Chapter IV

Methodology of the Study
CHAPTER IV

METHODOLOGY OF THE STUDY

INTRODUCTION

Research is an organized set of activities to study and develop a model or procedure/technique to find the results of a realistic problem supported by literature and data, such that its objectives are optimized and further make recommendations/inferences for implementations. So research is a continuous process, every time searching in a different way to understand better and more and more about the truth.

Our search for definition of methodology would require us to know the nature of course perused by research scholars in Social Science. A system of models, procedures and techniques used to find the result of a research problem is called a research methodology. Methodology is the science of appropriate modes and order of procedure. Methodology aims at making the study systematic. A suitable method helps the researcher to explore the diverse stands of the study and adequately measure them so as to satisfy the requirements. The method of investigation should be brief and suitable to the problem selected. “The procedures by which researchers go about their work of describing, explaining and predicting phenomena are called methodology” (Dickinson McGaw, George Watson, John Wiley & Sons. Inc 1976).

Methodology is defined as “the study of methods by which we gain knowledge…it deals with the cognitive processes imposed on research by the problems arising from the nature of its subject-matter”. (Rickman, H.P., 1967)

Thus methodology prepares the investigator to adopt techniques to neutralize the effects of such hurdles. There are numerous “tools” utilized by social scientists to uncover truth, find the explanation for the occurrence of a phenomena and to facilitate the understanding of problems and situations which would help scientist to foretell the reoccurrence of a similar phenomenon in the future under similar conditions. Research methodology is the description, explanation and justification of various methods of conducting research (Abraham Kalpan, Chandler 1964)
Considering the above requirements, the researcher adapted suitable methods for the study of listening skills in the teaching of English as second language in High Schools. Listening is one of the most influential approaches to second language teaching. While learning through listening, the language learner need not drill and practice language, need not speak at all, but only need to hear and understand the language. The material to be listened by the learner is not graded to any rigid way. It is based only on a theme of topic that is familiar to the learner. Some studies say that intelligence is related to those second language skills which are used in the formal study of a language (ie., reading, language analysis, writing and vocabulary study) but not on listening comprehension and free oral production tasks.

Here the researcher has taken up audio methods to teach various listening skills to all students (below average, average and above average).

**METHODODOLOGY AT CROSS-ROADS**

Introspection, Participant Observation, Non-participant observation, focused description, pre-experiment, Quasi-experiment and Experiment are among the commonly used methodologies in the second language acquisition studies.

In introspection, learners examine their own behavior, but the question is whether the learners report of what they are experiencing truly represents what is transpiring within themselves (Seliger, 1983)

In participant observation, the researcher takes part in the activities he is studying and takes copious notes on whatever he observes and experiences.

In nonparticipant observation, as the name implies, the researcher observes activities without engaging them directly.

Descriptive studies, according to Van Dalen (in Cook, 1965) classify, order and correlate data seeking to describe relationship that are discoverable in phenomena themselves” (p.39). An advantage of these studies is that the researcher’s task is limited, they are not burdened with trying to explain all aspects of second language acquisition simultaneously. One disadvantage however is that this type of research ignores the fact that second language acquisition is a multi-dimensional phenomenon.
EXPERIMENTAL DESIGN

Experimental design is the blueprint to the procedure that enables the research to test the hypothesis for reaching valid conclusions about relationships between independent and dependent variables. Selection of a particular design is based upon the purposes of the experiment, the type of variable to be manipulated, and the conditions or the limiting factors under which it is conducted. The design deals with such practical problems as how subjects are to be assigned to experimental and control groups, the way variables are to be manipulated and controlled, the way entrance variables are to be controlled how observations are to be made, and the type of statistical analysis to be employed in interpreting data relationships (John W. Best James V. Kohn, 1996). There are 3 types of experimental designs viz. Pre-Experimental Design, True-Experimental Design, and Quasi Experimental Design. The Quasi-Experimental Design was adopted in this study.

QUASI-EXPERIMENTAL DESIGNS

These designs provide control of when and to whom the measurement is to be applied, but because random assignment to control and experimental treatments has not been applied, the equivalence of the groups is not assured.

