CHAPTER THREE

RESEARCH METHODOLOGY
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3.1 PRELIMINARIES
The present study is an attempt to establish the efficacy of using computer technology for enhancing the acquisition of listening skills in English language learning. This chapter will throw light on the research methodology and procedures employed in the study, the collection of the data, selection of the sample, administration of tests and related analysis.

3.2 SELECTION OF THE SAMPLE
The sample group of students chosen for the study consisted of 100 students who were studying English at the Al Jamea Tus Saifiyah, Arabic Academy. The sample group comprised only of females between 13yrs-19yrs, studying in different standards and as mentioned in the introduction as per the system of the institution, the students enroll in STD-1 of the Academy after they complete STD-7 of normal schooling. Thus, the students come from varied academic backgrounds, as some have studied through regional boards; some have ICSE/CBSE background while there are international students also. This is a heterogeneous group and the students have been exposed to different teaching styles and accents.

3.3 INSTRUMENTATION-1
The researcher compiled and administered a pre-test, followed by a training module and then a post-test as the first part of the research.
3.3.1 PRE-TEST: The pre-test was administered at the beginning of the study. The pre-test listening test was with human voices. It established the level of the subjects who represented a mixed, heterogeneous group as per the basis of the study. It carried a total of 30 marks and was further divided into 3 sections of 10 marks each.

The pre-test (Appendix -1) consisted of 3 sections for listening as follows:

SECTION-1: consisted of 10 items; each item had a set of 3 single words. The selected words were a mixed group of vowels and consonants. The consonant sounds though easier to identify than vowel sounds were taken to ascertain through the tests how the students performed in the identification of vowel and consonant sounds. Thus there was a fair mix of easy and difficult words. In each set out of the three words, the word that was spoken aloud was to be ticked. Each item carried 1 mark: total 10 marks.

SECTION-2: consisted of 10 items; each item had a pair of sentences. The students had to listen carefully and put a tick against the sentence that was read out. Sentences need more careful listening to, than words. There were two similar sounding words in the pair of sentences. The students had to tick the correct sentence that they heard from each pair. Each item carried 1 mark each: total 10 marks.

SECTION-3: paragraph listening consisted of a picture story (pictures taken from the book Life Accents 3A, Lee-2003:64). A picture story was used, as the aim of the study was to enable acquiring of listening comprehension. The comprehension is better if more senses are involved. Thus in this section pictures were used as an aide to listening, as listening to paragraphs is more difficult than listening to words and sentences. The pictures were in a jumbled order and the students had to write the correct sequence of the story i.e. the correct
order of the pictures by writing the correct numbers of the pictures according to the sequence of the story as they listened to it. There were a total of 8 pictures and each item carried 1 mark each; total-8 marks and converted to 10 marks by the addition of 1/4th mark to each.

3.3.2 POST TEST

After administering the pre-test, the students were put on a study module implementing English language learning skills and emphasizing on the listening skill, using computer assisted listening technologies which is explained in detail below in section 3.4. After the completion of the training module the students were administered a post-test to ascertain the difference in learning and to test the hypothesis. The sections of the post-test were similar to the pre-test but computerized voices were used in the administering of the post-test. The sections of the post-test (Appendix-2) are as follows:

SECTION-1: contained three single words in each set of words similar to the pre-test. The students had to listen carefully to the computer and tick the word that they heard. Each item carried 1 mark: total 10 marks.

SECTION-2: contained pairs of sentences in each set. The students had to carefully listen to the computer and put a tick against the sentences that were heard by them. The difficulty level of the sentences was higher than those in the pre-test as more vowel sounds were to be identified and these are more difficult to identify than consonant sounds. Each item carried 1 mark each: total 10 marks.

