CHAPTER-III

RESEARCH METHODOLOGY
PLAN AND PROCEDURE
OF THE STUDY
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3.1 METHODS AND PROCEDURE

Research methodology is a way to systematically investigate a research problem. It gives various steps in the conduct of research in a systematic and logical way, both empirical and replaceable. It is essential to define the problem and state the objectives and hypotheses, clearly. The research design provides the details regarding what, where, how much, by what means, concerning an inquiry.

The plan and procedure spell out the description of the sample, the measures used and the steps taken in carrying out the investigation. A detailed description of the sample is needed in order for the reader to assess the general ability of research findings. This is also helpful to determine the degree to which the research sample is representative of the population. The population from which the sample is drawn should be defined clearly and a detailed description needs to be given for the procedure for selecting the sample.

Plan and procedure basically highlight details of the work carried out by the investigator and determine in turn its destiny. It is the character of the technique on which the degree of precision, objectivity, reliability and validity of results depend. The selection of the technique and devices by an investigator is determined by the nature of
the problem, objectives of the study, cost, time, function, availability of the subjects and other resources at the disposal of the investigator, followed by a presentation of the steps of the procedure adopted for the conduct of the study. The statistical techniques required to be used at various stages of the study need to be briefly described.

3.1.1 Research Design

Research is a systematic activity and, as a process, it employs a scientific methodology. A research design provides a framework within which the activity is conducted.

A research design is the arrangement of condition for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

3.1.2 Methods of the Study

Research methods are no more than the tools of the trade. Research methods refer to the methods, the researcher used in performing research operations. This is an unfortunate tendency to think that research begins and ends with methodology. This is just not so. It is important to be aware of the range of methods available and to understand how they work appreciating their advantages and disadvantages. The essential thing is to be able to select the methods that are most likely to achieve the objectives of the research.
There are three main methods of research, namely:

- Historical
- Descriptive
- Experimental

- Historical method deals with study of the past events, practices and developments in order to understand the present.
- Descriptive method is concerned with the present conditions, situations, events, practices and deals with relationship among variables.
- Experimental method describes what will happen when certain variables are controlled or manipulated.

The present study does not deal with the past, nor is concerned with what will happen if certain variables are manipulated and, therefore, it does not use the historical or experimental method. It mainly used the descriptive method to study Scholastic Achievement of Elementary School Children in relation to Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status.

**Descriptive Method**

"Descriptive research is concerned with hypothesis formulation and testing and the analysis or relationship between non-manipulated variables and the development or generalizations".
3.1.3 Variables of the Study

Variables of a study are of two types:

A. Dependent Variables

The dependent variables are the conditions or characteristics that appear, disappear or change as the investigator introduces, removes or changes independent variable. In this study, the dependent variable of the study refer to Scholastic Achievement of Elementary School Children.

B. Independent Variables

Independent variables are the conditions or characteristics that the investigator observes or controls in attempt to as certain its relationship to observed phenomena. The independent variables of the study in hand refer to Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status of Elementary School Children.

The present investigation attempts to study the relationship of dependent variable, i.e., Scholastic Achievement in relation to independent variables, i.e., Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status.

3.1.4 Paradigms of Research

Research methodology has two major paradigms, namely, the qualitative and quantitative. The qualitative paradigm makes use of a logical analysis of rich, soft, verbal, descriptive data obtained, whereas the quantitative paradigm makes use of statistical techniques to describe
the sample, to test the hypothesis and to draw inferences based on hard, quantifiable data. The quantitative paradigm is aimed at making generalizations.

The present investigation obtains hard numerical data and makes use of statistical procedures to test and verify preconceived hypothesis. Therefore, it employs the quantitative paradigm of research.

Descriptive research methodology has been classified differently by various authors.

According to Best descriptive research includes case studies, ethnographic studies, follow up studies and causal comparative approaches.


➤ Survey studies are conducted to give an accurate description of the existing phenomenon so as to justify current conditions and practices.

➤ Developmental studies refer to those investigations which research into a subject or a phenomenon over a period of time.

➤ Inter-relationship studies describe not only the existing phenomenon but also attempt to ascertain relationship among variables.

