the respondent answering various items and to exclude the irrelevant items in the tool. The researcher assessed the tool considering all the features of a good tool and pattern of questions. Also the judgmental rating of the expert related to the field of learning disability, psychology and education was done.

6. **FINAL DRAFT**

After removing the defects and on the basis of experts suggestions final modified draft was prepared.
3.3.2 VALIDITY OF THE TOOL

The validity of the test means the degree to which the test actually measures which it proposed to measure. The validity provides a direct check on how well it tells us more than the degree to which the test is fulfilling his functions. As the tool developed using the proper steps of tool development and in consultation with subject’s experts, the tool consists of face validity.

FACE VALIDITY

Validity of the questionnaire was determined on the basis of face validity. The validity was determined as:

“Expert opinion that was requested to examine the questionnaire according to the set objectives and ability of the students to answer every item of questionnaire.”

3.3.3 RELIABILITY OF THE QUESTIONNAIRE

Reliability refers to the consistency of the scores or measurement which is reflected in the reproducibility of the scores. The researcher has developed tool for identification of learning disabled children according to the objectives of the study. As the tool has adhered to its technical testing of reliability and validity, the researcher has calculated different correlations as represented in the following table:

Table 3.3.1: Showing Reliability of Learning Disability Identification Questionnaire

<table>
<thead>
<tr>
<th>TOOL NAME</th>
<th>RELIABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test-retest Method</td>
</tr>
<tr>
<td>Learning Disability Questionnaire</td>
<td>0.76</td>
</tr>
</tbody>
</table>
3.4.0 SELECTION AND DESCRIPTION OF THE TOOLS

A researcher requires many data gathering tools and techniques which may vary in their complexity, design, administration and interpretation. Each tool or technique is appropriate for the collection of certain type of evidence or information. The researcher has to select from the available tools, which will provide data, helps in the testing of hypotheses. Following figure shows the criteria of selection of the tools:

Figure 3.4.0: Criteria for Selection of Tools

3.4.1 SELECTION OF TOOLS TO MEASURE BEHAVIORAL PROBLEMS

3.4.1.1 Survey of the Various Tools to Measure Behavioral Problem

A search for suitable tool to assess the problem behavior of the children brought only three standardized tools to the notice of the researcher:
Table 3.4.1.1.1: Tools available for measuring the Behavioral Problems

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Youth Problem Inventory</td>
<td>M. Verma</td>
<td>Hindi/English</td>
<td>16 – 20 Yrs.</td>
</tr>
<tr>
<td>2.</td>
<td>Problem Checklist</td>
<td>M.C. Joshi and Jagdish Pandey</td>
<td>Hindi/English</td>
<td>High School</td>
</tr>
<tr>
<td>3.</td>
<td>Problem Behavior Checklist</td>
<td>Vinita Veeraraghavan and Archana Dogra</td>
<td>English</td>
<td>Married Couples</td>
</tr>
</tbody>
</table>

The researcher found only three inventories to measure problem behavior of the children and finally problem behavior checklist developed by Vimla Veera Raghavan and Archana Dogra was selected. Though it is in English, the researcher preferred it because youth problem inventory by M. Verma is only for 16 – 20 years age group. Problem checklist by M.S. Joshi and Jagdish Pandey is applicable exclusively for high school students which exactly fulfills our purpose but the parents are the one who can directly observe the behavior of their children so the researcher preferred the inventory by Vimla Veeraraghavan and Archana Dogra.

**Problem Behavior Checklist**

**Description and administration**

The checklist was devised to identify the emotional and conduct problems of children. There are 58 items in the scale. These items were to be tick-marked by the parents as to whether the symptoms occurred ‘most often’, ‘occasionally’ or ‘never’ where the response occur ‘most often’ it is indicative of high problem behavior, and ‘occasionally’ and ‘never’ were indicative of ‘average’ and ‘no problem behavior’ respectively.
Scoring

Items indicative of high problem behavior will be given 3; ‘average’ and ‘no problem behavior’ will be assigned a score of 2 and 1 respectively. Total scores obtained ranges between 58 – 174, thus indicates that the higher the score, the higher the problem behavior of the child, and the lower the score, the lower the problem behavior of the child. The categories of problem behavior are given below:

Low Problem Behavior          -          58-96
Moderate Problem Behavior     -          97-135
High Problem Behavior        -          136-174

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Behaviour Checklist</td>
<td>V. Veeraraghvan and Archana Dogra</td>
<td>English</td>
<td>Checklist</td>
<td>Married Couples</td>
<td>Both</td>
<td>No Time Limit</td>
<td>Split half – 0.81</td>
<td>Fairly High</td>
</tr>
</tbody>
</table>

3.4.2 SELECTION, ADMINISTRATION AND SCORING OF THE TOOLS FOR MENTAL ASPECTS

3.4.2.1 Survey of the Various Tools to Measure Intelligence

To assess the intelligence of the children, a search for the suitable tool was made and the following tools were found available:
Table 3.4.2.1.1 Showing Availability of Tools to Measure Intelligence

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Group test of Intelligence</td>
<td>Pramila Ahuja</td>
<td>English</td>
<td>9 – 13 Years</td>
</tr>
<tr>
<td>2.</td>
<td>Verbal Intelligence Test</td>
<td>R.K. Ojha and Raychoudhary</td>
<td>Hindi</td>
<td>13 – 20 Years</td>
</tr>
<tr>
<td>3.</td>
<td>Group test of Intelligence</td>
<td>S. Jalota</td>
<td>English</td>
<td>College educated adults</td>
</tr>
</tbody>
</table>

The researcher found these three inventories to measure the intelligence of learning disabled children and finally verbal intelligence test by R.K. Ojha and Ray Choudhary was selected because this test is an individual test and for 13 – 20 years age. But the other two tests were for 9-13 years and for college adults respectively.

**Verbal Test of Intelligence**

**Description**

This test is an objective intelligence test to measure the general mental ability or general intelligence. There are eight parts in the test. The number of questions in each part is different. The description of every part is given below:

1. **Classification:** In this sub-test fifteen parts are given in each of them five words are there out of which one word is dissimilar to other. The student has to underline that word.

2. **Analogies:** In this sub-test also fifteen parts are given. There are four options in each part. There is a relationship between the pair of first two words. For third word student has to underline one word out of the four given options.

3. **Synonyms:** Twenty words are given in this sub-test. In each part one word and four options are given the bracket. That word has to be underlined, the meaning of which is similar to the main word.
4. **Number Test**: There are twelve parts in this sub-test. In each part six numbers are given and the seventh number has to be written by the respondent which completes the given serial of numbers.

5. **Completion Test**: This sub-test is based on the general knowledge of the children. In this sub-test four paragraphs are given. There are five, two, four and two blanks respectively in the four paragraphs. Appropriate word has to be underlined from the given words for each and every blank.

6. **Paragraph Test**: A diagram depicting the family relations are given in this sub-test and questions based on these relationships are given.

7. **Best reasons**: Ten questions are there in this sub-test. For each question four options are given and the respondent has to select the correct answer.

8. **Simple Reasons**: This sub-test is divided into two parts. There are ten statements in first part and seven statements in second part.

**Administration**

Verbal intelligence test is both individual and group. There are total 112 statements the maximum score of which is also 112. Total time limit for the completion of test is 40 minutes. This test is useful for the age group of 13 – 16 and of no use for the age group above 20 years.

