CHAPTER - III
PLAN AND PROCEDURE

The plan and procedure of a research involves design, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme of the research. It includes an outline of everything that the researcher will do from writing the hypotheses and their operational implications to the final analysis of data.

Research design provides framework for adequate tests and relations among variables. The plan tells, in a sense, what observations to make, and how to analyze the quantitative representations of the observations. Research plan also suggests the directions of observations and analysis. A plan furthermore, tells what type of statistical analysis to use and outlines possible conclusions to be drawn from the statistical analysis.

This study aims to evaluate the Computer Aided Learning (CAL) Programme under SSA at elementary level in government schools of Haryana. This chapter deals with the method of study, the sample selected, tools used, procedure for data collection, and the statistical techniques applied to accomplish the objectives of the study. Hence, the following sequential order constitutes plan and procedure of present research.

1. Methodology of the study
2. Population and Sample
3. Tools used
4. Collection of data
5. Scoring of data
6. Statistical technique used.

3.1 RESEARCH METHOD OF THE STUDY

The purpose of present study was to evaluate the existing CAL programme of Sarva Shiksha Abhiyan in Haryana. Therefore, in order to know upto what extent the objectives of this programme had been achieved and how far this scheme had been
implemented in elementary schools and what types of difficulties/problems were being faced by the heads/school teachers during the implementation of Computer Aided Learning (CAL) Programme, the researcher used the Descriptive Survey Method, which seemed to be most appropriate to undertake such type of investigation.

Descriptive survey method attempts to describe and interpret what exists, in the context of CAL programme under Sarva Shiksha Abhiyan at elementary school level at present in the form of conditions, practices, processes, trends, effects and attitudes etc. It is concerned with the phenomenon that is typical of normal condition. This method helps researcher in investigating conditions or relationships that exist, practices that prevail, points of view that are held, processes that are going on, influences that are being felt and trends that are developing. This is an organized attempt to analyses, interpret and report the present status of a social institution, group or area. Descriptive studies involve measurement, classification, analysis, comparison and interpretation of the phenomenon. Kerlinger (1983) states that "Survey research is probably best adopted to obtain personal and social facts, beliefs and attitudes. It is significant that although hundreds of thousands of words are spoken and written about education and about what people presumably think about education, there is little dependable information on the subject. We simply do not know what peoples' attitudes toward education are". Thus, in order to know the heads and teachers' opinions/views about the adequacy of infrastructural facilities and financial inputs, effect of these infrastructural facilities and financial Inputs regarding qualitative improvement in the elementary education, difficulties/problems faced by them and suggestions for proper utilization of these infrastructural and financial inputs for the promotion of elementary education in Haryana, the survey method seems to be best suited.

3.2 POPULATION AND SAMPLE OF THE STUDY

The present study was carried out in order to evaluate the CAL programme of Sarva Shiksha Abhiyan in Haryana. Therefore, all the Government schools of Haryana, where computer aided learning (CAL) programme was being implemented, at elementary school stage, under SSA, constituted the population of the present study.
For drawing the sample of the present study, at the first stage, nine districts namely Bhiwani, Hisar, Ambala (of academic session 2010-11), Kaithal, Sonipat, Jind (of academic session 2011-12), Rohtak, Yamunanagar and Rewari (of academic session 2012-13) were selected randomly. At the second stage, 72 upper primary schools—eight from each sample district—were selected on purposive basis as per the provision of Computer Aided Learning Programme (under SSA) in those concerned schools. At the third stage, 01 computer teacher and 01 Head Teacher each of those 72 schools (72×2=144) along with 05 students each of those sample schools (72×5=360) were also selected on random basis for the sample of the present study. (A list of 72 sample schools is given in the Appendix-I)

Description of the sample of present study is given in the following flow chart.

3.2.1 Flow chart highlighting the description of the sample

FLOW CHART OF THE SAMPLE

State Haryana

Academic session 2010-11

Distt. Hisar

Distt. Bhiwani

Distt. Ambala

24 schools, 8 schools each of Distt. Bhiwani, Hisar and Ambala (8×3=24)

Academic session 2011-12

Distt. Sonipat

Distt. Kaithal

Distt. Jind

24 schools, 8 schools each of Distt. Kaithal, Sonipat and Jind (8×3=24)

Academic session 2012-13

Distt. Yamunanagar

Distt. Rohtak

Distt. Rewari

24 schools, 8 schools each of Distt. Rohtak, Yamunanagar and Rewari (8×3=24)

Total 72 schools 8 schools each from 9 sample district (9×8=72)

72 Head Teachers 01 Head Teacher each of 72 sample school

72 Computer Teachers 01 Computer Teacher each of 72 sample school

360 Students 5 Students each of 72 sample school (72×5=360)
3.3 TOOLS USED

After the selection of the sample the next step was to go for suitable tools for the collection of data. In the present study, for the purpose of collecting data, the following tools were used.