SECTION-3: was a computerized picture story read aloud by the computer. The story (taken from Learning to Communicate, Class 8, CD-ROM) narrated the travelogue of two children as they traveled to different places in India. The post-test story was at a more difficult
level of listening comprehension than that of the pre-test as here the students were given pictures that were a representation of the places that were visited and narrated in the travelogue for example the picture of India Gate stood for Delhi, the picture of oranges represented Nagpur. The pictures were in a jumbled order. The students had to listen to the story, identify the picture that represented each place and then arrange the pictures in the correct sequence by writing the names of the places that were visited as narrated in the story. There were 10 pictures in all and each correct answer carried 1 mark each, total-10 marks.

3.4 TECHNIQUES USED IN THE TRAINING MODULE

3.4.1 THE AUDIO VISUAL LAB: The listening activities were conducted in the Audio-Visual lab, known as ‘Mamal’ of the Al Jamea Tus Saifiyah Academy, the place where the researcher has conducted the study. The A.V. Lab ‘Mamal’ has three sections as follows:

3.4.1.1] THE SANAKO LISTENING LABORATORY
The Sanako Lab literature says that SANAKO Lab 100 is a unique, teacher-led language teaching system that allows one to bring language teaching back to life. The Lab 100 offers tools that will keep the students motivated and excited while they acquire the language skills they need to develop both personally and professionally. With its exceptional audio quality, Sanako Lab 100 offers students the opportunity to develop their foreign language skills, as well as their listening proficiency, in an environment that is entertaining and stimulating, and which promotes effective language acquisition.

Lab 100 is a digital language teaching solution which requires only a teacher computer. Included is a Media Storage Unit for the entire
class. Students are equipped with digital recorder units that are easy to operate, and which allow them to participate in a number of stimulating learning activities, either alone, or in groups or pairs. Preset activities such as phone conversation and listening comprehension make it easy for the teacher to develop the lessons.

[http://www.thorvinelectronics.com/educational/SANAKO_Lab_100_brochure.pdf]

The session-based thinking of the SANAKO Lab 100 program means that you can initiate different activities for the students to proceed with, and use different materials for each session. This way the students get a possibility to work with learning materials that correspond to their level and to get the maximum benefit of the teaching. In SANAKO Lab 100, activities are what and how you are teaching and the students learning. SANAKO Lab 100 sessions are the settings within which the teacher and the students proceed with the different exercises. For example, the teacher can have one group of students practicing pronunciation and another group proceeding with listening comprehension. All one has to do is create two sessions, one for model imitation and one for listening comprehension. For each session the teacher will select the participants, the desired activity, and an audio source (e.g. model imitation using an MP3 audio file), and then simply initiate the activity for the students to perform.

SANAKO LAB 100 ACTIVITIES

The SANAKO Lab 100 language instruction center includes the following pre-programmed activities:

1. Listening Comprehension
2. Model Imitation
3. Reading Practice
4. Phone Conversation
5. Pair Discussion
6. Group Discussion
7. Simultaneous Interpreting
8. Consecutive Interpreting
9. Recorded Response
10. Quiz
11. AP® Exam
12. Library Mode
13. Q&A
14. Audio-on-Demand

The researcher has used SANAKO LAB 100 for listening to the CDs that were provided with the course material, for example:

**Stepping Forward book** has listening transcripts for each chapter of the text book as well as workbook. The students listen to the listening text and answer the exercises related to the same given in the textbook as well as workbook. The entire class first listens to the entire session then as per the facility available of the Sanako Lab, the session was freed so that each individual student could listen at her pace, rewinding and listening to a single sentence also if required only by pressing a single button which rewinds the last sentence heard so it becomes very easy unlike a tape recorder where it is difficult to rewind exactly one sentence. As they listened the students simultaneously solved the listening comprehension exercises given which were as follows:

**Exercise-A**- was related to listening for specific details. Here each question had three alternatives and the student had to circle the best
option after carefully listening to the text. This covered the skills of listening with reading

Exercise-B- contained questions related to listening for meaning. Here the student had to write down the answer to the question in complete sentences. This covered the skills of listening with writing.