THE PRE TEST- POST TEST NON EQUIVALENT GROUP DESIGN

This design is often used in classroom experiments when control and experimental groups are such naturally assembled groups as intact classes, which may be similar. The difference between the mean of the pre test and the mean of the post test are tested for statistical significance. In this design you include a time series component along with a "control group" that is not exposed to the treatment. The essence of the non-equivalent control group design is that a comparable group of subjects is chosen and observed for the same period as the group for which the treatment is introduced.
In this chapter, an attempt is made to describe the methodology adopted in researching the problem of the study and the procedure adopted to this effect.

The description of the approach and the procedure of the experiment are preceded by an explanation on the development and validation of the various listening skills package and followed by a description of the establishment of reliability and validity of the different tools used in this study.

**AUDIO PROGRAMMES AVAILED**

As the focus of this study was on the effectiveness of audio intervention in developing listening skills, audio programmes pertaining to acquisition of English as a second language were inevitable in conducting the study.

In using recorded material, a much wider variety of listening experience can be brought to the pupils. They can hear different speakers with different accent speaking at different speech. It provides opportunities for students to hear native speakers of English and sometimes fluent non-native speaker.

To teach Sound Discriminative Listening Skills, ten exercises were formed and Audio recorded. The first three exercises consisted of distinguishing tests for consonants, vowels and diphthongs. The next two exercises were for choosing the correct word heard from the Audio recording. The sixth, seventh and eighth exercises were to tick the correct sentences heard by the students. The next exercise was to find the silent consonant “R” and “L” in the given words.

To Teach Aesthetic Listening Skill, Ten varied topics of interest were chosen and recorded as 10 passages. Poems, short stories and interesting passages for children were included. The students were required to choose the correct answer and fill in the blanks after listening to the Audio recording of the above.
To teach Efferent Listening Skill, ten exercises were formed. These consisted of Audio Recording of instructions to be followed and draw, or, tick and answer. These included topics such as listening to Railway Announcement, School Rules, Weather Forecast, News Bulletin, Rules of the Road, Packing a Parcel, and Packing for a School Excursion, Drawing Figures and Reaching a Place. The answers were to be chosen from a list of responses and drawings that were to be done were indicated.

To teach Critical Listening Skill, ten exercises were devised. Here the listener was exposed to daily items of advertisement, propaganda and sales talks, in which the listener was called upon to listen, think and critically evaluate the content of the material and tick the correct answer. These exercises included listening to quiz, match result, advertisements, election propaganda, newspaper commercials and free offers on purchases. The listeners had to come to a valid conclusion based on their reasoning and understanding of the Audio inputs.

To teach Therapeutic Listening Skill, ten exercises were formed. Here students have to listen and react to various real life situations. These involved listening, understanding and responding with sympathy, reassurance, suggestion and support. Through these exercises, an interest was created to listen, thereby the exercises became useful in improving the Listening Skill. These situations included death of a relative, loss of a pet, accident situation, theft, failure, police checking, parental advice, loss of personal belongings etc. These tests create interest and by responding suitably and offering remedial suggestions, improve the Therapeutical Listening Skill.

To teach Social Listening Skill, ten exercises were devised. These test the Listening Skill Comprehension of students in various social situations. These included Telephonic dialogues, Job interviews, responding to invitations for functions, dialogue between parent and children, dialogue between customer and staff of banks, thanking a person, placing orders, dialogue between passenger and conductor, passenger and Auto driver and expressing regret. This sort of listening gives a person varied experience in thinking and responding appropriately in various common situations. The students will be interested as they also have to face these situations in day to day life. They learn how to reply in multifarious tasks before them and gain experience in responding.
To teach Descriptive Listening Skill, ten exercises were formed describing the persons, places and things and activities and suitable questions were asked on the passages. Descriptive passages on farmer, Doctor, Policeman, Buildings, temples, Zoo, Market place, Friend's house, working of computer, camera and games like cricket were included as passages for this listening skill. These descriptions will stimulate the curiosity of the listener about the person's place, profession, games, and gadgets described, thereby helping in improving their Descriptive Listening Skill.

APPLICATION OF AUDIO BASED LISTENING SKILLS IN THE TEACHING OF ENGLISH AS SECOND LANGUAGE

Teaching listening skills is one of the most difficult tasks. This is because successful listening skills are acquired over time and lots of practice. So this study is on the effectiveness in developing the listening skills of students learning English at the high school stage. Using recorded material, a much wider variety of listening experiences can be conveyed to the pupils in the classroom.