- **A self-developed Observation schedule**
  It was used to record the information related to different aspects of CAL programme being implemented in government schools (included in the sample of the study). On the basis of the information recorded on this schedule, the responses of the sample subjects were also cross checked, besides other relevant information related to CAL programme. The copy of the observation schedule is given in Appendix-II

- **A self-developed Non-directive interview schedule**
  It was developed for collecting data regarding Computer Aided Learning (CAL) programme being implemented (under SSA) in sample government schools of sample districts of Haryana.

  The description of process followed for developing this non-directive interview schedule is given as under:

  Firstly, the researcher consulted and studied the document Sarva Shiksha Abhiyan (SSA) Framework for Implementation, Ministry of Human Resource Development (MHRD), Department of School Education & Literacy, Government of India and CAL programme (under SSA) in particular. Thereafter, the research studies conducted on CAL programme were also reviewed thoroughly in order to have clarity regarding the different aspects of Computer Aided Learning (CAL) Programme covered under those studies as well as tools and techniques developed / used for evaluating / studying CAL programme which was considered to be of upmost importance for developing relevant and valid tool for the present study. Thereafter, the researcher visited 10 Government CAL schools of district Sonipat to get first-hand experience with regard to actual implementation/ status of CAL programme in govt. schools. After this background, as per the objective of the study, the researcher framed items for development of the tool, i.e., non-directive interview schedule.
As many as 29 items were framed and submitted to subject experts, who were well acquainted with Computer Aided Learning (CAL) programme of SSA. The experts were requested to review / finalize those items only which were relevant in the context of objectives of the research study / different aspects of computer aided learning (CAL) programme of SSA taken up for research study. After getting the suggestions of experts in the context of items of the draft of the non-directive interview schedule, the needed modification was done. Thereafter, this draft was submitted to language experts with request to correct / modify the items from the point of language / expression in order to overcome ambiguities, if any, in the items so as to ensure the objectivity therein the items. After getting suggestions of language experts regarding items of the draft of non-directive interview schedule, needed modification was done in the items in the light of the language experts’ views / suggestions. And draft of non-directive interview schedule was finalized and prepared accordingly. The researcher visited 10 Government CAL schools of Sonipat district for the field try out of the non-directive interview schedule. After actual administration of the non-directive interview schedule on Heads Teachers, Teachers and Students of those 10 CAL schools researcher further modified that non-directive interview schedule in the light of responses/ ambiguities indicated by the respondents of those 10 schools in the context of each and every item. In this way the final draft of non-directive interview schedule was prepared and on the basis of aforesaid procedure of development of non-directive interview schedule, face validating of this tool was also ascertained.

Finally, the modified non-directive interview schedule contained 50 items related to the different aspects: (I) Infrastructural facilities available in schools for CAL. (II) Availability of number of computers in working order in schools. (III) Availability of Accessories/ equipments for computers. (IV) Availability of teachers, in position, having working knowledge of computers. (V) Provision of period in time table for CAL. (VI) Regular teaching learning in schools through CAL. (VII) Timely supply of CAL Grant for schools in CAL districts, of CAL programme under SSA. (VIII) Problems faced/ being faced by the Head Teachers, Teachers and Students of CAL schools. The copy of this non-directive interview schedule is given in Appendix-III.
3.4. COLLECTION OF DATA

A self-developed Observation Schedule and a self-developed Non-Directive Interview Schedule was used for collecting data of the present research study.

3.5. SCORING PROCEDURE

For the purpose of scoring of the data the researcher counted the total number of 'Yes' / 'No' responses and percentages were calculated accordingly.

3.6. STATISTICAL TECHNIQUE(S) USED

For the purpose of analysis of data of the present study, the percentage method was applied.

In order to analyse data, besides cross checks through observation schedule, the percentages were calculated for each item of the non-directive interview schedule on the basis of responses (in 'Yes' / 'No') of the respondents / sample subjects.