Exercise-C- contained questions related to listening to discuss ideas. This dealt with a higher level of comprehension. Based on the listening text the entire class of students discussed the questions first in small groups and then with the entire class. Thus this covered the skills of listening with speaking and helped in developing comprehension and inferential skills of the students.

Thus the learning activity progressed from the basic to higher order skills. The skills are used in conjunction so the learning is more effective. The students are able to listen at their own pace and as many times as possible. There is no physical stress on the teacher as the mechanical work of reading and repetition is done by the computer. The teacher can easily control the activities of the students and guide the discussion and answering of the exercises and questions. The Sanako Lab is manned by an expert computer technician who helps the teacher to conduct the class session so that there is no technical problem and even if the teacher is not proficient with the computer activities the listening activity can be conducted.

3.4.1.2 THE COMPUTER LAB: this section of the A.V. lab has 30 individual computers with audio phones and a central computer for the teacher with a projector. All the computers have internet access and the students are allowed to use the internet during class time under the guidance and supervision of the subject teacher. All the computers
have the Oxford Talking Dictionary and Encarta dictionary programs which the students can access when required. The researcher has used the facilities here for practice of words using the talking dictionary. The students could also play online word games and quizzes. Text-to-speech software was installed on the teacher's table. This was used by the researcher for the reading of long texts and stories. The computerized voice read the text aloud highlighting each word as it was read and this could be seen on the screen with the help of the projector.

3.4.1.3 THE MULTIMEDIA ROOM: the A.V. Lab has a vast collection of CD-ROMs, VCDs and DVDs covering various subjects. The researcher has used this facility to show the various CDs related to English language learning as the students enjoy coming to the A.V. lab. English movies like 'Finding Nemo', 'Jane Eyre', 'My Fair Lady', 'Lion King' and conversation practice material like 'Learn to Speak English' were viewed here. The Shakespearean drama 'Julius Caesar' was taught here with the help of the VCD. The students viewed the play, watching the action and listening to the dialogues which were exactly the same as given in the book. This gave them a proper idea of the historical setting of the play, the characters and the ensuing action. The researcher then explained the overall theme of the play. As there was interaction of the senses; seeing the real action taking place (and not having to imagine it), listening to the dialogues as the action enfolded with the characters in front of them, enabled the students to understand such a difficult and complex work more easily as the entire sequence of events came alive in front of their eyes.
3.4.2 THE STUDY MODULE

After administering the pre-test, the researcher had compiled a study module for the sample group students which they followed for a period of one academic year which amounted to a period of 7 months. There are 3 English periods/week out of which one period/week was dedicated for listening activities using computer assisted listening technologies.

3.4.2.1 MODULE-I: focused on enhancing the acquisition of listening of single words. Towards the fulfillment of this aim the following strategies were employed:

3.4.2.1 Oxford Talking Dictionary (OTD): using the Oxford talking dictionary/the Encarta dictionary to learn the correct pronunciation of words. The students were asked to note down the words they found difficult to pronounce from the text/lesson that they had studied. They were then taken to the computer lab where each student listened to the pronunciation of whichever words they wanted to. Initially they listened to a word for 10-15 times or more, repeating the word after the computer till they could pronounce it properly. This exercise was repeated time and time again with more and more words. Now that the students knew about this resource they could use it independently whenever they had doubts about the pronunciation of any word, as they are allowed to use the computers in the computer lab by themselves in the evenings.

3.4.2.2 Learning to Communicate (Oxford University Press): This set of 3 CD-ROMs was a part of the course books. The 'listen well' section as well as word games were used to develop the listening skills
of the students. The CD-ROMs were installed on all the computers of the computer lab and the students worked individually using the attached headphones.