**Inter relationship studies can be further classified as:**

➤ Case study which attempts to examine an individual unit in detail and analyses the various dimensions of the unit.
Casual comparative or ex-post-facto studies attempt to ascertain the relationship between two variables where one may be the cause of another.

Correlation and prediction studies usually attempt to find relationship among variables with the help of coefficient of correlation on the basis of which predictions are also made about the variables.

Cross-cultural and comparative researches compare simultaneous phenomena or societies on a particular aspect dimension.

3.1.5 The Method Followed: Correlational Approach

"Two variables are said to be related to one another if values of one variable is predictional from values of another variable". Further, "The correlational method provides information regarding the degree of relationship and explores possible causal factors through the use of the coefficient of correlation".

As the study attempts to ascertain relationship among the dependent and independent variables of the problem chosen for the study, it follows the correlation approach. The present research work is a descriptive survey type of study.

3.1.6 POPULATION

The term population in research is used in broader sense than its common place meaning as a population of people. The entire group from which the sample has been selected is called as population. That group may consist of persons, objects, attributes, qualities, behaviours of people
and animals, cities, families, answers to various items of a test and the like. According to nature and scope of the research in hand a population should be well defined in terms of geographical limits, age, grade, sex, category, socio-economic status, physical attributes and psychosocial behaviour. The population for the present study was children studying in the class VIII of Haryana State.

3.1.7 SAMPLE OF THE STUDY

A sample refers to the sub-group of a larger population under study from which inferences are drawn about the larger population. It is a process by which a relatively small number of individuals, object or events are selected and analyzed in order to find out something about the entire population from which it is selected. A good sample should be adequate and true representative of the whole population. The sample for the study consisted of eight hundred children. The sample was randomly drawn from government schools from four districts i.e., Panipat, Sirsa, Panchkula and Faridabad of Haryana State.

Sampling Techniques

"Sampling refers to the strategies which enable the researcher to pick a sub-group from a large group and use this as the basis for making judgements about the large group".

The various types of sampling techniques that can be generally employed to obtain a representative sample are as follows:
Simple Random Sampling

Here individuals are chosen in such a way that each unit has an equal chance of being selected through the use of random number tables or the lottery technique.

Stratified Random Sampling

When the units in a sample are proportional to their presence in the population, the sample is said to be stratified. The population is sub-divided into smaller homogeneous groups or strata and individuals are chosen at random from each of the sub-groups to get a more accurate representation from each stratum.

Systematic Sampling

When the frame of population can be listed as infinite, the researcher starts by selecting a unit at random from the first K unit and then every Kth subsequent unit is selected.

Cluster Sampling

When the population is infinite or spread over a vast geographical area, this method is used where the entire area is divided into smaller groups and simple random sampling is done from each of the sub-areas.

Incidental Sampling

This is a non-probability sampling technique where the subjects that are readily available are included in the sample.

3.1.8 Sampling Techniques Used

In the present study, the random sampling technique was used to select the subjects from the population. The
state of Haryana was divided into four zones and one district was taken from each zone, i.e., from East zone – Panipat, from West zone – Sirsa, from North zone – Panchkula and from South zone – Faridabad. In this way the sample was taken from four districts in all, i.e., Panipat, Sirsa, Panchkula and Faridabad of Haryana State. A sample of eight hundred students out of which four hundred girls from urban and rural area schools and four hundred boys from urban and rural area schools studying in class VIII were randomly selected from the government schools of four districts which were the representative of whole Haryana state.

**TOTAL SAMPLE SIZE = 800 CHILDREN FROM HARYANA STATE OF CLASS-VIII**

\[
\begin{array}{ccccccccc}
\text{EAST ZONE} & \text{WEST ZONE} & \text{NORTH ZONE} & \text{SOUTH ZONE} \\
\downarrow & \downarrow & \downarrow & \downarrow \\
\text{Panipat} & \text{Sirsa} & \text{Panchkula} & \text{Faridabad} \\
\end{array}
\]