Audio recordings for various situations where listening skills are useful could be as follows: family conversation, health care dialogues, class room discussion, group situations, interviews, promotional campaigns, debates, social situations, dramatics and political dialogues.

Repetition is possible and new learners can be exposed to few sentences at a time. The pronunciation, stress and intonation can be learnt from recordings of native speakers of English and also from selected non native speakers.

Written texts do not adequately prepare learners for the challenge of coping with the language they hear and read in the real world outside the class room. For the learner to comprehend oral and written language outside class, they need to be provided with structured opportunities to engage with such materials inside the class room.

In second language context, Brosnan et al. (1984) point out that the text learners will need to read in real life matters that are in the environment around them at the bank,
in the mail box, on labels, packets, on shop doors and windows etc.. Given the richness and variety of these resources it would be possible for teachers to select appropriate audio assisted materials to the needs, interests and proficiency level of their students.

Class room activities should parallel the real world as closely as possible since language is a tool of communication, method and materials should concentrate on the message. In addition, the purpose of reading should be same in the class as they are in real life. Class room procedures should necessarily mirror communicative performance in the real world. Rivers and Temperley (1978) in skill getting, learners master phonological, lexical and grammatical forms through memorization and manipulation. In skill using they apply these skills in communicative interaction, proponents of audio lingualism with its 3Ps (Presentation, Practice, Production) assumed that skill getting should logically precede skill using.

DESIGNING AND DEVELOPING OF EDUCATIONAL SOFTWARE PACKAGES

Software Lesson Design is based on a five-faced model called ADDIE-Analyze, Design, Develop, Implement and Evaluate. ADDIE- Criswell(1989) stated that a designer of CAI needs an understanding of programming languages as well as design principles. The skill of the teacher who is undertaking the development of software should enable to fill the role of content expert and designer. Before the implementation of the above, audio package the researcher followed the steps in the development of CAI packages.

The ADDIE (analyze, design, develop, implement, evaluate) model suited the researcher’s idea of designing and developing a suitable package for teaching, testing and evaluating English teaching in schools.
Analyze

In analyzing the software package, first, the instructional problem is to be defined clearly. The next aspect is identification of intended students their age and attention span, ability level, motivation, prior knowledge assumed and so on. The performance objectives that could be gained from the experiences are to be specified. After this the instructional strategy to be used is determined. At this point, media selection must be justified as the best solution for the problem at hand. Next, the content outline has to be developed in order to establish scope and sequence of the package. In addition to this, curriculum fit or usefulness of the units should be ascertained. The role of the teacher in preparing students to use the material is also clarified. Anticipated delivery constrains are also identified at this stage.

Design

In the next stage, a general concept for the package is developed. A general concept for designing the software package was conceived and developed by Gagne.

THEORIES OF EDUCATIONAL PSYCHOLOGY

Instructional Theory- The American Educator Robert Gagne developed a hierarchical theory that some types of learning are pre requisites to other kinds of learning. His research has been fruitfully used in determining the sequence of instruction. Instructional plans and test items are designed to match specified objectives. The plans then are tested and if necessary, redesigned on the basis of empirical findings. These studies demonstrate that research on teaching can be used to train teachers in ways that will increase student achievement even in low achieving classrooms.

They are being applied in the form of nine events of instruction as follows:-

1. Gain attention/ motivate
2. Present objective
3. Recall pre- requisites
4. Present stimuli
5. Guide learning
6. Require performance
7. Provide feedback
8. Assess achievement and

The experience is weakened, and its efficiency threatened, by the absence of one or more events. Thus one can improve learning experience by providing explicitly for all the events of instructions.

**Development**

To develop the software packages, the software are to be coded and then tested. Suitable materials are to be produced. Instructions for the use of the materials are also to be written. Then, for a formative evaluation, a pilot study using a few members of the target sample is to be conducted. The quantum of learning is measured and at the same time the point of confusion, operating difficulties and approaches that do not work in the use of the software packages are noted down. Revision of materials is to be made accordingly.