**Scoring**

For scoring of the test there is an answer key. The researcher has to tally the answers for the given key and for each correct answer 1 mark has to be given. After getting the total score for every sub-test, ‘T’ score and ‘Percentile’ score will be obtained and on the basis of which I.Q. of the child will be known.
Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal Intelligence Test</td>
<td>R.K. Ojha and Ray Choudhary</td>
<td>Hindi</td>
<td>Verbal Intelligence Test</td>
<td>13 – 16 Years Child</td>
<td>Both</td>
<td>40 Min.</td>
<td>Split-half 0.81</td>
<td>Fairly High</td>
</tr>
</tbody>
</table>

3.4.2.2 Survey of the Various Tools to Measure Academic Achievement Motivation

To assess the Academic Achievement motivation of the students, a search for the suitable tool was made and the following tools were found available:

Table 3.4.2.2.1: Showing Available Tools to Measure Academic achievement Motivation

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Tool Name</th>
<th>Author Name</th>
<th>Language</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Achievement Motive Test</td>
<td>V.P. Bhargava</td>
<td>Hindi/English</td>
<td>16-22 Years</td>
</tr>
<tr>
<td>2.</td>
<td>Achievement Motivation Scale</td>
<td>Pratibha Deo and Asha Mohan</td>
<td>English</td>
<td>13-20 Years</td>
</tr>
<tr>
<td>3.</td>
<td>Achievement Motive Scale</td>
<td>P.S.N. Tiwari</td>
<td>Hindi</td>
<td>Any</td>
</tr>
<tr>
<td>4.</td>
<td>Academic Achievement Motivation Test</td>
<td>T.R.Sharma</td>
<td>Hindi</td>
<td>14 Years</td>
</tr>
</tbody>
</table>

The researcher found three inventories for achievement motivation but only single test for academic achievement Motivation. So, researcher has
selected the Academic Achievement Motivation Test by T.R. Sharma for the present study.

**Description, Administration and Scoring of the Academic Achievement Motivation Test:**

This test is an objective questionnaire with 38 items of two response alternatives. It is meant for 14+ age and for school going children. There are 38 items and the maximum score is also 38. It can be administrated on a group or individual easily. There are two options yes and no and the respondents have to tick on one of them.

For scoring of the test an answer key is attached. The researcher has to tally the answers from the given key and for each correct answer one mark has to be given.

**Tool Profile**

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Achievement Motivation Test</td>
<td>T.R. Sharma</td>
<td>Hindi</td>
<td>Verbal Test</td>
<td>14 Years Children</td>
<td>Both</td>
<td>30 Min.</td>
<td>High</td>
<td>Fairly High</td>
</tr>
</tbody>
</table>

**3.4.2.3 Survey of the Various Tools to Measure Creativity**

To measure the creativity of learning disabled children only three standardized tools of creativity were found relevant to researcher. These are:
### Table 3.4.2.3.1: Showing Available Tools to Measure Creativity

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Passi Test of Creativity</td>
<td>B.K. Passi</td>
<td>Hindi/English</td>
<td>X – XI grades</td>
</tr>
<tr>
<td>2.</td>
<td>Verbal test of Creative Thinking</td>
<td>Baqer Mehndi</td>
<td>Hindi/English</td>
<td>VII and VIII class</td>
</tr>
<tr>
<td>3.</td>
<td>Verbal test of Scientific Creativity</td>
<td>V.P. Sharma and J.P. Shukla</td>
<td>Hindi/English</td>
<td>VII and VIII class</td>
</tr>
</tbody>
</table>

The researcher found only three standardized tools to measure the creativity of children and the selected tool was verbal test of creative thinking by Baqer Mehndi. The idea behind the selection of tool is that it is a verbal test whereas the Passi Test of creativity is a Performance Test. Another point is that it is for VII and VIII grade students which can be used to IX and X grade students but Passi test is only for X & XI grade student which cannot be used for the children of lower classes. The third tool that is verbal test of scientific creativity is made to assess only scientific creativity whereas the researcher needs to measure creativity in all the areas. So, this tool also got rejected by the researcher and finally the verbal test of creative thinking by Baqer Mehndi was selected as the most appropriate tool.

**Verbal Test of Creativity**

**Description**

The verbal test of creativity includes four sub-tests, namely, consequences test, unusual uses test, similarity test and product improvement test.

(i) **Consequences test:** The consequences test consists of three hypothetical situations:

   a) What would happen if man could fly like birds?

   b) What would happen if our schools had wheels?
c) What would happen if man does not have any need for food?

The subject is required to think as many consequences of these situations as he can, and write them under each situation in the space provided. The time allowed for the three problems is 4 minutes each.

(ii) **Unusual Uses Test:** This test presents the subject with the names of three common objects – a piece of stone, a wooden stick, water and requires him to write as many novel, interesting and unusual uses of these objects as he may think of. This test measures the subject’s ability to retrieve items of information from his personal information in storage. Evidently, it measures also the subject’s ability to shift frames of reference to use the environment in an original manner. The time allowed for the three tasks is 5 minutes each.

(iii) **New Relationships Test:** This test presents the subject with there pairs of words apparently different-tree and house, chair and ladder, air and water, and requires him to think and write as many novel relationships as possible between the two objects of each pair in the space provided. The test provides an opportunity for the free play of imagination and originality. The time allowed for each pair of words is 5 minutes.

(iv) **Product Improvement Test:** In this test the subject is asked to think of a simple wooden toy of a horse and suggest addition of new things to it to make it more interesting for the children to play. The time allowed is 6 minutes.

**Administration**

The total time required for administering the test is 48 minutes in addition to time necessary for giving instructions, passing out test booklets to children and collecting them back.
Scoring

There is no right or wrong responses for the test. Each item is to be scored for fluency, flexibility and originality. The definitions of these terms are given below:

1) **Fluency:** Fluency is represented by number of relevant and unrepeated ideas which the testee produces. Relevance is judged on the basis of the appropriateness of the response when considered in relation to the test problem. An unrepeated idea is one which has been expressed only once under a given problem.

2) **Flexibility:** Flexibility is represented by a person’s ability to produce ideas which differ in approach or thought trend. All ideas which fall under one category of approach or thought trend are treated as one for purposes of flexibility scoring. There could be intermediate scores for flexibility depending on the number of categories of thought trends to which the responses belong.

3) **Originality:** Originality is represented by uncommonness of a given response. Responses given by less the 5% of the group are treated as original.

**Tool Profile**

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal test of Creative Thinking</td>
<td>Baqer Mehdni</td>
<td>Hindi/English</td>
<td>Test of Creativity</td>
<td>VII and VIII class</td>
<td>Both</td>
<td>48 Min.</td>
<td>Test retest 0.939</td>
<td>0.39</td>
</tr>
</tbody>
</table>

3.4.2.4 **Survey of the Various Tools of Study Habit**

To find out the study habit of children researcher has made a refined search and got these tests available:
Table 3.4.2.4.1: Showing Availability of Tools for Study Habit

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Test of study habits and attitudes</td>
<td>C.P.G. Mathur</td>
<td>Hindi/English</td>
<td>13 – 16 + Years</td>
</tr>
<tr>
<td>2.</td>
<td>Study habit inventory</td>
<td>M. Mukhopadhyaya and D.N. Sansanwal</td>
<td>Hindi/English</td>
<td>Post Secondary Level Students</td>
</tr>
<tr>
<td>3.</td>
<td>Study habit inventory</td>
<td>M.N. Palsane and S. Sharma</td>
<td>Hindi/English</td>
<td>College students</td>
</tr>
</tbody>
</table>

The study habit inventory by M.N. Palsane and S. Sharma was for college students and the test of study habits and attitudes by C.P.G. Mathur was for the children of 13 – 16 years but this test measures both study habit and attitudes whereas, the researcher is interested in measuring the study habit only so, the researcher has decided to use the study habit inventory by M. Mukhopadhyaya and D.N. Sansanwal to fulfill the objective of the research.

