Language Laboratories: A Milestone in Higher Education

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Abstract

English Language plays a vital role in academic and professional life and it is used as the official language in many countries. Good communication skill in English has become essential in the lives of Indian students who aspire to excel their careers anywhere in the world. Indian students fare well in their exams, but in real life they are unable to communicate in English. Due to globalization, there has been a rise in demand for employees with good communication skill. An exploration in the area of technology helps to meet the growing demand for excellent communication. Language laboratory is one of the experiments applied in this field. Hence, the language laboratory has become the need of the hour in improving the process for communication. This paper attempts to highlight the significance of Language Laboratory in higher Education with the merits and demerits.

Key Words

Language Laboratory, Higher Education and Communication skill

I. INTRODUCTION

Language is a system of arbitrary symbols for human beings' communication (Knight,1992). According to the 'Oxford Advanced Learners Dictionary', Language laboratories are study rooms equipped with electronic sound-reproduction devices, enabling students to hear model

pronunciations of foreign languages and to record and hear their own voices. The language laboratory is an audio or audio-visual installation used as an aid in modern language Learning. It helps in language learning process for communication which helps to speak with proper accent, articulation, stress and intonation (Vohra, 2014). Language lab assists the students to acquire listening and comprehension skills and to acquire effective spoken language which in turn helps to build self-confidence and better career (Al-Hmoud 2014). Since the language laboratory offers broadcasting, television programmes, Web-assisted materials and videotaped off-air recordings in the target language, the learner can interact with the native speakers. They can be installed and used in schools, universities and academies. The main purpose of a language lab is to make the students active and to practice and participate in language learning exercises. It provides more practice than in a traditional classroom environment.

II. ORIGIN AND TYPES OF LANGUAGE LABORATORY

The first lab was at the University of Grenoble, (Ruby,W.B. 2004) In the 1950s up until the 1990s, they were tape based systems using reel to reel or (latterly) cassette. Current installations are generally multimedia PCs. The original language labs are now outdated. They allowed a teacher to listen to and manage student audio via a hard-wired analogue tape deck based systems with 'sound booths' in fixed locations (Ranjan & G. Patel, 2014).

III. CATEGORIES OF LANGUAGE LABORATORY

A language laboratory is an instructional technology tool consisting of a source unit that can circulate audio materials to any number of students at individual seats. Language labs can be categorized into three levels (Stone & LeeAnn, 1991). In level I labs, Students are passive listeners (via headsets) to audio materials from a single source unit in level I type of labs. The students may repeat the materials they hear, but are not able to "self-monitor" through feedback from headsets. In Level II type of labs, a microphone was additionally provided along with the headset for self-monitoring. Teachers console is the only audio source inn both Level I and II labs, so that the students are restricted to work at the same pace on a given task. So in the next Level, Level III labs provide students a tape recorder, video monitor, and/or computer at each carrel. Hence in Level III labs at the teacher's diplomacy, the student has access to the entire range of controls including playback, record, and review. Thus Level III labs are considered as interactive and helps in creating communicative environments.

IV. TYPES OF LANGUAGE LABORATORY

The *Conventional Laboratory* is the archaic form of the language laboratory (Saleh Al-Hmoud, 2014), which has a tape recorder and a few audiocassettes of the target language to teach the learners. Learners will listen to the tape and learn the pronunciation. This type of laboratory is no longer in use in classroom environment as it is prone to disruption.

The *Lingua Phone Laboratory (Levy, 1997)* is also a modernized conventional type of lab, headset will be provided to listen to the audiocassettes being played. Here distractions are minimized and. There is also a modernized lingua phone laboratory available today, which uses an electronic device that works as a cassette player with all the features of a normal cassette player on the left side, and as a repeater on the right side that helps one to record one's voice and replay it for comparison.

The *Computer Assisted Language Laboratory (CALL)* （Brown,1988）: It uses computer to teach language. The course materials are fed into the computer and displayed as per the features available in the computer system. Presently Computers with internet connections are used in laboratories to learn the language.