3.4.2.3 Online Word Games: students were taken to the computer lab where they could play online word games from various sites to sharpen their listening of words and enjoy the whole experience, for e.g. Minimal pairs: [http://www.manythings.org/e/pronunciation.html]

Students' response: when the researcher ascertained the response of the students' to this way of learning they gave an extremely positive response saying that listening comprehension was better as they could listen to the word as many times as they wanted till they understood the correct pronunciation. They could work independently and did not have to depend on the teacher for all their needs. Another observation made by the researcher here is that it would not be possible for a teacher to repeat the pronunciation of words for each and every student in a 35-45 min period/lecture and that also 10-15 times. It would be tiring and tedious but this mechanical activity of repetitions which is a great help for listening of words can be done effortlessly by the computer.

3.4.2.2 MODULE-II: focused on listening to sentences. The resources used for this purpose were the CDs' available with the Institute's computer laboratory as well as online resources from the internet.

3.4.2.2.1 Learn to Speak English 7.0: this CD-ROM contains different conversations pertaining to day-to-day activities and goes in
a sequence with the central character of a lady who has lost her aunt and travels to USA to claim her inheritance. It contains 10 units and each unit has 3 chapters and a cultural movie. Additional features include an inbuilt talking dictionary, story cum action and dialogues/conversation which can be read as you listen and grammar and vocabulary exercises

**Vocabulary:** new vocabulary words are seen on the screen, one just has to click on a word in the list to hear it pronounced. Then, one can check his/her progress with the help of the speech recognition gauge. One can also see and hear how the word sounds in the context of a sentence, as spoken by a native speaker.

**CD-1 of Learn to Speak English 7.0 has 5 Basic Units and 15 chapters as follows:**

1] UNIT-1: Chapter-1, Customs and Immigration
   Chapter -2, Changing Money
   Chapter -3, Public Transportation
   CULTURAL MOVIE-1, Washington DC

2] UNIT-2: Chapter -1, Checking into a Hotel
   Chapter -2, Making a Phone Call
   Chapter -3, Dining Out
   CULTURAL MOVIE-2, New Orleans

3] UNIT-3: Chapter -1, Making an Appointment
   Chapter -2, At the Movies
   Chapter -3, Shopping at the Mall
   CULTURAL MOVIE-3, San Francisco.

4] UNIT-4: Chapter -1, Meeting an Attorney
   Chapter -2, Finding an Apartment
Chapter -3, Moving Day
CULTURAL MOVIE-4, Chicago

5] UNIT-5: Chapter -1, Shopping for Groceries
Chapter -2, At the Laundry
Chapter -3, Renting a Car
CULTURAL MOVIE-5, Miami

Similarly in CD-2 of Learn to Speak English 7.0 there are units 6-10 having 15 chapters based on different situations and each unit has a cultural movie based on a city of the USA.

3.4.2.2.2 Rosetta Stone Series: As explained in chapter-2, Rosetta Stone Series is proprietary language-learning software produced by Rosetta Stone, Ltd. The Rosetta Stone series of 2-CD-ROMs was used for practice by the weaker students who under the guidance of the researcher made use of the CDs in their free time in the evenings.

3.4.2.2.3 Randall's ESL Classroom: Randall Davis' cyber listening lab for ESL/EFL students, [http://www.esl-lab.com/]. This online site was used by the students to listen to everyday conversations which are divided into 3 segments easy, medium, and difficult. After listening to the conversation the students could attempt a quiz to ascertain their listening comprehension. Details of the same can be seen in the Listening Resources CD attached with this work. Similarly there are many other sites as seen in the Listening Resources CD, the students were shown these and they practiced on their own by accessing the same.
3.4.2.3 MODULE-III: The aim of this module was to use computer technology for enhancing the listening of paragraphs in English. The following resources and methods were used:

3.4.2.3.1 Text-To-Speech (TTS): as has been explained in Chapter-2, TTS systems are used to create a spoken sound version of the text in a computer document. This is a method by which the computerized voice does the task of reading texts that are put into the TTS system.

