Chapter - III

Methodology
In any discipline whether it is science, social science, commerce or humanities etc., methodology plays a leading role in carrying out the study systematically and objectively to be more scientific in nature. Research as defined by Redman and Mory (1923) is “a systematized effort to find out the solution of the problem”. These efforts require certain techniques to be followed properly. Methodology is a total sum of these techniques / steps being carried out by a researcher in order to find out the real dynamics operating for any problem and behavioral outcomes. Mounton and Marais (1993) defined methodology as “the logic of the applications of scientific methods to the investigation of the phenomena”. It is a kind of decision making process in which researcher has to select the appropriate model, sampling techniques, measuring instruments and data analysis methods, suitable for selected problem. However, the objectivity of the scientific investigation is contingent upon the accuracy of research methodology adopted by the researcher.

Formulation of research problem is followed by research design – the scientific procedure within which research is conducted in a smooth and unbiased fashion. Sellizer et al (1962) pointed out that “research design is the arrangement of conditions
for collecting and analyzing the data in a manner that aims to combine relevance to the research purpose with economy in procedure”, it is a kind of architecture prepared in advance by the researcher with minimum expenditure of time, money and other requirements. As per Mohsin (1984) view “research design contains a built-in system of checks against all factors that might affect the validity of the researcher outcome”.

In the light of the above facts and also the nature of the present research problem the following steps were taken for enhancing the efficacy and objectivity of the research endeavours.

SAMPLE

Sample is the portion of the entire population or universe of a certain kind of objects. Thus, for making findings more generalized to over-all population, it is essential that sample must possess almost all the qualities and characteristics of the population or universe selected for the investigation. More over, the selection of the sample should be dependent upon the very objective of the research problem. In the present proposed study school children of class IX and X from City High School (Boys) & general Girls High School, A.M.U., were chosen for studying
the "Influence of School environment reading habit and self concept on scholastic achievement – an HRD approach for School children".

The sample consisted of N=412 children who were taken from different sections of class IX and X. The break-up of the sample given in the Table.

**Table Showing Sample Break-Up:**

<table>
<thead>
<tr>
<th>Sample Groups</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class IX</strong></td>
<td></td>
</tr>
<tr>
<td>Boys (Urdu/Hindi Medium)</td>
<td>n = 62</td>
</tr>
<tr>
<td>Boys (English Medium)</td>
<td>n = 64</td>
</tr>
<tr>
<td>Girls (Urdu/Hindi Medium)</td>
<td>n = 51</td>
</tr>
<tr>
<td>Girls (English Medium)</td>
<td>n = 44</td>
</tr>
<tr>
<td><strong>Class X</strong></td>
<td></td>
</tr>
<tr>
<td>Boys (Urdu/Hindi Medium)</td>
<td>n = 52</td>
</tr>
<tr>
<td>Boys (English Medium)</td>
<td>n = 51</td>
</tr>
<tr>
<td>Girls (Urdu/Hindi Medium)</td>
<td>n = 49</td>
</tr>
<tr>
<td>Girls (English Medium)</td>
<td>n = 39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>N = 412</td>
</tr>
</tbody>
</table>

**DESCRIPTION OF TOOLS**

In behavioral sciences measurement have always been considered a very complex task but an inevitable means to understand human experience and behaviour. Among the various method used in behavioural sciences especially in psychology, questionnaire method in understanding or giving information
about certain issues and problem is considered as most
convenient method pertaining to questionnaire, it is imperative to
mention that without ascertaining the efficacy of the tools,
reliable results can’t be obtained, therefore, standardization of
the psychological tool is necessarily a prerequisite.
Standardization of psychological test involves item analysis,
ascertaining reliability and validity. In this regard it is
immensely important to mention that whatever the tools have
been used in quest of studying the present problem the
psychological tools were standardized before administration.

The description of the various tools used in this
investigation is being given below:

READING HABIT SCALE (R.H.S.)

This scale was developed by researcher. Before framing the
items for the scale, literature on reading habit were thoroughly
studied and experts’ opinions were sought that lead to identify
the dimensions and formulating the statements. The numerous
dimensions which were identified are: Readiness and
Preparedness, Note taking habit, Help seeking behavior, Fixing
priorities, General Habit attitudes, Concentration and Schedule.
Items related to these dimensions were framed in the form of
statements in simple easy and highly Indianized English language and in all there were 27 items. There after scale was administered on N = 412 school children, with instruction to rate their agreement or disagreement with the statement on a 5 point Likert type scale, ranging from '5' for Strongly Agree, to '1' for Strongly Disagree.

**SCHOOL ENVIRONMENT SCALE (SES)**

School Environment Scale was developed consisting of 30-item scale, based on 8-dimensions, was developed by the present researcher by opting the same procedures that were taken in the development of reading habit scale. The 8-dimensions of the scale are: Attitudes towards teacher, Attitude towards administration, Teacher caring attitude for students, Attitude towards classmates, Extra Curricular activities, Teacher-taught relationship, Home-work, student’s attitude towards school.

Responses were measured on Likert type 5 point scale viz, S.Agree ‘5’; Agree ‘4’; Undecided ‘3’; Disagree ‘2’; Strongly disagree ‘1’

**CHILDREN’S SELF CONCEPT SCALE (CSCS)**

In order to assess self-concept of school children a self-
developed scale was used. This questionnaire consisted of 80-items. Out of which items were negatively phrased. In self-concept there were 6-dimensions: Behaviour, Intellectual and School status, Physical appearance and attributes, Anxiety, Popularity, Happiness and Satisfaction. These dimensions were taken from Dr. S. P. Ahluwalia's (1986) Children's Self-Concept Scale (CSCS). Each item was measured on 2-point scale, viz., ‘YES’ (✓) ‘No’ (x). In the scale there are 14 lie items to detect whether the children have filled it accurately or not. The scale items are scored in a positive or negative direction to reflect the evaluation dimension.

**BIOGRAPHICAL INFORMATION BLANK (BIB)**

Biographical Information Blank was prepared for recording biographies of students viz., Name, Class, Section, age, sex, School, Father’s profession, Father’s qualification, Mother’s profession, Mother’s qualification, No. of brothers/Sisters and percentage was also incorporated in the Biographical Information Blank.

It is highly pertinent to mention here among the three described in the preceding pages, two were solely constructed by the researcher for the purpose of attaining the objectives of this
larger study leading to the degree of doctor of philosophy. In the development of scales all possible cares were taken to maintain the efficacy and objectivity of the scales. In spite of this fact there would have been certain non-perceptible errors, which can be removed after getting these errors identified in the future endeavours.

STATISTICAL ANALYSES

Once the data collected from the respondents, then it requires certain kind of statistical treatment to reduce long widespread scores into intelligible and interpretable form, so that results can be easily and conveniently understood. Analysis means categorizing, reducing, and summarizing data to obtain results of research problems (Kerlinger, 1984).

Different types of Statistical techniques are available which can be sorted out for statistical treatment, keeping in view the nature and objectives of the research problem. In the present context where the study was aimed to see the "Influence of School environment reading habit and self concept on Scholastic achievement- An HRD approach for schoolchildren", Stepwise Multiple Regression, method of statistics was found best suited for analyzing the data and obtaining the appropriate results.
Multiple Regression method is quite flexible to access two or more predictors (IVs) at a time to see their influence on criterion variable (DV). This method not only tells us about the relationship between dependent and independent variables but also the nature of the relationship i.e., the contribution of predictors (IVs) to criterion variables (DV). In stepwise method predictors enter to the equation step wise one after the other on the basis of their highest correlation with criterion variables. This process continues until no more useful information is obtained from the further addition of predictors.