**Study Habit Inventory**

**Description**

The inventory comprises 70 items pertaining to nine sub-components namely:

1. Comprehension (12 items)
2. Concentration (10 items)
3. Task orientation (9 items)
4. Study sets (7 items)
5. Interaction (3 items)
6. Drilling (4 items)
7. Supports (22 items)
8. Recording (2 items)
9. Language (1 item)
These components characterize the basis of study habits. The items have been drafted in affirmative (52 items) and negative (18 items) forms.

Table 3.4.2.2: Items of Study Habit Inventory

| Affirmative (+) items | 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 22, 23, 24, 25, 27, 29, 30, 31, 32, 34, 38, 39, 41, 43, 44, 46, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70 | 52 |
| Negative (-) items | 10, 16, 17, 18, 19, 20, 21, 26, 28, 33, 35, 36, 37, 40, 42, 45, 47, 48 | 18 |
| Total Items | 70 |

Administration

The test booklet with 70 items will be provided to each candidate and they have given instructions to put a (x) sign in one column out of five response columns. These five responses are:

1. Always
2. Frequently
3. Sometimes
4. Rarely
5. Never

Scoring and Interpretation

Scoring and interpretation forms have been provided separately on the last page of consumable test booklet. In it, Area-wise serial number of items have been provided to facilitate area-wise scoring and finding out the area-wise raw scores as per scoring procedure i.e. for positive items – 4, 3, 2, 1, 0 and for negative items – 0, 1, 2, 3, 4.
Table 3.4.2.3: Scoring Procedure of Study Habit Inventory

<table>
<thead>
<tr>
<th>Items</th>
<th>Always</th>
<th>Frequently</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Items</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Negative Items</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

After scoring and finding out the raw scores for each area, they be totalled for getting the raw scores for total inventory.

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Group/ Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Habit Inventory</td>
<td>M. Mukhopadhyayya and D.N. Sansanwal</td>
<td>Hindi/English</td>
<td>Invention</td>
<td>Both</td>
<td>No Time Limit</td>
<td>0.91 (Split half method)</td>
<td>Fairly High</td>
</tr>
</tbody>
</table>

3.4.3 SELECTION, ADMINISTRATION AND SCORING OF THE TOOLS FOR EMOTIONAL ASPECTS

3.4.3.1 Survey of the Various Tools to Assess Adjustment

To assess Adjustment of children researcher has searched various tools and found these tools available:
Table: 3.4.3.1.1: Availability of Tools to Assess Adjustment

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bell Adjustment Inventory</td>
<td>S.M. Mohsin, Shamshad Hussain and Khursheed Jehan</td>
<td>Hindi</td>
<td>Intermediate</td>
</tr>
<tr>
<td>2.</td>
<td>Adjustment Inventory</td>
<td>P. Kumar</td>
<td>Hindi</td>
<td>College going students</td>
</tr>
<tr>
<td>3.</td>
<td>High School Adjustment Inventory</td>
<td>A.K. Singh and A. Sen Gupta</td>
<td>Hindi</td>
<td>High school students</td>
</tr>
<tr>
<td>4.</td>
<td>Adjustment Inventory for school students</td>
<td>A.K.P. Sinha and R.P. Singh</td>
<td>Hindi/English</td>
<td>14 – 18 years</td>
</tr>
</tbody>
</table>

In these available tools bell adjustment inventory is for intermediate students and adjustment inventory by P. Kumar in for college students so both are not suitable for the research. High school adjustment inventory by A.K. Singh and A. Sen Gupta and adjustment inventory for school students by A.K.P. Sinha and R.P. Singh both inventories fulfill the objective of research but researcher has preferred adjustment inventory by A.K.P. Sinha and R.P. Singh because this is in both Hindi and English language whereas high school adjustment inventory is only in Hindi language.

**Adjustment Inventory for School Students**

**Description and Administration**

The Adjustment Inventory has been designed for use with Hindi knowing school students of India. The Inventory seeks to segregate well adjusted secondary school students (age group 14 – 18 years) from poorly adjusted students in the three areas of adjustment: Emotional, Social and Educational. There are 60 questions in the test showing the problem of school students in the three areas. The questions were to be answered in ‘Yes’ or ‘No’. There is no
time limit for answering. Ordinarily an individual takes 10 minutes in completing the test.

Scoring

The inventory can be scored by hand only. The use of letters A, B and C corresponding to emotional, social and educational adjustment. The total score indicates the general adjustment status.

1. **Emotional Adjustment**: High Scores indicates unstable emotion. Student with low scores tend to be emotionally stable.

2. **Social Adjustment**: Individual scoring high are submissive and retiring. Low scores indicate aggressive behavior.

3. **Educational Adjustment**: Individuals scoring high are poorly adjusted with their curricular and co-curricular programs. Persons with low scores are interested in school programs.

### Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/ Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment Inventory for School Students</td>
<td>A.K.P. Sinha and R.P. Singh</td>
<td>Hindi / English</td>
<td>Psychosocial</td>
<td>14 – 18 Years Student</td>
<td>Individual</td>
<td>40 Min.</td>
<td>Split half – 0.95 Test retest 0.93</td>
<td>Fairly High</td>
</tr>
</tbody>
</table>

### 3.4.3.2 Survey of the Various Tools for Temperament

To find out the temperament of learning disabled children only two tools were found available:
Table 3.4.3.2.1: Exhibiting Available Tools for Temperament

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dimensions of Temperament Scale</td>
<td>N.K. Chadha and S. Chandna</td>
<td>Hindi / English</td>
<td>14 – 18 Years</td>
</tr>
<tr>
<td>2.</td>
<td>Temperament Schedule</td>
<td>S. Malhotra and Anil Malhotra</td>
<td>Hindi / English</td>
<td>4 – 14 Years</td>
</tr>
</tbody>
</table>

Dimensions of Temperament Scale by N.K. Chadha and S. Chandna is preferred over the Dimension schedule by S. Malhotra and Anil Malhotra for the research work because dimensions of temperament scale measure 15 dimensions whereas the other one measures only 5 dimensions.

**Dimensions of Temperament Scale**

**Description**

‘Dimensions of temperament scale’ is an individual test for 14 – 18 years age group. It includes 15 dimensions of temperament:

1. Sociability
2. Ascendance
3. Secretiveness
4. Reflective
5. Impulsivity
6. Placid
7. Accepting
8. Responsible
9. Vigorous
10. Co-operative
11. Persistence
12. Warmth
13. Aggressiveness
14. Tolerance
15. Tough Minded

**Administration**

There are 152 items in the scale and students have to answer in Yes or No.
Scoring

For scoring of the test an answer key is given. There are 119 questions with the response Yes and 33 with the response no. If the answers are matching to the key one marks will be given if not than zero mark will be given.