**Implementation**

This is the actual tryout stage of the package with the intended group of students.

**Evaluation**

The attainment of objectives is assessed with the help of proper tools. Based on the findings the package can be revised as required. To design and develop any piece of instructional package, the designer must have a thorough concept of the end product. If the student achievement falls short on one or more of the objective, and if the evaluation data indicates short comings in instructional methods and media, it is the time to go back to the faulty part of the plan and revise it. Hence evaluation is not the end of instruction. It is the beginning of the next and continuing cycle of the systematic ADDIE model for effective use of instructional media.
MICRO SKILLS IN LISTENING

In order to understand each unit of discourse, opportunities should be provided to the learner to acquire specific micro skills. If particular micro skills in listening comprehension are developed, the listener is enabled to comprehend discrete items in a continuous speech.

- To distinguish between English and other languages.
- To comprehend and carry out instructions, carry out linked set of instructions.
- To comprehend requests for personal detail.
- To comprehend request for identification of people and things.
- To listen to simple descriptions of common objects, actions and scenes.
- To identify core vocabulary items when encountered in a variety of aural texts.
- To develop factual discrimination skills by listening to a passage and identifying true/false statements relating to the passage.
- To listen to a short aural text and transform the information by presenting it in a different form.
- To grasp the gist of a short narrative.
- To identify emotional state of speaker from tone and intonation.
- To develop inferencing skills by listening to a passage and suggesting an appropriate conclusion.
- To differentiate between fact and opinion.
- To comprehend the details of short conversation on unfamiliar topics.
- To identify relationship between participants in aural interaction.
- To recognize differences in intonation.

ASSESSING STUDENTS' ACHIEVEMENT IN LISTENING COMPREHENSION

In order to assist students' achievement in listening comprehension in English, an achievement test was constructed. This test was designed to fulfill the requirements of the local situation taking into consideration the linguistic competency of rural high school students who study English as a second language. A pilot study was conducted for the purpose of constructing and validating the achievement test.
The pilot study

The objectives of the pilot study in constructing the achievement test were as follows:-

- To determine the suitability of the various test items with reference to both form and content in measuring students' achievement in listening in English.
- To decide on the duration of the achievement test.
- To find out if all the students understand the instructions given in the test.
- To select the best items for the final study which could discriminate high scores from low scores and which could bring out the difficulties of the students in responding to the questions.

The pilot test was administered. The answer scripts were valued and analyzed in order to select the best items for the final study. The procedure followed the item analysis is given as:

Item Analysis

The responses of the students to the objective test items were studied in order to determine the discriminating power of the test item. Soon after the test was administered and scored, the response sheets were analyzed item by item. The steps followed in the item analysis are as given below:-

1. Scoring the response sheets.
2. Arranging the response sheets in the order of scores.
3. Dividing the response sheets into three piles.
   (i) 27% of the top end of the order (upper group)
   (ii) 27% of the bottom end of the order (lower group)
   (iii) 46% of the middle order response sheets (The response sheets of this group were ignored in Item Analysis.
4. Counting the frequencies for the following with regard to each item and for each group.
   (i) Number of students who responded to a certain item wrongly.
   (ii) Number of students who omitted that item.
5. Converting the frequencies into percentage.
6. Computing the difficulty level of each item using the formula
   \[ \text{Difficulty level} = \frac{(PU + PL)}{2} \]
   Where PU means the percentage of the upper group. PL means percentage of the lower group.
7. Computing the discriminative power for each item using the formula
   \[ \text{Discriminating Power} = PU - PL \]
8. Selecting the required items keeping in mind the difficulty level and the discriminating power of the items.
   The items with the difficulty level ranging from 40 to 70 and discriminating power above 15 were included in the final test. The items which have more PL from the PU value were also eliminated.

**Planning of the test paper**

1. **Discriminative listening skill** – This is a test for discriminative ability, to distinguish the distinctive sounds of vowels, consonants and diphthongs. This also tests the ability to distinguish word stress, sentence stress, sounds in connected speech and intonation.

2. **Aesthetic listening skill** – This item tests the interest with which students listen to short stories, poems, situations in real life and tick answers as they listen. These are enjoyable listening activities.