The *Dial Access Lab* needs more spaces than the Conventional Lab. It also needs more technicians at any given time. It is basically a broadcast operation. Many students can access a particular audiotape at any given time, depending on the size of operation,

Mobile Lab is a console on wheels and it has storage spaces for headsets. It can be used within a single building where it can be moved from one room to another (Smriti Singh, 2013). Any classroom may be turned into a mobile lab, the drawback is that the equipment is heavy and hampers free movement. It requires time and energy to set up.

Wireless Lab: The wires connecting the sources to student headsets are replaced by radio transmission in a wireless laboratory (Conrad & Howitt,2006). The console contains a small transmitter that serves this purpose. Monitoring and intercom are NOT possible with this lab.

Portable Lab: This is placed in weather–proofed packages enclosed in containers with handles, instead of being placed on wheels as in Mobile Labs. It is either powered by batteries or portable electric generators. It is ideal for poverty stricken areas. (Types of Laboratory Installations, Wiki educator).

V. LANGUAGE LABORATORY IN PSYCHOLOGICAL ASPECT OF LEARNING

The language laboratory, long a bulwark of programmed instruction (i.e., drill and repeat exercises), is now experiencing re evaluation by teachers for its potential as an instructional tool. Based on the theories of structuralism and behaviorism students became speakers of the target language by learning discreet linguistic units, because of the audio-lingual approach held. Through the mechanical process of repetitive drills, the linguistic units could be mastered (Baltra, 1986). A typical audio-lingual language lab activity is one in which students listen to and repeat pre-recorded audio materials, either individually or as a group, with the option of the teacher "monitoring" (listening without disturbing the students) and providing individual feedback as necessary. Language acquisition theories have been modified significantly from the days when language labs ruled as the most excellent technology in language instruction. The main objective of Language laboratory is communicative fluency rather than linguistic accuracy..

The language laboratory can indeed serve to support communicative approaches to language instruction by becoming "interactive." Although, in one sense, this can be achieved through the acquisition of interactive hardware, this paper will focus on the pedagogical approaches to language lab use that create interaction in the sense defined by Rivers (1987):

Students achieve facility in "using" a language when their attention is focused on conveying and receiving authentic messages (that is, messages that contain information of interest to speaker and listener in a situation of importance to both).

VI. USE OF LANGUAGE LAB WITH TEACHER'S CONSOLE

In Language Lab, teacher's Console will have Language Learning Software and it acts as a platform for learning, practicing and producing language skills through interactive lessons and communicative mode of teaching. Learners can learn and respond at their own pace in different ways. Language lab may have the following objectives, purposes, functions to work upon (Sunitha.R,2016).

VII. OBJECTIVES

- To develop linguistic competence- through accuracy in grammar, Pronunciation & Vocabulary.
- To accomplish strategic competence to use the language with a wide range of communication strategies.
- To enhance the discourse competence, to make the learner to be able to contextualize written text and speech.

VIII. TECHNIQUES TO IMPROVE THE SKILLS OF LANGUAGE THOUGH LANGUAGE LAB

Listening and reading are receptive skills whereas speaking and writing are the productive skills among the four skills of language learning. Linguistic skills can be improved effectively when the learner learns at their own pace.

I) Techniques to improve listening

Speech is the primary form of linguistic communication and listening is the most important receptive skill in second language acquisition. Teaching listening involves training in perception of sounds, stress, intonation patterns, accents, attitudes and so on, and 'practice' in various styles of listening comprehension.

a) Perception / Pronunciation

The first stage is the perception of the sounds of the language that leads to interpretation and comprehension. In second language acquisition, a learner needs to know the sounds, rhythms, tunes and stress patterns of that language.

1) Phonetics: Using the International Phonetic Alphabet (IPA) the sounds of the English is used in all Longman dictionaries. With the help of perception exercises (ship/sheep, ten /then), students learn the sounds of English. Pronunciation can be practiced through the software or by using CDs in language lab.

2) Interpretation: We listen to interpret meaning. Most of the exercises will focus on listening comprehension, which in turn interprets meaning from spoken language.