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension of Temperament Scale</td>
<td>N.K. Chadha and S. Chandna</td>
<td>Hindi / English</td>
<td>Psychological</td>
<td>14 – 18 Years Student</td>
<td>Individual</td>
<td>40 Min.</td>
<td>Split half 0.94</td>
<td>Cross Validation 0.01</td>
</tr>
<tr>
<td>3.4.3.3 Survey of the various tools for the measurement of Aspiration level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A relevant search is made by the researcher to measure the aspiration level of children and following tools are found:

Table 3.4.3.3.1 Showing Availability of Tools to Measure Aspiration Level

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Level of Aspiration measure</td>
<td>Mahesh Bhargava and M.A. Shah</td>
<td>Hindi / English</td>
<td>Higher Secondary Students</td>
</tr>
<tr>
<td>2.</td>
<td>Educational Aspiration Scale</td>
<td>V.P. Sharma and A. Gupta</td>
<td>Hindi</td>
<td>Class X</td>
</tr>
<tr>
<td>3.</td>
<td>Educational Aspiration Inventory</td>
<td>T. Pradeep Kumar</td>
<td>English</td>
<td>12 – 15 Years</td>
</tr>
<tr>
<td>4.</td>
<td>Level of Educational Aspiration Test</td>
<td>Yashmin Ghauri Khan</td>
<td>English</td>
<td>Class VI to X</td>
</tr>
</tbody>
</table>
From all these inventories available researcher has found the inventory by Mahesh Bhargava and M.A. Shah, “Level of Aspiration Measure” Because it measures the general Aspiration level of children whereas all the other tools measure only Educational Aspiration level. So, the researcher has selected level of Aspiration measure for the research.

**Level of Aspiration Measure**

**Description**

The first page of the level of aspiration booklet contains general information of the testee; instructions to the respondent and the scoring table while remaining eleven pages contains the performance sheet of this measure which are arranged in order of trial numbers.

The performance sheet has 50 circles (each of 1 cm in diameter) which are arranged in five rows – ten in each row. Above and below of these rows, there are two boxes on the right side – the upper box is for writing the number of expected score (except in practice trail) whereas lower box is for putting the number of actual score or completed performance. Thus, ten trials are needed for each subject except practice trial. Stop watch or stop clock is also required for the test.

**Administration**

Students will be instructed to draw four lines in the circles given, so that they may appear like a human face. For each trial 30 seconds are allotted for work and at the end of this time the students will be asked to stop the marking and count the number of completed faces and enter it in lower box. This trial will be treated as practice trial. In the following trials the students have to do the same thing along with to put the number of faces in the upper box which intended to complete within 30 second time. Total 10 trials are to be completed by the students.
Scoring

The procedure of scoring is simple. It provides three types of scores:

1. **Goal discrepancy Score (GDS):**
   
   The extent and direction of the difference between actual on the previous trial and goal set up of the next trial is known as goal discrepancy or G.D. score, which is obtained by subtracting the actual score on a trial from the aspiration score (Goal set up score) for the next trial. A positive goal discrepancy suggests that one’s goal is higher, in relation to one’s previous performance and a negative goal discrepancy indicates that one’s goal is lower than one’s previous performance.

2. **Attainment Discrepancy Score (ADS):**
   
   Attainment Discrepancy score is the difference between aspiration (expected score) and the achievement (actual score on the same trial). Thus in order to obtain ADS expected performance is subtracted from the actual performance. Therefore, ADS is positive when actual performance is more than expected performance and negative when expected performance is higher than the actual performance. The size of the discrepancy shows the extent to which one surpasses or fails to reach his goal.

3. **Number of Times the Goal Reach Score (NTRS):**
   
   This is obtained by the number of times where his actual score is equal or more than the expected score. It provides an index of subject’s actual probability of reaching his scaled goal.
3.4.3.4 Survey of Various Tools to Measure Frustration of Children

To measure the frustration level of children, researcher has made a serious search and found some tools which can be useful in the present research. These tools are:

Table 3.4.3.4.1: Exhibiting Two Tools Available for Measuring Frustration

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rosenzweig Picture Frustration Test for Children</td>
<td>Udai Pareek</td>
<td>Hindi</td>
<td>4 – 13 Years</td>
</tr>
<tr>
<td>2.</td>
<td>Test of Reactions of frustrations</td>
<td>S.N. Dubey</td>
<td>Hindi</td>
<td>18 – 50 years</td>
</tr>
</tbody>
</table>

Out of these two tests available the researcher has preferred Rosenzweig Picture Frustration Test for children by Udai Pareek because this test is specially designed for children whereas the other tool that is ‘Test of Reactions to Frustration’ by S.N. Dubey is for 18 to 50 year age which do not fulfill the
objective of the research that’s why the researcher has picked up the tool ‘Rosenzweig Picture Frustration Test’ by Udai Pareek.

**Rosenzweig Picture Frustration Test**

**Description**

The Rosenzweig Picture – Frustration study may be said to be a controlled projective technique, primarily intended to measure reactions to frustrating situations. Originally the Adult form was introduced in 1996, which was later revised in 1997, and then was followed by the children’s form in 1998. The method was considered to be particularly suitable for use with children. To them such an approach could be expected to appeal as a game in much the same way as they are intrigued by the numerous comic strips designed for their enjoyment. Moreover, one could reasonably anticipate that they would “project” more naively than do adults.

Each form of the P-F Study consist 24 cartoons like drawings representing frustrating situations. One character in the drawing is shown saying something that causes frustration to the other person depicted. The subject is required to say or write what the other person would say in that situation. In the children’s form the frustrated individual is always the child. The study can be administered individually as well as in groups.

In both the forms of the study samples everyday situations of life has been included. A variety of needs have been covered in the study the needs of approval, affiliation, inviolacy, freedom, nurturance etc. and at the same time various types of frustrating situations have been involved, e.g. deprivation, conflict and accusation. In both forms there are “ego blocking” as well as “Superego blocking” situations. The former are those in which some obstacle, personal or impersonal, interrupts, disappoints, derives or otherwise directly frustrates the subject, while the latter represent some accusation, charge or incrimination of the subject by someone else.
The original children’s form of the Rosenzweig P-F study was adapted for use with Indian children. While preparing the Indian adaptation, care was taken to retain the original situations with as little modification as necessary to make the situations acceptable to the Indian Child. As such, slight changes were needed in the paraphernalia of the pictures, clothing and furniture. Some changes were also made in the captions of the pictures.

**Administration**

The Indian Adaptation of Rosenzweig’s P-F study is intended to use with children of 4 through 13 years of age. The study can be administered in about 20 minutes either individually or in groups. In administration the subject should write his own answers on the standard examination blank and the total time should be recorded. Subjects should be told to raise their hands on completing the answers; the examiner then collects the examination blanks. After giving instructions to the subjects, he is asked to open the blank, examine the first situation and think of the first reply that the character in the picture might give. He is instructed to write down this response. He is then told to proceed with the other pictures similarly and is left on his own.

**Scoring**

It is assumed as a basis for the P – F study that the subject unconsciously or consciously identifies himself with the frustrated individual in each pictured situation and projects his own bias in the replies given. To determine this bias scores are assigned to each response as to direction of aggression and reaction type. Under direction are included:

(i) **Extrapunitiveness** – In which aggression is turned on to the environment.

(ii) **Intropunitiveness** – In which it is turned by the subject upon himself.

(iii) **Impunitiveness** – In which aggression is evaded in an attempt to gloss over the frustration.
(iv) **Obstacle dominance** – In which the barrier occasioning the frustration stands out in the responses.

(v) **Ego-defense** – In which the ego of the subject predominates.

(vi) **Need Persistence** – In which the solution of the frustrating problem is emphasized.

From the combination of these six categories there result for each item nine possible scoring factors and two variants – E and I. The letters E, I and M and employed to signify the extrapunitive, intropunitive directions of aggression in whatever combination with type of reaction. To indicate obstacle dominance an apostrophe (’) is written after the capital letter E, I or M. The ego-defensive types of extrapunitiveness, intropunitiveness and impunitiveness are signified by the capital letters E, I and M, used alone. To indicate need persistence small e, I and m are employed. The convention has been adopted of writing obstacle dominance first, ego-defense second, and need persistence third in a three columnar arrangement: O-D/E-D/N-P.