3. **Efferent listening skill** – Tests the ability to hear and follow instructions such as announcements, reaching a place, and drawing. It involves listening, comprehending and execution of audio instructions.

4. **Critical listening skill** – These items test the ability to listen and critically evaluate propaganda, sales promotions, and advertisements and come to valid conclusions.

5. **Therapeutic listening skill** – These items test the ability to listen sympathetically and comprehend the seriousness of the situation that has been described to him.
6. **Social listening skill** – These items test the comprehension of the students in various common social situations such as accepting invitations, taking messages, taking orders and expressing regret.

7. **Descriptive listening skill** – These items test the ability to answer questions about places, persons, things and events described to them.

### TABLE 1. BLUE PRINT OF THE TEST PAPER

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Types of listening skills</th>
<th>No. of items</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Discriminative</td>
<td>1 to 10</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Aesthetic</td>
<td>11 to 20</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>Efferent</td>
<td>21 to 30</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>Critical</td>
<td>31 to 40</td>
<td>10</td>
</tr>
<tr>
<td>5.</td>
<td>Therapeutic</td>
<td>41 to 50</td>
<td>10</td>
</tr>
<tr>
<td>6.</td>
<td>Social</td>
<td>51 to 60</td>
<td>10</td>
</tr>
<tr>
<td>7.</td>
<td>Descriptive</td>
<td>61 to 70</td>
<td>10</td>
</tr>
</tbody>
</table>

### ESTIMATION OF THE RELIABILITY AND THE VALIDITY OF THE TEST PAPER

Reliability is the measure of accuracy, consistency, dependability, or fairness of scores resulting from administration of a particular examination. This kind of accuracy is reflected in the obtaining of similar results when measurement is repeated on different occasions or with different instruments or by different persons. Reliability refers to consistency.

In language tests, reliability is present when an examinee’s results are consistent on repeated measurement. With a group of examinees, reliable measurement is indicated by a tendency to rank order the entire group in the same way on repeated administrations of the test. Even if a slight practice effect is present, such that students do somewhat better on the second administration than they did on the first, if all the scores improve equally, students will be rank-ordered in the same way on the two administrations, the Inter correlation of these repeated measures will be high, and the test will be called reliable.

Validity refers to the appropriateness of a given test or any of its component parts as a measure of what it is purported to measure. A test is said to be valid to the extent that it measures what it is supposed to measure.
Reliability of the test in listening skills

In order to establish the reliability of the test paper in listening skills, the test-retest method was adopted. The same test was administered twice, first to the entire class and next, after a gap of one month. An attempt was made to find out the correlation coefficient between these two sets of scores. The value $r$ is found to be 0.785 and is significant at 0.01 levels. Hence, it is concluded that the test paper in listening skills in English is highly reliable.

Validity of the test in listening skills

To establish the validity of the test paper an attempt was made to find out the correlation coefficient between the achievement scores in English as measured by this test in listening skills and the scholastic achievement of the student in English in class test by product movement correlation coefficient method. The value of $r$ is found to be 0.821 and is significant at 0.01 level. Hence, it is concluded that the test has high validity.
DESIGN OF THE STUDY

Selection of the School

Sampling Method

Pre Test

Three groups taught in three different methods.

Group I

Group II

Group III

Post Test

Retention Test after a Month

Groups Compared using Statistics
PROCEDURE

Introduction to Experimental Research

Experimentation is a way of the science laboratory where certain stimuli treatments or environmental conditions are deliberately and systematically manipulated and the observed effects controlled. The aim of this method is to discover and develop an organized body of knowledge. The method has also been successfully followed in such non laboratory situations as the class room where certain variables can be controlled to some degree.

The purpose of these educational experiments is to predict events and to generalize the relationship among the variables so that the finding might be applied universally. An important element in this kind of research is that the investigator sets up conditions deliberately so that different groups of subjects undergo different experience.

Quasi experimental design – Pre Test, Post Test, Non- Equivalent Group Design

The major objective of the present investigation is to study and compare the Traditional method of teaching, Audio method of teaching and Traditional supported by Audio method of teaching as reinforcement strategies in teaching learning process and its affect on achievement and retention of cognitive skills among the VIII standard Tamil medium students.