The researcher downloaded a version of the TTS system known as 'Naturalsoft'. Then the long texts, stories and short stories that were there in the text book and a part of the syllabus were scanned into the computer using the OCR (Optical Character Recognition) method. Now this text was ready to be used by the TTS system. The text was copied and pasted into the TTS system. One can choose the human voice that one wants as the reader of the texts. There are male and female voices as well as there is a choice between accents UK, USA, or Indian. The class was brought to the computer lab, where they listened to the texts and could also see it on the projector screen. Another feature is that the software highlights each word in color as it is read. This enhances the listening as it combines two skills that of listening with reading plus added feature of the words being highlighted as they are read aloud. Another advantage observed by the researcher was that as the mechanical job of reading was done by the computer the teacher could control the class more easily. After the reading of 1-2 paragraphs, the researcher would pause the reading of the text and ask questions to the students related to the text to ascertain comprehension of the subject. The students were found to be engrossed in their work and as per their response they found this
method more conducive and effective for learning as there was total involvement on their part. The role of the teacher was that of a well prepared facilitator who did the ground work beforehand and then just orchestrated the entire lesson to perfection letting the students be active recipients.

3.4.2.3.2 Online Stories: the internet is a treasure trove for all kind of information today and if used properly these various internet resources can be an endless source for learning material. The researcher has used a few of these in the present study. There are innumerable online sites that provide stories which can be read and listened to simultaneously, for example: The American Storyteller-Radio Journal [http://www.theamericanstoryteller.com/] has a collection of stories related to real life incidents. One can listen to the story and read it in text form. If one subscribes to them giving the e-mail address, one receives a story every week via e-mail and it is absolutely free.

Another feature for younger learners is that the stories are animated with pictures, action and the dialogues are spoken by the characters. This immediately catches their attention and they want to listen to the stories over and over again. For example the stories for listening provided by British Council- Learn English Kids site [http://www.britishcouncil.org/kids-stories.htm] are so interesting that even adults get engrossed in them. The colorful animation, dialogues and action help to make the learning fun and enjoyable. The pronunciations are crisp, clear and reliable as it is an authentic British Council site.
3.4.2.3 CD-ROM: the CDs which were a part of the text book and provided passages for listening comprehension were used as part of the research module. English films were used for enhancing listening comprehension. As explained earlier the Shakespearean play "Julius Caesar" was taught, using the DVD of the entire play. The younger students were shown animated films like Finding Nemo, Lion King, Beauty and the Beast. The older ones were shown films like Jane Eyre, My Fair Lady, and The Scarlet Pimpernel which are well known works in English.

3.5 INSTRUMENTATION-II

3.5.1 QUESTIONNAIRE
The researcher had administered a questionnaire to ascertain the response of the students towards the effectiveness of computer technologies in their English language classes especially for the listening skill. The students were given the questionnaire after completing the study module.

3.5.2 RELIABILITY OF THE QUESTIONNAIRE
The questionnaire had been prepared after reviewing such related questionnaires in other research works. The researcher then, prepared a questionnaire keeping in mind the purpose and need of the questionnaire for this research which was to ascertain the effectiveness of Computer Technology in enhancing the acquiring of listening skills of learners. The questionnaire was then administered to the research group after they had completed the training module.
3.5.3 ADMINISTERING OF THE QUESTIONNAIRE
The questionnaire was administered to the research group after they had completed the research study module incorporating computer assisted listening technologies. The questionnaire was used to ascertain the response of the students to the new methodology that was used in their English classes especially for the listening skill.

3.5.4 DATA ANALYSIS
The questionnaires were scrutinized and the responses given by the students to the various questions are discussed in the following chapter.

3.6 CONCLUSION
This chapter explained in detail the research methodology and procedures employed in the collection of data related to this study. It put forth the study module created for this research study, its implementation and the instrumentation of the tests and the related procedures.