**TABLE 3.1**

**DISTRICTS OF HARYANA CHOSEN FOR SAMPLE**

<table>
<thead>
<tr>
<th></th>
<th>PANIPAT</th>
<th>SIRSA</th>
<th>PANCHKULA</th>
<th>FARIDABAD</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RURAL</td>
<td>URBAN</td>
<td>RURAL</td>
<td>URBAN</td>
<td>RURAL</td>
</tr>
<tr>
<td>MALE</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>FEMALE</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
TABLE 3.2

LIST OF SCHOOLS SELECTED FOR SAMPLE

The schools selected for sample are listed below:

1. Govt. Senior Secondary School, Kharpur, Sirsa
2. Govt. High School, Kirti Nagar, Sirsa
3. Govt. Model Senior Secondary School, Sirsa
4. Govt. Senior Secondary School, Bhrokhan, Sirsa
5. Govt. High School, Ali Mohmad, Sirsa
6. Govt. Senior Secondary School, Neza Dela Kalan, Sirsa
7. Govt. Senior Secondary School, Sector - 15, Panchkula
8. Govt. High School, Sector - 19, Panchkula
9. Govt. Senior Secondary School, Raipur Rani, Panchkula
10. Govt. Senior Secondary School, Barwala, Panchkula
11. Govt. Senior Secondary School, Faridabad Tikona Park, NH2, NIT, Fridabad
12. Govt. Girls Senior Secondary School, Fridabad, P - Block, NH5, NIT, Faridabad
13. Govt. High School, Tilpat, Faridabad
14. Govt. Middle School, Saehatpur, Faridabad
15. Govt. Girls Senior Secondary School, Israna, Panipat
16. Govt. Senior Secondary School, Israna, Panipat
17. Govt. Senior Secondary School, Dahar, Panipat
18. Govt. Model Senior Secondary School, G.T. Road, Panipat
19. Govt. Senior Secondary School, Kishanpura, Panipat
3.1.9 Tools Used

"If the tools used possess all the necessary and desirable attributes, then the potential for the sound research is present".

Findings of any research study are based on data collection, which in turn, depends on the tools used. The research tools should have reliability, validity, availability, appropriateness, ease in administration.

Keeping in view the above, the following tools which are readily available and suited the requirements of the study in hand and had also been tested on the touchstone of various test requirements on reliability, validity etc. by their authors, were preferred to be employed for collection of the data for the study.

Keeping in mind these criteria, the researcher decided to go in for the following standardized psychological tools to measure Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status Scale of Elementary School Children in the present study:

1. Deo-Mohan Achievement Motivation (n-Ach) scale by Pratibha Deo and Asha Mohan (1990)
2. Group Test of General Mental Ability by Dr. S. Jalota (1972)
3. Level of Aspiration Measure (LOA) by Dr. M.A. Shah and Dr. Mahesh Bhargava (2005).
5. Scholastic Achievement Scores obtained from Annual Examination of class VII children.
3.1.9.1 DEO-MOHAN ACHIEVEMENT MOTIVATION (n-Ach) SCALE

In the present study, to test the level of Achievement Motivation of the target group, Deo-Mohan Achievement Motivation (n-Ach) Scale was selected. It has been developed by Partibha Deo and Asha Mohan. This scale consisted of 50 items as suggested by Mc Clelland and Atkinson. Out of 50 items 13 are negative and 37 are positive items. This scale is broadly based on three factors such as: (i) Academic Factors (ii) Factors of General field of Interest and (iii) Factors of Social Interest.

Under these three main factors, items relating to other sub- factors such as:-

- Academic motivation
- Need for achievement
- Academic challenge
- Achievement Anxiety
- Importance of grades/marks
- Meaningfulness of task
- Relevance of School/College to future goals
- Attitude towards education
- Work methods
- Attitude towards teachers
- Interpersonal relations
- Individual concern
• General interests
• Dramatics
• Sports etc.