Since the subjects are students who cannot be under the investigators constant control and observation throughout the period of study, a quasi experimental design could do well in such situations. In quasi experimental method the researcher has full control over the independent variables to be manipulated and could see the effectiveness of the treatment variable on human behavior. Further, the Quasi experimental design does not require randomization and perfect matching of all variables, which affect the independent variables. Of such Quasi experimental design, The pre- test post- test non equivalent groups design is an effective method used in class room experiments with control and experiment groups.

Usually these groups are naturally assembled sets of students as intact classes. The difference between the mean of the pre test and the post test scores of each group and
the mean gain scores of a group or two are tested for statistical significance. Analysis of variance is also used.

Sampling

The sampling for this study consisted of seventy eight VIII standard students of Government High School, P.N Pudur, Coimbatore.

One of the classes with Forty students was divided into two. Twenty students were treated as Control Group and the other Twenty as Experimental Group II.

Thirty Eight students of the other section of Standard VIII were treated as Experimental Group I.

The students were semi-urban students belonging to similar socio-economic status. All of them hail from lower middle class families. They were all of the same age group. They had Tamil as the medium of instruction. A copy of the personal data sheet is given in the Appendix IV.

Administration of the Pre-Test

A pretest for the seven different listening skills was administered to all the three groups before experimentation started. The mean and SD of the scores were computed for analysis.

EXPERIMENTATION

The three identical groups of students were formed. The Homogeneity among the students was established based on their marks in English as measured by the class exam results, as well as the means and SD of their scores, as measured by the pre-test. One of the groups was designated as “Control Group” and the other two as “Experimental Group I” and “Experimental Group II” respectively.

Traditional Method of Teaching (TMT) was adopted for the Control Group. Audio Method of Teaching (AMT) was adopted for Experimental Group I and Traditional supported by Audio Method of Teaching (TAMT) was used for Experimental Group II.
Traditional Method of Teaching

This is a flexible method, because both quantity and duration can be adjusted by the teacher. Non-verbal communicative modes such as gestures, mannerism, postures and movements can be suitably conveyed by the teacher through this Traditional method. There is good interaction between student and teacher; using a black board, the teacher gives visual stimulation. Repeating the topic several times helps students to grasp the topic. For an economically under privileged country with population disproportionate to available facilities, the Traditional Method of Language Teaching still continues to be the predominant method.

Audio Method of Teaching

Through the Audio Method of Teaching English as second language, the students are enabled to listen repeatedly to develop the aural -oral skills. The teacher is a facilitator and the students listen to pre recorded exercises on audio-cassettes. This type of instruction suits the relatively short attention span of students. They were motivated to listen since they were hearing a different voice.

Intonation, Stress, Pause and Pronunciation can be learnt from the recording of native speakers of English.

Traditional Supported by Audio Method of Teaching

This method combines the Traditional as well as the Audio Method of Teaching in such a way as to eliminate the short comings of both.

The Traditional Method of Teaching cannot meet the challenges of teaching the Phonological and Cultural aspects of English. A mixture of Audio based and Teacher based instruction will provide the best mix of listening for students and will bring them to range of listening experience which are so important in developing their skills.

Keeping all these points in view, the investigator designed this instructional strategy wherein Teacher’s class room instruction is supported and supplemented by intervention of audio materials.

Control Group

The Control Group of Twenty Students received instructions through the Traditional Method of Teaching. Being an English Teacher herself, the investigator
engaged the students using the black board. The classes were conducted for Fifteen days. The duration of each unit was Twenty Five minutes. One such unit was taught every day. The investigator maintained suitable and sufficient interaction with the students throughout the unit- period. Oral questions were asked after each exercise. Tests in the respective unit area were administered as Post Test after the completion of instruction.

Experimental Group I

Experimental Group I of Thirty Eight students received instruction purely by Audio Method of Teaching. If there was request for any clarification, the particular passage was played once again. This was taught for Fifteen days. Recorded questions were asked after every exercise and the students gave the answer. Tests in the respective unit area were administered as Post Test after the completion of instruction.