3) Listening to words: In spoken language is a continuous stream of sound. The learner needs to listen carefully to understand the meaning of words spoken.

b) Tools for Listening (Clark.P,2007)

1) Acoustics: Our ability to hear is essential to our ability to listen. It concerns the production, corruption, transmission and reception of spoken language.

2) Usage of language laboratory: Earphones and headphones in the in a language laboratory with the helps o hear the acoustics with clarity; this provides ideal conditions for intensive listening.

II) Techniques to improve speaking (Clark.P,2007)

Students' speech evaluation is possible through the digital recorder modules in language learning software. Students' audio recordings can be scored or saved for later evaluation. The students can get the chance of hearing the voice notes of the teachers later for review.

Group Discussions & Role Plays (Clark.P, 2007): The students on different workstations can be grouped to participate in role plays and group discussions. Teachers can listen directly or intervene to control, monitor the learner and evaluate the process. It can also be recorded and saved for later evaluation.

Digital Recorder (Nunan, D.2006): The modules in the helps students to experience interactive multimedia programs while simultaneously recording their own voices for practice. Learners can increase their level of comprehension, vocabulary and speaking skills and they feel like interacting with a live native speaker. By adding subtitles, reading skills are also increased.

Voice Recognition Technology (Wadhwa, 2005): This technology is integrated into the Pronunciation module of the software. Built in microphone on computer are used by the learner to repeat words after they hear from a native speaker through computer speakers. The software

will compare their pronunciation with that of a native speaker's waveform representation An accuracy scale on the screen with display their voice match to the native speaker on a scale of "Bad", "Acceptable", and "Good".

III) Techniques to improve Reading & Writing

Good exposure and use of vocabulary and grammar is the key technique to learn a language. Before integrating a word into a conversation, an average person must be exposed to the word or phrase 100s of times. The main thresholds of gaining language fluency are the learner's ability to:

- Learn the rules of grammar
- Grammar Exercises
- Learn a base vocabulary of approximately 2000 words for day–to–day use
- Vocabulary Lessons
- Interactive Stories.

IX. TRACK LEARNING PROGRESS THROUGH LANGUAGE LEARNING SOFTWARE

Language learning software provides teachers to evaluate students' performance and tracking their progress by various methods. By using writing, listening, recorded and Web-based activities to stimulate learners to make use of their growing oral and written language skills, store results for comparison over time, so the teacher/learner can measure progress.

Exam module under the Teacher's Console provides a complete interactive and automatic quiz module (Madhavi,2009). They can contain text, graphics, audio, video in the quiz. This is useful for teacher to create tests and evaluate the learners. Multiple choices, true/false, fill in the blanks and essay are some of the Question types. Speaking can also be evaluated through digital recorder module. Students' working on assignments or conversations in groups can be evaluated. Their audio recordings can be scored in and saved for evaluations.

Reports and statistics for tests are immediately available at the end of the each session, giving the important details of the class, individual student and individual question in tabular, graphical representation or pie diagram model.

TABLE 1: LANGUAGE TEACHING AND LEARNING BETWEEN A TRADITIONAL CLASSROOM AND A MULTIMEDIA LANGUAGE LAB UNDER THE COMMUNICATIVE FRAMEWORK

	Traditional Classroom	Multimedia Lab
Teaching tools	Chalk, blackboard.	Computer network, Videos.
Teaching materials	Textbook	Interactive computer software
Communicative activities	Imaginative role-play	Realistic computer-simulated environment
Student-teacher	Direct communication and more "intimacy"	Indirect communication and less intimacy"
Student-computer	Not available	Interactive

X. SALIENT FEATURES OF LANGUAGE LABORATORY

The use of a modern language lab or reading lab system will allow the students to learn any language or improve their own reading and speaking skills and develop their own native language comprehension at an accelerated rate (Smriti S,2014). Listening skills are primary in becoming fluent (Balashowri, K.2011). Language labs develop listening skills, allowing the students to focus on the spoken word and therefore enhancing the learners' ability to repeat and understand the spoken language (Gilakjani, 2011). The students can be subdivided into small groups to either listen and respond to the instructor's program material or interact with each other in conversational practices in a lab environment. There are various types of activities that can be developed by instructors for both mainstream and special needs. In a Language laboratory all students can practice simultaneously (rather than one at a time) thus increasing the student's self-paced learning and fluency.