• **Reliability**

  Test-retest method was applied to obtain the reliability coefficient of the scale. Taking different sets of sample, the administration of the scale was repeated on several occasions. The results are given below:

  Table 3.3
  **Reliability coefficient of Achievement Motivation Scale**

<table>
<thead>
<tr>
<th>Sample</th>
<th>N</th>
<th>Internal</th>
<th>( r )</th>
<th>Significance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed group</td>
<td>51</td>
<td>4 weeks</td>
<td>.69</td>
<td>0.01</td>
</tr>
<tr>
<td>Males</td>
<td>33</td>
<td>5-6 weeks</td>
<td>.67</td>
<td>0.01</td>
</tr>
<tr>
<td>Females</td>
<td>50</td>
<td>5-6 weeks</td>
<td>.78</td>
<td>0.01</td>
</tr>
</tbody>
</table>

  From the above Table no. 3.3, it is evident that the coefficients of reliability are sufficiently high and quite reliable for use.

• **Validity**

  As far as the validity of the scale is concerned, in the first instance the item validity established by the high-low discrimination method was accepted as the validity of the whole measure. Besides, this scale was also used for validating the projective test of achievement motivation. The coefficient of correlation between the scale and the projective test was observed to be 0.54 and with the
Aberdeen Academic Motivation Inventory of Entwistle (1968) yielding a coefficient of correlation as .75 for a mixed sample of 93. This correlation is high enough to establish the validity of the scale.

Realising the suitability of the scale as discussed above, this scale was put to use by the present researcher.

- **Scoring**

For scoring of this scale, two stencil keys are used, i.e., one for positive items and one for negative items. A positive item carries the weightage of 4, 3, 2, 1, and 0 respectively for the categories of Always, Frequently, Sometimes, Rarely and Never. The negative item is to be scored 0, 1, 2, 3, and 4 for the same categories respectively that are given above. The total score was the summation of all the positive and negative items scores. The minimum score obtained could be zero and the maximum could be 200. Thus Achievement Motivation scores of the sample subjects would be fall in between the range of 0 to 200.

3.1.9.2 GROUP TEST OF GENERAL MENTAL ABILITY BY DR. S. JALOTA

In the present study, to test the general intelligence of the target group, Group Test of General Mental Ability by Dr. S. Jalota is selected. It is standardized on 11 to 16 years children. It consists of 100 items of multiple choice questions.

- **Reliability**

In this study the Reliability of the test-scores has
been calculated by the finding of correlations between the Odd and Even halves scored by the tested population. These correlation coefficients were corrected for length with the Spearman-Brown formula, and are given in Table 3.4. The reliability coefficients found in this study are uniformly high for all the classes targeted in this study. So we can recommend the final version of the Revised Test (72) as quite reliable for the 8th, 9th and 10th classes. From our past experience, we know that such a test is equally suitable to the assessment of the under-graduate classes in the colleges and universities of the Hindi speaking areas. So we anticipate the same utility with the revised test.

**Table 3.4** showing ODD-EVEN item scores correlation as a measure of empirical reliability corrected for length.

<table>
<thead>
<tr>
<th>Class</th>
<th>VIII</th>
<th>IX</th>
<th>IXa</th>
<th>IXb</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>335</td>
<td>379</td>
<td>201</td>
<td>178</td>
<td>363</td>
</tr>
<tr>
<td>r_{oe}</td>
<td>703</td>
<td>873</td>
<td>906</td>
<td>845</td>
<td>908</td>
</tr>
<tr>
<td>r_{tl}</td>
<td>877</td>
<td>932</td>
<td>953</td>
<td>916</td>
<td>979</td>
</tr>
</tbody>
</table>

- **Validity**

  The validity of the Revised Test has been reported on the basis of a factor-analysis of the inter-element scores, which gave a pattern of three centroid factors. When obliquely rotated to simple structure, these exhibited an identification of the Verbal, Numerical and Reasoning
factor (New trend in Education, Chandigarh, 1973, April, 4-6). Further, we tried to determine the contributions of the V, N and R subtests to the total score of the final revised version. We have reported the results of Multiple correlation (R) study with one group of 178 students of the 10th class. By now, we have further obtained the results of 363 students of the 10th class, and another, 379 of the 9th class (Table 3.5 and 3.6). In both cases while the coefficients of non-determination are quite low; the contributions of the specific Verbal Numerical, and Reasoning components, indicates a fair distribution in the data of our standardization sample.