**Scoring Factors**

Definitions of the 11 scoring factors, including the two variants, are as follows:-

- **E’** The presence of the frustrating obstacle is insistently pointed out.
- **I’** The frustrating obstacle is constructed as not frustrating or as in some way beneficial or in some instances, the subject emphasizes the extent of his embarrassment at being involved in instigating another’s frustration.
- **M’** The obstacle in the frustrating situation is minimized almost to the point of denying its presence.
- **E** Blame, hostility, etc. are turned against some person or thing in the environment.
CHAPTER III

E In this variant of E the subject aggressively denies that he is responsible for some offense with which he is charged (most often applicable to superego situations).

I Blame, censure, etc. are directed by the subject upon himself.

I A variant of I in which the subject admits his guilt but denies any essential fault by referring to unavoidable circumstances. (Most often employed in superego situations)

M Blame for the frustration is evaded altogether, the situation being regarded as unavoidable; in particular the “frustrating” individual is absolved.

e A solution for the frustrating situation is emphatically expected of someone else.

i Amends are offered by the subject, usually from a sense of guilt, to solve the problem.

m Expression is given to the hope that time or normally expected circumstances will bring about a solution of the problem; patience and conformity are characteristic.

Tool Profile

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenzweig Picture Frustration Test</td>
<td>Udai Pareek</td>
<td>Hindi</td>
<td>Projective Test</td>
<td>3 – 14 years children</td>
<td>Both</td>
<td>20 minutes</td>
<td>Quite High</td>
<td>High</td>
</tr>
</tbody>
</table>

3.4.3.5 Survey of Tools to Measure Self Efficacy

The researcher has searched tools to measure self-efficacy and found single tool available:
Table 3.4.3.5.1: Showing Tool for Self Efficacy

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Tool Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
</table>

Because of the availability of single tool available, there is no choice of other tool on self efficacy and this tool fulfills the requirement of research. Hence, researcher has chosen self efficacy scale by G.P. Mathur and R.K. Bhatnagar.

**Self Efficacy Scale**

**Description**

Self efficacy scale intends to assess the level of self – efficacy in any age group above 14 years. It consists of 22 items, dealing with following eight factors:

Table 3.4.3.5.2: Showing Eight factors of Self Efficacy Tool

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Factors</th>
<th>S.N. of Items</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Self regulatory skills</td>
<td>15, 21</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Self influence</td>
<td>09, 14, 18</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Self confidence</td>
<td>01, 04, 12</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Social achievement</td>
<td>03, 08, 10</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>Self</td>
<td>05, 17, 22</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>Self Evaluation</td>
<td>02, 07, 19</td>
<td>3</td>
</tr>
<tr>
<td>7.</td>
<td>Self-Esteem</td>
<td>13, 20</td>
<td>2</td>
</tr>
<tr>
<td>8.</td>
<td>Self-Cognition</td>
<td>06, 11, 16</td>
<td>3</td>
</tr>
</tbody>
</table>

|       | Total                          | 22            |
Each item describes human self-efficacy in different situations in the society. The scale presents belief items to denote self-efficacy on the scale. This scale was standardized and administered on a large sample of 800 (400 male and 400 female). For the cause of simplicity and clarity in application and analysis of the scale, Likert type 5 point was constructed. In this scale items are in two forms i.e. positive and negative.

**Administration**

1. It is a self-administrating scale. It is administered to a group as well as an individual. The instructions printed on the test form should be read by test administrator as well as testee.

2. No time limit is fixed for completing the scale. However an individual takes 20 – 25 minutes in completing the scale.

3. Each item has to be responded.

4. No item is right or wrong, it’s only to know the reaction of individual in different situations.

5. They should be assured that their answers will be kept confidential.

**Scoring**

Scoring of the self efficacy scale is very easy. For the convenience purpose of scoring the scale, in the scale before the serial number of the ten items, means negative items and remaining items as positive items has been given there are 15 positive and 07 negative items which are as follows :

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Types of Items</th>
<th>Item wise serial numbers</th>
<th>Total Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Positive</td>
<td>1, 4, 5, 6, 7, 9, 10, 11, 14, 16, 17, 18, 19, 21, 22</td>
<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>Negative</td>
<td>2, 3, 8, 12, 13, 15, 20</td>
<td>07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

**Table 3.4.3.5.3: Types of Items in Self Efficacy Scale**
Table 3.4.3.5.4: Scoring Procedure of Self Efficacy Scale: Award Scheme

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Type of Items</th>
<th>Scoring of Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>1.</td>
<td>Positive Items</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Negative Items</td>
<td>1</td>
</tr>
</tbody>
</table>

Tool Profile

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Constructor</th>
<th>Language</th>
<th>Natur e</th>
<th>Filled by</th>
<th>Group/ Individual</th>
<th>Durat ion</th>
<th>Reliab ility</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy Scale</td>
<td>G.P. Mathur, R.K. Bhatnagar</td>
<td>Hindi</td>
<td>Psych ologic al Test</td>
<td>14+ age group</td>
<td>Both</td>
<td>20 – 25 minut es</td>
<td>Male 0.73 – 0.81</td>
<td>Male 0.73 – 0.87</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Female 0.79 – 0.86</td>
<td>Female 0.71 – 0.83</td>
</tr>
</tbody>
</table>

3.4.4 SELECTION, ADMINISTRATION AND SCORING OF TOOLS FOR SOCIAL ASPECTS

3.4.4.1 Survey of Various Tools to Measure Social Maturity

For measuring social maturity of children researcher has done a keen search and found these three tools available:
Table 3.4.4.1.1: Tools Available to Measure Social Maturity

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Tool Name</th>
<th>Author</th>
<th>Language</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Social Maturity</td>
<td>J. Bharath</td>
<td>English</td>
<td>0 – 15 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Raj</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Social Maturity</td>
<td>R.P. Srivastava</td>
<td>Hindi</td>
<td>25 Years</td>
</tr>
<tr>
<td></td>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Social Maturity</td>
<td>Nalini Rao</td>
<td>Hindi/English</td>
<td>Class VIII, IX and X</td>
</tr>
</tbody>
</table>

Social maturity scale by R.P. Srivastava is in Hindi language and for 25 years age group, which is worthless for the research. In between social maturity scale by J. Bharath Raj and Social Maturity Scale by Nalini Rao, investigator chosen Social Maturity Scale by Nalini Rao because it is specifically for class VIII, IX and X whereas the social maturity scale by J. Bharath Raj is for 0 – 15 years. Scale by Nalini Rao hence fulfills the research objectives more specifically.

**Description**

This scale consists of 90 items. There are three dimensions of social maturity and its components are as follows:

1. **Personal Adequacy**

(i) **Work Orientation:** It manifests in the perception of work related skills and development of proper attitudes towards work in terms of knowledge of standards of competence in performing tasks, capacity for experiencing pleasure in work leading to self sufficiency.

(ii) **Self-direction:** Manifests in one’s capacity to independently act and exercise control over one’s actions. This also involves the initiative an individual takes in directing himself and his actions with a feeling of security and full faith in one’s efforts.
(iii) **Ability to take stress:** It is an ability to exhibit appropriate emotional stability and react without embarrassing either himself or the group he is in. It also involves ability to undertake challenging tasks with assurance.

2. **Interpersonal Adequacy**

(i) **Communication:** It involves an ability to understand, write to communicate and make clear meaningful speech and gestures. The ability also involves empathy which sensitizes the individual to the affective domain and demands effective communication.

(ii) **Enlightened trust:** This component includes a general belief that it is acceptable to rely or depend or others when need arises. It involves clear functioning of enlightened decision about whom, when and how much to trust.