XI. BENEFITS OF LANGUAGE LABORATORY

Acoustics: The language lab provides all students no matter where they are seated in the room with equal opportunity to hear the instructor and to be heard by the instructor. A student can listen to the lesson material at a level set by themselves at their own pace.

Privacy: Psychological privacy promotes the speaking ability among the students by the provision of headset/microphone. It reduces the inhibitions felt in normal classroom situations.

Attention: In language lab each individual student's attention is focused on the program material being studied.

Individualization: The different groups in a laboratory can be listening to different programs on varying subject matters and at different levels of inter-activity and individual's ability can be evaluated.

Developing Listening Skills: Students always hear the correct language patterns all the time through their headsets in the language lab which develop listening skills and aid the process of communication.

Efficiency: The teacher can monitor individual students (and talk to them) much more efficiently than in a regular classroom (Hannah, 2013) . Normally in a regular classroom all other students stop speaking when the teacher communicates with an individual student. In a lab they will continue working without interruption. In order to be in contact with a student a teacher can interact with students when he/she merely presses a mouse key or touches a button. The language lab makes most efficient use of time, allowing the instructor to maximize the use of time in a given lesson.

Variety: The language lab provides variety from regular classroom situations ((Hannah, 2013). The teacher's role has been changed as facilitator and the students are more active for longer periods of time. The attention span of the students increases by the use of visual stimulus coupled with selective audio materials increases

Oral Testing((Hannah,2013): Student's answers are recorded by the Oral test features which allow instructors to test students with a question or stimulus Based on the student recordings . Instructors can easily mark the student's work, which is made up of only the responses given by the student.

Teacher Monitoring: Since the teacher need not concentrate on producing the next question or exercise, he/she can concentrate more on the student responses. The instructor has more time to produce materials and oversee class activities due to the automatic rather than manually controlled instructor console features (Ramesh babu.A,2010).

Role Playing Exercises (Ramesh babu.A,2010): Using the random pairing feature, instructors can generate a variety of exercises structured around role-playing. Students can be paired or grouped together in small numbers and practice conversation with each other. The students' interest level is high in anticipation because of random students' selection.

XII. SHORTCOMINGS

Students are interested in words, phrases and their meanings. The learners do not have the patience to listen to the pronunciation and practice them. All except the first generation laboratories allow the teacher to control the tape with the use of remote and transport controls of the student booths (record, stop, rewind etc) from the master desk. The master programme material is often copied at high speed for later use by the students at their own pace.

Successful implementation of the communicative method of teaching English makes it imperative that the institute possess a language lab (Vohra,2013). But in a country like India, the problems are numerous. If these basic problems are sorted out and a language syllabus with

adequate number of lab hours is put in place only then language teaching and learning can be a fulfilling task(Nunaun,2014).

XIII. CONCLUSION

In any field and for learning any subject there is always scope for improvement and advancement. It has to be accomplished with commitment and enthusiasm. Teachers are habituated to the traditional teaching methods. It is the right time that the teaching methods have to undergo a change. Through the adoption of new technology in English language teaching, we can impart language skills among learners at the rate of growing competition. Foreign language training will take place not in a traditional classroom but with the help of a setting such as a multimedia lab. So that the training will be more efficient. Teachers should understand the idea of how a traditional classroom is different from a multimedia lab clearly. A language lab acts as a platform for acquiring language skills through interactive lessons and communication mode of teaching. The Language Research Centres are considered to be a radical shift from the teacher-centred approach to an independent and enjoyable learning experience. Learners can learn and respond at their own pace of learning. The language laboratory helps one to use technology effectively to communicate.

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