

Chapter III

Research Procedure and Data Collection

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Chapter III

Research Procedure and Data Collection

3.1 Introduction:

The research design is the detailed plan of an investigation. In fact it is the blue print of the detailed procedure of testing the hypotheses and analyzing the obtained data. The research design may be defined as the sequence of those steps taken ahead of time to ensure that the relevant data permits objective analysis of the different hypotheses formulated with respect to the research problems.

Research design refers to the systematic scheduling of the time at which treatment is administered to subjects and at which observations are made on the performance of the subjects. This careful scheduling of the treatment and observations can be very helpful in reducing the threats to internal validity of research.

3.2 Design of the Study:

The design followed for the study is Ex-Post-Facto two group design. The inputs of Head Start were being given in the Head Start schools since its launch in November 2000. The students in Head Start schools were being taught through CAI, whereas the students in the Non-Head Start schools were being taught through traditional method. The effect of CAI on students' achievement is analyzed by comparing it with the achievement of other students who did not receive computer assisted instructions.



3.3 Sample:

The technique of selecting the sample together with its size is an important aspect of any kind of research. The appropriately chosen sample size enhances the reliability and validity of research findings. Commonly used sampling methods are random sampling, stratified sampling and purposive sampling.

For conducting the present study, keeping in view the limitation and resources available with the researcher, the method of purposive sampling has been used. Purposive sample includes those groups which are selected mainly because they are easily and readily obtainable.

The present study was conducted on four sub-samples belonging to

1. Urban Head Start.
2. Rural Head Start
3. Urban Non- Head Start
4. Rural Non- Head Start

Thus fulfilling both locale and intervention criteria. The size of each sub-sample depended purely on the enrolment and attendance of the students in class VI in respective schools. Two Jan Shiksha Kendras were selected from the urban area of Chattarpur district and two Jan Shiksha Kendras were selected from the rural area of Chattarpur district, where, in all four of them, inputs of Head Start program were being given since, November 2000, the launch of first phase of the programme. Four governments school, two each, from urban and rural area were selected, where Head Start interventions are not given and teaching goes in a traditional way without any additional inputs being given in the process. A preliminary sample of 125 students, in total of all sub-samples, was obtained, to which the instruments were administered. But due to inadequacy in responding on the part of certain individuals in either one of the tools, data obtained from 18 students were rejected and results of only 107 students were analyzed for the final results.



Table 3.1 Sample of the study

Intervention	Locale	Name of the school	Number of students	Total number of students
Head Start	Urban	1. Middle School, Dharmshala, Naugaon.	15	30
		2. Adarsh Middle School, Chattapur.	15	
	Rural	1. Government Middle School, Brijpura.	13	26
		2. Middle School, Goregaon.	13	
Non-Head Start	Urban	1. Government Middle School, Gurudwara, Chattapur.	15	28
		2. Government Middle School, Naugaon.	13	
	Rural	1. Middle School, Darriya, Naugaon.	11	23
		2. Government Middle School, Mau	12	



3.4 Instruments Used:

Selecting appropriate tools in the study is another important aspect of any research study. Some times, the researcher uses tools which has been constructed by others and are standardized; some times the researcher has to construct tools for the purpose.

Keeping in view the objectives of the study, the investigators constructed two tools. One was the "Achievement Test in English Language" (ATEL) for obtaining the achievement scores of the students on precise components of English Language; the other one was an inventory, an opinionnaire, for obtaining students opinion towards the inputs being provided in the Head Start programme titled "Opinionnaire to Study Students opinion Head Start Interventions" (OPINIONNAIRE).

3.4.1 Achievement Test in English Language (ATEL):

A. Construction of the Achievement Test in English Language

The syllabus of English language for class VI was analyzed and identified for preparing the test of English language. These components were those which had been identified by English Language Teaching Institute (ELTI), SCERT as hard spots and compiled in the report titled "Sandhan" which was given to the teachers to lay emphasis on these components while teaching. The Head Start cell developed CD-based Multi Media Rich Lessons (MMRLs) on these components and supplied these CDs to the teachers of Head Start JSKs, for using these CDs as interventions while teaching. The components were,

1. Alphabetical knowledge.
2. Knowing animals.
3. Identifying colours.
4. Knowing body parts.
- ✓ 5. Sentence formation.
- ✓ 6. Phonetics.



In the first draft 25 items were written by the researcher. These were given to two teachers who were teaching English to class VI in government school. Then the achievement test edited by the two teachers was discussed with the supervisor. On the basis of the suggestions it was again modified. The modified version contained 20 items. Each item, in all components was scored for maximum 5 marks, thus making the questionnaire total to a maximum of 100 marks. The questionnaire was given a time limit of 1 1/2 hours. The time limit was decided so, keeping in view, that English language has been implemented in the schools of state just 2 years back and the students of class VI do not have much practice and exposure to the language. To provide them ease of answering the questions to their optional knowledge, the question pattern was varied in nature, consisting of – Match the Columns, Joining the Dots, Choosing the Odd One Out, Searching the Matrix, Very Short Answers and Short Answers. This test was judged in a try-out described in the later part of this chapter.