(iii) **Co-operation:** An altruistic tendency to join others in their efforts in order to reach a mutually desirable goal. It involves ability to regard rules and practices more as reciprocal social agreement rather than a rigid, unchangeable law.

3. **Social Adequacy**

(i) **Social commitments:** It involves a feeling of oneness with others, willingness to modify or relinquish personal goals in the interest of societal goals and also a readiness to invest in long term social goals.

(ii) **Social Tolerance:** Social tolerance involves a person’s willingness to interact with individuals and groups, who differ from him. Sensitivity to the rights of individuals and groups who differ from him, thus accepting the difference as a means of building up the out group loyalties.

(iii) **Openness to change:** Involves willingness to accept changes in the social setting and adapt oneself to the demands of these changes.
### Table 3.4.1.2: Showing Items on the Different Sub-scales of the Social Maturity Scale

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Sub-scales and Categories</th>
<th>Final Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Positively Oriented Items</td>
</tr>
<tr>
<td>1.</td>
<td>Work orientation</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>Self direction</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Ability to take stress</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Personal Adequacy</strong></td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>Communication</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Enlightened Trust</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Cooperation</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Inter-Personal Adequacy</strong></td>
<td>11</td>
</tr>
<tr>
<td>7.</td>
<td>Social Commitment</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Social Tolerance</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>Openness to change</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Social Adequacy</strong></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>23</td>
</tr>
</tbody>
</table>

### Administration

The Social Maturity Scale is administered to the respondents in groups in the regular class – room situation. The instructions provided on the first page of the scale booklet. The time required to complete the scale items is between 45 minutes and one hour.

### Scoring

**Table 3.4.1.3: Scoring Procedure for Positive Items**

| Strongly Agree | 4 |
|                |   |
| Agree          | 3 |
| Disagree       | 2 |
| Strongly Disagree | 1 |
Table 3.4.4.1.4: Scoring Procedure for Negative Items

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>2</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>4</td>
</tr>
</tbody>
</table>

High score represent the most mature response.

Maximum Mature Score – 360

Minimum Mature Score – 90

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group / Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Maturity Scale</td>
<td>Nalini Rao</td>
<td>Hindi/E</td>
<td>Social</td>
<td>Students of class</td>
<td>Both</td>
<td>45 minutes to 1 hour</td>
<td>0.79</td>
<td>Based on teacher rating</td>
</tr>
</tbody>
</table>

3.4.4.2 Survey of the Tools to find out Parent Child Relationship

To find out the extent of parent-child relationship, the standardized tools available are as follows:

Table 3.4.4.2.1: Exhibiting Available Tools for Parent Child Relationship

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Tool Name</th>
<th>Author</th>
<th>Language</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Parent child Relationship Scale</td>
<td>N.S. Chauhan and Harish Sharma</td>
<td>Hindi</td>
<td>Parents</td>
</tr>
<tr>
<td>2.</td>
<td>Parent Child Relationship Scale</td>
<td>Nalini Rao</td>
<td>Hindi / English</td>
<td>13 – 16 years children</td>
</tr>
</tbody>
</table>
The investigator found only two standardized tools to measure parent child relationship. Parent Child Relationship scale by Nalini Rao is for 13 – 16 years adolescents whereas, Parent Child Relationship scale by N.S. Chauhan and Harish Sharma is for parents. The Investigator has chosen the scale by N.S. Chauhan and Harish Sharma because the questionnaire will be filled by parents, they have to express their attitude towards the child which will fulfill the research objective.

Parent Child Relationship Scale

Description

The scale through the ‘Self Anchoring Technique’ makes measurement possible on eleven points for eight dichotomous dimensions of basic parent – child relationship. The technique employed remains simple and pointed in getting to natural responses and the placement relations on a dichotomous dimension makes the instrument highly sensitive and differentiating in the context. The details for the dichotomous dimensions are:-

Table 3.4.4.2.2: Showing Various Dichotomous Dimensions of Parent Child Relationship Scale

<table>
<thead>
<tr>
<th></th>
<th>RJCT (–) Rejection</th>
<th>Vs</th>
<th>(+) ACPT (Acceptance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parental negative attitude towards children, feeling them worthless, refusing to admit them, criticism comparisons, parental signs of hostility, crossness, refusal to pay attention.</td>
<td>(+)</td>
<td>Parental positive attitude towards children, accepting their idea and judgment. Loving, affectionate, joyful, cheering, sing and attentive behavior of parents towards children.</td>
</tr>
<tr>
<td>2</td>
<td>CRLN (–) (Carelessness) Unconcerned, thoughtless, negligent, inaccurate behavior of parents towards their children.</td>
<td>Vs</td>
<td>(+) OPTCT (Over Protection)</td>
</tr>
<tr>
<td></td>
<td>Parental uncared, pampering indulgence, excessive physical contact, prevention of independence, over-solicitude, shielding behavior towards children.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| 3. | **NGLC (−) (Negligence)**  
Least-attentive, non-cooperative, avoiding, leave uncared for: behavior of parents. | **Vs** | **(+ OIND (Over-indulgence)**  
Parental behavior of endeavour even on the whims of children, failure to exercise needed constraint. |   |
| 4. | **STRL (−) (Strong-realism)**  
Adapting to outside relations, tolerating, objective realities or non-fantastic oriented behavior of parents towards their children. | **Vs** | **(+ UPECT (Utopian – expectation)**  
Parental demands of higher quality performance than is permitted or higher expectation from their children even on their limitations. Parental demand of imaginary perfection from their children. |   |
| 5. | **LNST (−) (Lenient Standards)**  
Parental weak superego, permitting, lesser restrictions for moral deviation, attitude of indifference against such inhibitions in the name of freedom and individuality. | **Vs** | **(+ SEMOR (Severe Moralism)**  
Parental severity of superego, attitude of condemning even mild types of sexuality or sexual inclination, negating feelings and always pleading a dry mechanically operated life. |   |
| 6. | **TOFE (−) (Total freedom)**  
Hyper-permissiveness, hypo punishments, children as their own decision maker. | **Vs** | **(+ SEDIS (Severe discipline)**  
Hypopermissiveness, hyper punishment decision making resting with parents. |   |
| 7. | **MCON (−) (Marital conflict)**  
Conflicts between the father and the mother usually witnessed by children with a non-palatable taste and damaging temperament. | **Vs** | **(+ MADJ (Marital adjustment)**  
Mutual understanding, solidarity and congenital atmosphere between the father and the mother providing an atmosphere of peace and propriety to children. |   |
| 8. | **FAROEX (−) (Faulty role expectation)**  
Emotional instability and ego weakness among parents leading them to unexpected deviant roles and appearing always a problem for their children to follow. | **Vs** | **(+ REROEX (Realistic role expectation)**  
Emotional stability, consistency in thought and action of parents. Present them as sufficiently effective, inspiring model for their children to follow. |   |
Administration

This scale consists of 8 items. This dimensional scale is filled up by parents. The Researcher will give the instructions to parents on how to fill the questionnaire as instructed on the first page of the booklet.

Scoring

The scores for the eight dichotomous dimensions are usually indicated by the specific numbers of the rings of the ladder. Every score on a dichotomous dimension needs its placement with reference to the dichotomous ends in view. As such it is highly important to place it on the following table which separates the dichotomous ends of all dimensions at the score of 5 – 5.