**Multiple correlations of class x students**

Table 3.5 Showing inter-correlations between the V, N, R and the Total score for a group of 363 students of Xth class.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>.683</td>
<td>----</td>
<td>.582</td>
<td>.620</td>
</tr>
<tr>
<td>N</td>
<td>.599</td>
<td>----</td>
<td>----</td>
<td>.491</td>
</tr>
<tr>
<td>R</td>
<td>.874</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

\[ R^2 = 1.234 = .1045 + .6287 = .8135 \]

Coefficient of Multiple non-determination = .1865

Contribution of V = 10.45% ; N = 10.03% ; R = 60.87%

[1 = Total; 2 = Verbal ; 3 = Numerical; 4= Reasoning]
Multiple correlations of class IXth students

Table 3.6 for 370 students, IXth class.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>.9033</td>
<td>----</td>
<td>.5841</td>
<td>.6386</td>
</tr>
<tr>
<td>N</td>
<td>.8004</td>
<td>----</td>
<td>----</td>
<td>.5913</td>
</tr>
<tr>
<td>R</td>
<td>.8565</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

R² 1.034 = .3284 + .2337 + .4264 = .9885
Coefficient of Multiple non-determination = .0115;
Contribution of V=32.84%; N=23.37%; R=42.64%

• Norms

Norms refer to the assessment of the average student of a particular age and education. The data from a large population is more useful to determine the relative position of any individual of a given age and educational group. This is most conveniently obtained by comparing a given score with the actual scores found for the percentile position in the standardization sample. In such cases, the score for the 50th or 60th percentile means that the said score is above the 50% or the 60% members of the group. The relatively unsophisticated users of our tests find the Table of percentile norms quite useful.

Scoring of Group Test Of General Mental Ability

The scoring was done according to the manual of Dr. S. Jalota of Group Test of General Mental Ability. The test consist of 100 items of multiple choice question type. The respondents were given a separate response sheet.
According to their obtained scores their I.Q. was find out and classification was done.

3.1.9.3 LEVEL OF ASPIRATION SCALE BY DR. M.A. SHAH AND DR. MAHESH BHARGAVA

This measure of Level of Aspiration by Shah and Bhargava is a non-verbal test based on coding method. 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 c.m. 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) where as 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. The respondents are required to draw four lines in these circles, so that they may appear like human face work from left to right across the rows and then proceed to the next line. For each trial, 30 seconds are allotted for work and at the end of this time they are 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 respondents are asked to do the same thing along with to
put the number of faces in the upper box which they intend to complete within 30 seconds time on the basis of last actual performance. Thus, the respondents have to complete 10 trails for actual work.

**DETERMINANTS OF LEVEL OF ASPIRATION**

Level of Aspiration is usually influenced by two types of factors environmental and personal. In early childhood, before the child is old enough to know what his abilities, interests and values are, his aspirations are largely shaped by his environment. As he grows older and is more aware of his abilities and interests, personal factors have a greater influence, but may of his aspirations, his values, for example are still environmental in origin.

**Environmental Determinants**

(i) **Parental Ambitions** – Parental ambitions influence the Level of Aspiration of the child. Parents always expect more for the first born, and therefore the Level of Aspiration may be higher for the first born than that of those born later.

(ii) **Social Expectations** – Society expects more from some people than others. It is generally assumed that one who is successful in a particular area may also be successful in other areas if he wishes.

(iii) **Peer Pressure**– Friends may encourage or discourage a child for any thing. If they encourage him, it is possible that he will develop a tendency of high goal setting.
(iv) **Culture** – Cultural traditions are important factors for setting the goal better and rich culture background helps a child in fulfilling high expectations.

(v) **Social value** – It also varies with the area of achievement. Social rewards and prestige and also as a reinforcer.

(vi) **Competition** – Competitions with siblings and peers in the hope of showing better than others is also an affecting factor for Level of Aspiration.

(vii) **Group Cohesiveness** – It is also considered as a determinant of goal setting. One does better and sets high goal when he is acting in a group.

**Personal Determinants**

(i) **Wishes** - If one’s need to achieve something or he has high Achievement Motivation, his Level of Aspiration for achieving will be higher, and thus his wishes influence the Level of Aspiration.

(ii) **Personality** – The personality characteristic also determine the kind and strength of his aspirations.

(iii) **Past Experiences** – The previous success strengthens one’s aspirations whereas failure weakens it.