Appendix 1

3.4.2 Opinionnaire to Study Students' Opinion towards Head Start Interventions

The opinionnaire, in the first draft contained 18 items, which was given to experts for their judgment. After the consultations with supervisor 15 items were finalized which aimed to obtain a view of students towards the interventions being given in "Head Start" programme. This was a 3 point rating scale, where the students either agreed or disagreed or were not sure of the opinion on each item. The opinionnaire comprised of ten positive statements and five negative statements about the interventions of the "Head Start" programme. The statements in this opinionnaire concentrated mainly on knowing about the Computer Assisted Instruction as an intervention of the Head Start programme.

Appendix 2



3.5 Try-out:

In an attempt to establish reliability of the tool, for the purpose of the study, the tool was administered on 10 students of class VI of a government school of Obaidullahganj, a sub-urban locale. This sub-urban locale was selected with the view point that the tool, thus tried out, will be appropriate for administration on students of both, urban and rural locale. Due to time and resource constraints, it was not possible for the researcher to try-out the tool on the students of both the locales separately.

When the tool was administered, firstly it was revealed that the students could not understand the directions and questions clearly and failed to answer the questions. After probing the students with their teachers it became known that the students were not well conversant with the English language, so as to understand all the directions and questions clearly. The reason for this being, although the policy implications have the introduction of English language as a subject from class I itself, since two years, the students who are in class VI, started learning English language from class V only. They haven't had the exposure to English learning earlier, this policy being just two years old in implementation.

After confirming the found facts from the State Council for Educational Research and Training (SCERT), the tools were re-written in a translational approach. These re-written tools were then administered for the try-out on the same set of 10 students.

3.6 Data Collection:

Data was collected with the help of the tools described in the preceding section. The tools were administered personally by the researcher, spread over two sessions in the same day, in each Head Start school, and one session in Non-Head Start school. In the Head Start school both the tools OPINIONNAIRE and



ATEL were administered, where as, in the Non- Head Start schools only ATEL tool was administered.

The researcher first, established a rapport with the staff and then the students in each school. After taking the students into confidence, they were motivated to answer the questions in the tool, with ease and honesty. The students were psychologically prepared by the researcher, to do their utmost, to sincerely respond to the tool items and to leave none unresponded. Students were assured that the tasks were a measure of their intelligence, but only an assessment of, how Head Start interventions helped them. They were also assured and reassured that the whole process had nothing to do with their school achievement.

The interventions to each tool were given on test sheets, but these were further reinforced by having them read out to the students before they were told to start answering. An example of each item, which was given in the test, was illustrated on the blackboard also, to make sure the students understood it fully.

The inventory for gathering opinion was administered in the first session in Head Start schools. After an interval of 1 hour, the ATEL tool was administered for collecting the achievement scores of the students. The time given to the students for answering the questions of the tools OPINIONNAIRE and ATEL was 45 minutes and 1 hour 30 minutes respectively. At the end of the task of administering the two tools or one tool (depending upon the school being Head Start or Non- Head Start) the conditions, of all the schools, under which the data was collected, like the physical facilities of the schools, material availability with the students etc. were noted, an observation, before the data was collected. It was assured that these conditions in all the schools were at par. Table 3.2 gives the detailed schedule of data collection.



TABLE 3.2. Schedule of collecting data from the schools:

Intervention	Locale	Name of the school	Tool administered	Date
Headstart	Urban	1. Middle School Dharamshala, Naugaon	1. OPINIONNAIRE 2. ATEL	13.02.03
		2. Adarsh Middle School, Chatarput	1. OPINIONNAIRE 2. ATEL	14.02.03
	Rural	1. Government Middle School, Brijpura	1. OPINIONNAIRE 2. ATEL	15.02.03
		2. Middle School, Goregaon	1. OPINIONNAIRE 2. ATEL	17.02.03
Non-Headstart	Urban	1. Government Middle School, Gurudwara, Chattapur.	1. ATEL	18.02.03
		2. Government Middle School, Naugaon.	1. ATEL	19.02.03
	Rural	1. Middle School, Darriya, Naugaon.	1. ATEL	20.02.03
		2. Government Middle School, Mau	1. ATEL	21.02.03



3.7 Scoring and Tabulation:

With the completion of the field work of collecting the data, the next task was to score the test sheets and tabulate the obtained data for statistical processing and analysis.

3.7.1. Achievement Test in English Language (ATEL):

Items in ATEL were segregated in various components described in the preceding chapter. The score of each student was tabulated, item-wise and component-wise. Total score of each student was also tabulated in the data sheet.

3.7.2. Opinionnaire to Study Students' Opinion About Head Start Interventions

The opinionnaire gave the response data in string form. The students marked their choices, as A (for agree), B (for not sure) and C (for disagree) with the statements.

Student-wise and item-wise tabulation was done, in this form, to assess the agreement, disagreement or neutrality of the students towards each particular statement.

For analyzing whether the opinion is favourable towards Headstart Interventions or not, scores were transformed out of students' responses, as detailed earlier, the opinionnaire contained nine positive statements and six negative statements.

The score conversion was done in the following manner;

Table 3.3 Scoring of the opinion of the students

	A (Agree)	B (Not Sure)	C (Disagree)
Positive statements	3	2	1
Negative statements	1	2	3



3.8 Statistical Technique

This tabulated data was then processed for obtaining Mean, Standard Deviation and 't'-value of the component wise scores and total score, to analyze the differences as aimed in the objectives of the study.