Experimental Group II

Twenty members of this group were given instruction in the content area of the instructional package in various listening skills in English through audio presentation as a support system to the teacher’s classroom instruction. Being a teacher of English, the investigator herself remained a facilitator to this group. She combined her explanation with the audio programme so that the learner could comprehend the content of the unit effectively by listening to the tape and to the explanation as well. The investigator paused at intervals to ask questions in order to have a feedback and permitted the students to raise questions for clarification. The time spent by the group for the units varied from one unit to another but within the range of 25-45 minutes. The experimentation period for this group was also for Fifteen days and tests were administered to this group as Post Test soon after the completion of the instruction.

ADMINISTRATION OF THE RETENTION TEST

A retention test in the same area was also administered to all the three groups a month after experimentation.

The scores obtained by the students of the Control Group, Experimental Group I and Experimental Group II in the various listening skills in English as measured by the pre, post and retention tests are given in the Appendix VII. The mean and the SD of the
scored of these students were completed for all the three tests. The spelt-out hypotheses were tested using appropriate statistical techniques.

**EVALUATION OF THE MEDIA MATERIALS AVAILED IN THE STUDY**

A unit appraisal form, which is given in Appendix VI, was designed and the students reaction to the units and modules was solicited and analyses. The appraisal form was administered to all the members of the experimental groups and their ratings of the module are given the Tables.

**TABLE 2. RATING PERCENTAGE OF EXPERIMENT GROUP I**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating Percentage of Experiment Group I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
</tr>
</tbody>
</table>

**TABLE 3. RATING PERCENTAGE OF EXPERIMENT GROUP II**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating Percentage of Experiment Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
</tr>
</tbody>
</table>
It is known from the tables that 80% and 75% of the Experimental Group I and the Experimental Group II respectively reported that the spelt out objectives of the package were clear in terms of their formulation and presentation.

The tables also point out that 80% of the two groups vouched for the interesting nature of learning activities contained in the module. Similarly, 85% and 75% of these two groups respectively were of the opinion that the module covered sufficient content matter in relation to the spelt out objectives. According to 80% of the subjects of the Experimental Group I and Experimental Group II found the module very easy.

Out of the total sample 80% of the subjects considered the package excellent in design and presentation.

The module appraisal form was also circulated among 10 experts. The experts listen to the audio tapes and their ratings are summarized and given in Table 4.

**TABLE 4. RATING PERCENTAGE OF EXPERTS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating Percentage of Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>90</td>
</tr>
</tbody>
</table>

It is found from the table that 70% of the experts reported that the objectives of the package were clear with respect to their formulation and presentation. 90% of them agreed that the teaching/learning activities contained in the package were interesting. According to 80% of the experts, the scope of the content matter was adequate. Among these experts 80% was of the opinion that the module was easy. A majority of them, 90% were of the opinion that the module was excellent.
TECHNICAL EVALUATION

In addition to the general appraisal the experts were also requested to validate the package from the technical and language point of view.

Heinich – Molenda – Russel Checklist was provided to them

TABLE 5. RATING PERCENTAGE OF AUDIO MATERIAL

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating Percentage of Audio Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>6</td>
<td>80</td>
</tr>
<tr>
<td>7</td>
<td>80</td>
</tr>
<tr>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>9</td>
<td>70</td>
</tr>
<tr>
<td>10</td>
<td>70</td>
</tr>
</tbody>
</table>

Distribution of rating of Audio Package by Experts

60% of the experts felt that the audio packages were relevant to the spelt-out objectives. 70% expressed it was accurate in providing information. 60% felt that the package aroused and maintained interest. 70% expressed that technical quality of the audio was superior. 70% of experts felt that these packages were likely to promote participation and involvement. 80% said that it was effective in developing listening comprehension skills in English. They were free from any sort of objectionable bias. 

The audio was presented in a clear manner with appropriate vocabulary.
The experts who reviewed the audio materials of the passage recorded that the strong points of the audio material as "Learning Environments is strengthened by the tapes without which a straight explanation of the content and monotonous drilling by the teacher would be effective only to a set of few excellent students in a class.

The experts felt that the weak points of the Audio materials were:

1. Technical Quality could be further improved.
2. Pacing could be more appropriately adjusted for the target audience, since they were exposed to this method for the first time.
3. The vocabulary level could be suitably adjusted in view of the background of the children.

The analyses and interpretation of data along with a description of testing hypotheses are given in the next chapter.