![Scoring of Parent Child Relationship Scale](image-url)

Figure 3.4.4.2: Scoring of Parent Child Relationship Scale
Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Group/ Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent child relationship scale</td>
<td>N.S. Chauhan and Manish Sharma</td>
<td>Hindi</td>
<td>Socio-metric</td>
<td>Parents</td>
<td>No Time Limit</td>
<td>0.79</td>
<td>–</td>
</tr>
</tbody>
</table>

3.4.4.3 Survey of Various Tools to Assess Social Acceptability among Peers

There are only two tools available to assess the social acceptability among peers. These are:

Table 3.4.4.3.1: Showing Availability of Tools of Social Acceptability among Peers

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Test for Social Acceptability</td>
<td>S.L. Chopra</td>
<td>Hindi</td>
<td>College students</td>
</tr>
<tr>
<td>2.</td>
<td>Parasparik Sambandh Prashnawali</td>
<td>Guru Pyari Mathur</td>
<td>Hindi/ English</td>
<td>Any age group</td>
</tr>
</tbody>
</table>

From the above two sociometric tests the researcher has decided to use test for social acceptability among peers by SL. Chopra because this test is easier to administer than Parasparik Sambandh Prashnawali by Guru Pyari Mathur.

Test for Social Acceptability among Peers

Description

Sociometric tests consist of questionnaire in which each member of the group is asked to name the members of the group with whom he will like to associate for different activities. The firm of the questions, therefore, depends upon the social setting of the group and the questions indicate the scope of the
choice. In the present test the activities chosen to have social acceptability of the students among their class fellows were to sit with in the class, to play with, to spend interval with and to spend leisure time with. These criteria are general and it was expected that they will provide stable and generally useful results.

Administration

For the present test, the students were asked to select only three of their class-fellows for each of the four activities. They could choose the same students for the different activities, if they liked. But their choices were to be limited to students in their own section. They were allowed to select the students who might have been absent on the day of testing.

Scoring

One mark will be assigned for each choice received by a student. The total numbers of choices on all the four activities received from the class fellows studying in his/her own section will denote his/her socio-metric score. The students in every section may then be arranged in the rank order in accordance with their total socio-metric scores. Those falling in the top 25 percent may be regarded as the socio-metric stars, those having PRs 26 to 75 may be regarded as the average chosen and those having scores in the bottom 25 percent may be regarded as the social isolates.

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test for social acceptability among peers</td>
<td>S.L. Chopra</td>
<td>Hindi</td>
<td>Socio-metric Test</td>
<td>Both</td>
<td>No Time Limit</td>
<td>0.94</td>
<td>Stability in behaviour = Validity of Test</td>
</tr>
</tbody>
</table>
3.4.4.4 Survey of Various Tools to Measure Children’s Home Environment

For measuring home environment of children the researcher has made a genuine search and got these tests available:

Table 3.4.4.4.1: Available Tools of Home Environment

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Home Environment Inventory</td>
<td>Prerna Mohite</td>
<td>English</td>
<td>I to IV class, Intermediate class</td>
</tr>
<tr>
<td>2.</td>
<td>Home Environment Inventory</td>
<td>K.S. Mishra</td>
<td>Hindi/English</td>
<td>Intermediate</td>
</tr>
<tr>
<td>3.</td>
<td>Family Environment Scale</td>
<td>Harpreet Bhatia and N.K. Chadha</td>
<td>Hindi / English</td>
<td>17 – 50 Years</td>
</tr>
<tr>
<td>4.</td>
<td>Home Environment Scale</td>
<td>Reena Sharma and Vibha Nigam</td>
<td>Hindi/English</td>
<td>20 to 50 Years</td>
</tr>
</tbody>
</table>

The Home Environment Inventory by Prerana Mohite is in English only and just for primary classes. Family Environment scale by Harpreet Bhatia and N.K. Chadha and Home Environment Scale by Reena Sharma and Vibha Nigam are for age group 20 – 50 years which do not fulfils the research objective. Home Environment Inventory by K.S. Mishra is for Intermediate classes which can be applied for High School Children. Hence, the researcher has chosen the Home Environment Inventory by K.S. Mishra for the research.

**Home Environment Inventory**

**Description**

The present Home Environment Inventory (HEI) is an instrument designed to measure the Psycho-social climate of home as perceived by children. It provides a measure of the quality and quantity of the cognitive, emotional and
social support that has been available to the child within the home, HEI has 100 items belonging to ten dimensions of home environment. The ten dimensions are:

(a) Control
(b) Protectiveness
(c) Punishment
(d) Confirmity
(e) Social Isolation
(f) Reward
(g) Deprivation of Privileges
(h) Nurturance
(i) Rejection
(j) Permissiveness

Each dimension has 10 items belonging to it. The instrument requires pupils to tell the frequency with which a particular parent-child interaction behavior has been observed by them in their homes, i.e. he/she is requested to tell whether, a particular parental behavior occurs – ‘Mostly’, ‘Often’, ‘Sometimes’, ‘Least’ and ‘Never’. There is no time limit for this tool.

**Administration**

Home Environment Inventory can be administered in individual or group settings. To start with, students should be made familiar with the nature and purpose of measurement of home environment. Later, the procedure for marking the responses on the booklet should be explained to them. They should be asked to put ‘X’ mark on any cell indicating their perception of the frequency with which a particular behavior has been exhibited by their parents.

**Scoring**

The responses are to be given on the booklet itself. There are five cells against every item of the inventory. Each cell indicates the frequency of occurrence of a particular behavior. The five cells belong to five responses
namely, ‘Mostly’, ‘Often’, ‘Sometimes’, ‘Least’ and ‘Never’. The dimension to which a particular item belongs has been indicated by alphabets near the serial number of the items. 4 marks will be assigned to ‘Mostly’, 3 marks to ‘often’, 2 marks to ‘Sometimes’, 1 mark to least and 0 marks to ‘Never’ responses. The mark assigned to A, B, C, D, E, F, G, H, I and J dimension – statements are to be counted on every page and then added the dimension – scores awarded to statements given on the five pages so as to get scores for the ten dimension of HEI.

**Tool Profile**

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group / Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Environment Inventory</td>
<td>Dr. K.S. Mishra</td>
<td>Hindi/English</td>
<td>Psycho-Social</td>
<td>Intermediate</td>
<td>Both</td>
<td>No time limit</td>
<td>0.850</td>
<td>Content Validity</td>
</tr>
</tbody>
</table>

**3.4.4.5 Survey of the various tools to Measure School Environment**

Researcher has searched tools to measure school environment and found just one test of school environment.

**Table 3.4.5.1: Exhibiting Tool Available for School Environment**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Name</th>
<th>Author</th>
<th>Language</th>
<th>Age-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>School Environment Inventory</td>
<td>K.S. Mishra</td>
<td>Hindi/English</td>
<td>High School and Intermediate Students</td>
</tr>
</tbody>
</table>
School Environment Inventory

Description

SEI contains 70 items related to the six dimensions of school environment i.e. concepts intuitively judged relevant to the social psychology of the classroom. The six dimensions are –

A) Creative Stimulations (CRS)

B) Cognitive Encouragement (COE)

C) Acceptance (ACC)

D) Permissiveness (PER)

E) Rejection (REJ)

F) Control (CON)

Twenty items belong to the (CRS) dimension while each of the remaining five dimensions has the item belonging to it.

The instrument requires pupils to tell the frequency with which a particular teacher pupil interaction behavior is expressed in his or her school i.e. he / she is requested to tell whether a particular teacher – behavior (as mentioned in an item) occurs – ‘Always’, ‘Often’, ‘Sometimes’, ‘Rarely’ and ‘Never’. There is no time limit for this tool.