(iv) **Values and Interest** – Personal values and interest also determine the extent of Level of Aspiration.

(v) **Sex** – It is generally found that boys have higher aspirations than girls because of their different interests, likings, goals and expectations of family and society.
(vi) **Socio-Economics Background** – It is noticed that middle and upper groups have higher degree of aspirations than those of lower group.

(vii) **Racial Background** – Minority groups aspire higher than majority group. It is just a sort of compensation in the part of minority groups.

**Reliability**

The reliability of this measure calculated by the test-retest method and the split half method (correlating with the first half with a second half trials). Here the questions of inter-judge reliability does not arise.

**Reliability of the measure**

**Table-3.7**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Methods</th>
<th>N</th>
<th>GDS</th>
<th>ADS</th>
<th>NTRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Retest Method</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>With gap of one month</td>
<td>100</td>
<td>.88</td>
<td>.82</td>
<td>.86</td>
</tr>
<tr>
<td></td>
<td>With an interval of 3 month</td>
<td>60</td>
<td>.72</td>
<td>.72</td>
<td>.74</td>
</tr>
<tr>
<td>2</td>
<td><strong>Split Half Method</strong></td>
<td>60</td>
<td>.77</td>
<td>.69</td>
<td>.78</td>
</tr>
</tbody>
</table>

**Validity**

Investigator tried to find out the validity co-efficient with few task and available allied tests of aspirations and it is obtained in the Table.
### Validity of co-efficient measure

**TABLE-3.8**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>External validity criteria</th>
<th>N</th>
<th>GDS</th>
<th>ADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Card Sorting Tray Tasks</td>
<td>30</td>
<td>.58</td>
<td>.52</td>
</tr>
<tr>
<td>2</td>
<td>Ansari and Ansari : The L.A. Coding Test</td>
<td>60</td>
<td>.73</td>
<td>.68</td>
</tr>
<tr>
<td>3</td>
<td>V. P Bhargava: Level of Aspiration (Based on Coding Method)</td>
<td>60</td>
<td>.67</td>
<td>.62</td>
</tr>
<tr>
<td>4</td>
<td>J.S.Grewal: Occupational Aspiration Scale</td>
<td>60</td>
<td>.76</td>
<td>.65</td>
</tr>
<tr>
<td>5</td>
<td>Sharma and Gupta: Educational Aspiration Scale Form V</td>
<td>60</td>
<td>.48</td>
<td>.56</td>
</tr>
<tr>
<td>6</td>
<td>Doe Mohan Projective Test of Achievement Motivation (n-ach) Male Group</td>
<td>40</td>
<td>.72</td>
<td>.67</td>
</tr>
<tr>
<td>7</td>
<td>Doe Mohan Projective Test of Achievement Motivation (n-ach) Female Group</td>
<td>40</td>
<td>.78</td>
<td>.73</td>
</tr>
<tr>
<td>8</td>
<td>T. R. Sharma: Academic Achievement Motivation</td>
<td>80</td>
<td>.84</td>
<td>.76</td>
</tr>
</tbody>
</table>

Since all the obtained r values between the present measure of level of aspiration and different external criteria are found significant at 0.01 level hence the test is having the satisfactory validity.

- **Scoring of Level of Aspiration Measure**

The procedure of scoring of the Level of Aspiration...
Scale is very easy. It provides three types of scores:
(i) Goal Discrepancy Score (GDS)
(ii) Attainment Discrepancy Scores (ADS)
(iii) The Number of Times the Goal Reach Score (NTRS).

3.1.9.4 SOCIO-ECONOMIC STATUS SCALE (SESS) BY UPADAYA AND SAXENA

For the present study the investigator has selected the SES scale by Upadhya and Saxena. The present scale is intended to measure the SES of students of both rural and urban areas. The scale consists of 31 items in five parts related to:

(1) Personal information
(2) Family
(3) Education
(4) Income and
(5) Others (cultural material possessions).

Items were selected on the basis of social and economic needs of individuals of different strata and also on the basis of cultural material symbols which affect individual's Social-Economic Status.

• Reliability
  On 109 students of secondary school, the test retest reliability was found to be 0.83.