Administration

School Environment Inventory can be administered in individual or group setting to start with, students should be made familiar with the nature and purpose of measurement of school environmental. Later, the procedure to be followed while marking responses on the booklet should be explained to them. They should be told to put ‘X’ mark on any cell indicating the five responses, whichever expresses their perception about the frequency with which a particular behavior is exhibited by their teachers.
Scoring

The responses are to be given on the booklet itself, against each item of the inventory five alternatives are given in forms of cells indicating the intensity of the responses. Marks to be assigned are 4 marks to ‘Always’, 3 marks to ‘Often’, 2 marks to ‘Sometimes’, 1 mark to ‘Rarely’ and zero to no responses. The particular items belong to which area is indicated by alphabets near the serial number.

Table 3.4.4.5.2: Showing the Scoring of Responses of SEI

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Responses</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Always</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Often</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>Sometimes</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Rarely</td>
<td>1</td>
</tr>
<tr>
<td>5.</td>
<td>No Responses</td>
<td>0</td>
</tr>
</tbody>
</table>

Tool Profile

<table>
<thead>
<tr>
<th>Name of the test</th>
<th>Constructor</th>
<th>Language</th>
<th>Nature</th>
<th>Filled by</th>
<th>Group/Individual</th>
<th>Duration</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Environment Inventory</td>
<td>Dr. K.S. Mishra</td>
<td>Hindi/English</td>
<td>Psycho-Social</td>
<td>High School and Intermediate</td>
<td>Both</td>
<td>No time limit</td>
<td>0.792</td>
<td>Content Validity</td>
</tr>
</tbody>
</table>

3.4.5 Designing of the Questionnaire Related to Awareness of Parents and Interview for Teachers about Learning Disability or other Learning Disorder of Children

3.4.5.1 Description Administration and Scoring of the learning Disability Awareness Questionnaire

A questionnaire for parents and an interview schedule for teachers were constructed by researcher to know their awareness about learning disability. The questionnaire consisted of 40 statements and interview schedule consisted of 10
statements which were listed according to 3 areas of awareness. The details are as follows:

1. Knowledge of Learning Disability
2. Symptoms of Learning Disability
3. Parental involvement/ teacher’s involvement

**Administration of Inventory**

Necessary Instructions were given to parents about the questionnaire. There was no specific time limit but sufficient time required for completing the inventory was 30 minutes. After distributing the booklets, the parents were asked to read the instructions carefully and complete the preliminary entries. Then they were asked to start the work. When the time was over, the booklets were collected. The interview of the randomly selected teachers was taken individually.

**Scoring of the Inventory**

In scoring, credit of one point was given for each correct answer and zero for incorrect answer. There was no negative marking. The number of the correct responses was counted which served as the raw score of a subject.

**3.4.6 Assessment of Academic Achievement**

The report cards of previous classes were considered as a tool for assessment of academic achievement percentage obtained in the final examination of previous class was taken into account.

**3.5.0 COLLECTION OF DATA**

Initially rapport was established and learning disabled children were identified from the Class IX and X of each and every school by using self made questionnaire for identification of learning disabled children. After identifying those children the requisite data was collected with the help of tools which were employed during field work. Data was collected from different sources eg.
Schools, parents, peers and the students. The children were assured that the information and data would not be disclosed and would be used only for research purpose.

### 3.5.1 Procedure of the Data Collection

Data collection is an important step in research which a researcher has to apply systematically; only then the results will be reliable, valid and will add to the qualitative value to the research. The results of research are of as much importance for a nation or society as for the researcher. So it is necessary for a researcher to make a plan before applying the different tests, considering the time, money and resources available, number of tests to be applied and the mental state of the sample.

Keeping in mind the targeted sample, number of schools and number of tests to be administered the data procedure was divided in to six sessions. Each day one session of the tests is performed in 2 schools. There are 18 total schools. So the days used in completing one session in 18 schools were 9 days. For six sessions 54 (9x6) days were consumed. In this way the target to administer the tests in 18 schools within 2 months was achieved.

The following tools were administered in each session:

**Session I**: 1. Normal Intelligence Test  
2. Academic Achievement Motivation Test  
3. Study Habit Inventory

**Session II**: 1. Verbal Test of Creative Thinking  
2. Adjustment Inventory for school students (AISS)
Session III: 1. Dimension of Temperament Scale

2. Level of Aspiration Test

Session IV: 1. Rosenzweig Picture Frustration Test

2. Rao’s Social Maturity Scale

Session V: 1. Home Environment Inventory

2. School Environment Inventory

3. Test for Social acceptability among Peers (TSAAP)

Session VI: 1. Problem Behavior Checklist (PBCL)

2. Parent Child relationship Scale

3. Questionnaire Related to Awareness of Parents about Learning disability

3.6.0 ADMINISTRATION OF THE TOOLS

For the administration of various tools in different institutions, principals of the respective institutions were approached. All the principals granted permission. The date and time on which students of these institutions were to be contacted in their respective classrooms was then fixed.

In order to ensure proper testing conditions during administration of different tests, the following precautions were strictly observed by the investigator:
1. Number of many tests was not simultaneously administered on the same group of subjects and on the same day. This was considered necessary to minimize fatigue, monitory and anti reaction towards the next test among examiners.

2. Enough spacing between the seat of examines was kept to minimize mutual discussion among them as well as to prevent copying.

3. An adequate arrangement for light, air and drinking water was also made during the test period.

4. Each subject was given a pencil for responding to the items of the test.

5. After supplying the test booklets, the subjects were asked to complete their personal information such as name, father's name, college name and the date on which the test was administered, which was present on each test booklet.

6. After supplying test booklet, subjects were instructed to start the actual work after furnishing personal data.

7. The subjects started attending the test items only after, the specific instructions related to the test were read aloud.

8. Doubts and confusions raised by any of examine concerning the test were immediately clarified and removed.

9. Examines are asked to begin from the first page and continue till last page in a sequential order.

10. If any test has practice examples as in case of picture frustration test examines were asked to silently read these practice examples carefully and start attempting items similar to them.

11. If any test had a time limit for its completion, as in case of verbal intelligence and level of aspiration test time limit was strictly adhered to.
However in tests without any time limit, the subjects were allowed to take their own time.

### 3.7.0 STATISTICAL TECHNIQUES USED

The collected data was processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. This is essential for a scientific study to ensure that all the collected data are relevant for making comparison and analysis. Technically speaking, processing implies editing, coding, classification and tabulation of collected data so that they are amenable to analysis. This study was based on the case study method. Hence tools were administered, analyzed and interpreted individually. No statistical technique was required in dealing with the individual case but to have composite view of the personality and problem of the Learning Disabled Children some statistical technique were used. The uses of statistics are illustrated below:

**Figure 3.7.0: Showing the Uses of Statistical Techniques**

In order to thrash out the essence from the collected data and to make the data meaningful the following statistical techniques were used:

- Descriptive Statistics
- Graphical Representation
Descriptive Statistics

Certain descriptive statistics were employed to analyze data, obtained on the group through these were:-

1. **Mean**

The mean value was computed as a measure of central tendency of the distribution of variation

\[ \text{Mean} = \frac{\sum Fx}{N} \]

Where,
- \( N \) = Number of score
- \( \sum F \) = Total sum of Frequencies
- \( x \) = Mid point

2. **Percentage**

Percentage was used in order to do comparative study of the conclusions drawn in different cases and to show the different quality of various aspects.

\[ \text{Percentage(\%)} = \frac{\text{No.of Student}}{\text{Total Students}} \times 100 \]

3. **Graphical Representation**

Graphical represent of data often facilitates understanding a set of data. It makes it easier to read and interpret. Thus the following graphs were drawn up by the researcher:

**Charts**

As it was a case study bar and line charts were used to present various different aspects related to each case as well as on the group.