• Validity
  The validity of this scale was computed by correlating with SESS of Shah (1986). It was found to be 0.78. This
scale was also valid in terms of the known group administration (N=22 for high SES group and N=18 for low SES group respectively) as it was found to measure high (by 95 per cent of correctness) and low (by 95 percent of correctness) Socio-Economic Status appropriately.

- **Administration and Scoring**

  Administration of SESS is very easy. There is no time limit but students generally take 20-25 minutes to complete it. Response is scored according to the scoring key provided in the SESS.

**3.1.9.5 SCHOLASTIC ACHIEVEMENT:**

Scholastic Achievement in ordinary sense refers to the learning outcomes of students in various subjects of curriculum in the educational situations. In the present study Scholastic Achievement implies the scores drawn from the total achievement test, i.e., considering the total marks obtained in all subjects at previous examination. As the sample of the present study comprise class VIII students and therefore, their achievement in the annual examination of class VII will be taken as their Scholastic Achievement. Further, the marks of three subjects, i.e., Maths, Science and Hindi were taken as Scholastic Achievement of their respective subjects.

**3.2 PROCEDURE OF DATA COLLECTION**

After selecting the sample and deciding the tools and techniques for data collection, arrangements were made to carry out the administration of tests in the institutions. The investigator visited all the schools personally for the
administration of tools and collection of data. The principals were contacted for this purpose in advance. The whole plan of the administration of test was settled with them. After meeting the principals personally, the investigator settled with them the specific time and date for the administration of the tests. The time for the work was sought during the working hours. First, because the students may not do it lastly in a hurry to go back to home. Secondly, so that they may not take it as a task disinterestedly.

Three days before the beginning of the task of data collection, the investigator again contacted to all the principals /teachers and requested them that this being a research works, all possible facilities are provided for successful completion. The principals and the concern teachers helped the investigator in every aspect and made suitable arrangements for the conduct of the study. They agreed to leave the students at the disposal of the investigator.

The investigator reached the institution a little before the schedule time and met the teachers through principals. The investigator explained the whole of the programme and purpose of the study to the teachers as well. Seating arrangement was made. The investigator then took charge of the whole class. The investigator instructed the students to do the assignment carefully. Before the students attempted at the tests, instructions were made clear with regard to each test used in the study. They were also informed that their academic result would not be affected
as it was only an exercise for research purpose and their responses would be kept strictly confidential. Hence they should be free and frank, honest and sincere in attempting the questions. They were informed the time limit before giving response to questions. The confidence and cooperation of the subjects was secured by developing a good rapport with the subjects, and then the tests were administered.

The data was collected in different phases. In the first phase Deo Mohan Achievement Motivation Scale was administered. Group Test of General Mental Ability was given in the second phase. In third phase Level of Aspiration Scale was administered. Socio-Economic Status Scale was administered in the fourth phase. Thus the tests were administered under proper testing conditions. Then the investigator got all the tests get filled from the respondents.

During the test, the researcher explained the meaning of difficult words to the students from time to time. The researcher was very cautious about omitting questions. Therefore, helped the students and requested them to answer the questions patiently and carefully. The investigator discouraged the tendency to change answers.

In this way, the investigator collected all the tests together and thanked the students and their teachers for their kind cooperation. The same procedure was followed in all the institutions. Further, the Scholastic Achievement of students in the previous annual examination, i.e., class VII, were taken from the school records, so as to assess
their Scholastic Achievement. In this way, the data was collected from 800 students studying in government schools of class VIII.

3.3 STATISTICAL TECHNIQUES USED

The data was analysed with the help of two statistical techniques, i.e., Coefficient of Correlation and Critical Ratio (t-test). Coefficient of correlation was used to find out the relationship of Scholastic Achievement with Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status of Elementary School Children. And secondly, critical ratios were calculated to find out the significance of difference between the mean Scholastic Achievement as a whole and subject-wise (Mathematics, Science, Hindi) scores of different groups (high and low) of Elementary School Children in relation to their Achievement Motivation, Intelligence, Level of Aspiration and Socio-Economic Status. After making necessary calculations the data was summarized and interpreted. The same is discussed in the next chapter.