CHAPTER – 3

HISTORY AND TYPES OF LANGUAGE LAB

History of Language Lab

The word ‘laboratory’ originated in the late 15th century. It refers to a specific structure or a room for mixing chemicals and preparing medicines by science experts. Scientists used to follow structured steps to perform their experiments and research purpose. With the progress of science few types of mechanical and electronic equipments were added to this structure. Later on this structure was introduced for teaching learning process. Any learner can develop one’s subject knowledge practically in controlled conditions. Observe and improve through own experience is the key concern of any laboratory. Today specific requirements of subjects and technology have changed the form of laboratories. It has transcended the boundaries of various subjects. Nowadays laboratory is been used by engineering and language students as well. Popularly it is abbreviated as lab.

Language learning has its separate requirements like all other subjects. There are four skills to master as Listening, Speaking, Reading and Writing. The sequence of all these skills is also important. They must be acquired in a sequence for one’s proper development. After the boom in ICT a new chapter in language learning started as language laboratory. The language laboratory plays an important role in the language learning process. As it is a combination of various technological aids which gives many advanced facilities that can help a student to learn a language developing all four skills. It proves that education and technology are best complement of each other. Language lab is a class of English language learning where teaching learning process happens with computers and other technical support. For language learning students individually use a computer which is connected with a server.
There are some verified ways to use computers for language class. In early phase of learning teacher uses common computer to teach the entire class. For the purpose of delivering content teacher uses some popular and useful computer programs like PowerPoint or MSWord or an Interactive whiteboard can also be used. Here all classroom activities are in the control of teacher. For intermediate and mature learners, group activities in a set network of language learners are very fruitful. This teaching is a task-based group learning activities which can be only monitored by teacher. Students use computer to communicate in group. For advance learners self learning is preferred. They do their exercises and drilling on their own. They also explore resource and share with friends. And for working people the most useful way is distance learning. Those who can’t take classes due to the problem of time or distance but if they are strongly determined they can learn by this way. For them course content is available online. They use computer and get their lessons by email and similarly can submit their assignments by email. Chat room, blogs, websites and many online materials they can use. Last two decades were the spring of computer-mediated instruction. Wide spread of Internet and rise in computer industries are two main causes for this. Some hi-tech language learning software like Renet, Aristoclass, Hiclass, Globarina and Words Worth have changed the scenario of English language learning.

Knowledge gives birth to technology and technology helps in knowledge spreading. It is known fact that any new invention in technology proves to be a boon for those who uses it in a better way. Educational purpose is one of the best way of utilizing this discovery. Such best examples are invention of printing press, radio, television and computer. The best use of printing press is in printing material related to teaching learning process. In the same way radio and television were invented for information broadcasting and entertainment but they both are also being used for educational purpose. The history of teaching through technology is dated behind in 1943. A red letter day was when a separate department for learning English was established in BBC in the year 1943. After two years of meticulous work, in 1945 BBC World Service came up with the first English language teaching programme. Initially the program was known as ‘English
by Radio’ and after changing few more names today it is known as ‘BBC Learning English’. According to Wikipedia also

“The Light Programme was a BBC radio station which broadcast chiefly mainstream light entertainment and music from 1945 until 1967, when it was rebranded as BBC Radio 2. It opened on 29 July 1945, taking over the long wave frequency which had earlier been used – prior to the outbreak of World War II in September 1939 – by the BBC National Programme.” (BBC Light Programme)

The programmes then were very simple and of elementary level. As the audience was of heterogeneous level in their knowledge, age and interest it was only practice of listening and repeating. ‘What is certain is that the first English by Radio broadcast consisted of a series of selected utterances articulated slowly in the impeccable BBC English of the day, followed by a careful translation in the language of the learner.’ (105-The Use 15) After a few months the need for advance information of lessons and printed material felt by both learners and trainers. According to experts only listening and repeating will not give desired result. Some printed material was dire need of learners so that they can learn faster. The credit to make this possible can be given to Sydney Stevens. ‘The first Head of English by Radio, the late Sydney Stevens, who laid the foundations upon which all that has followed has been built, had the vision to see the need to support these broadcast series with self-study materials…’ (105- The Use of the16)

Few more experts were accompanying Sydney Stevens in this noble task of spreading English. Albert Sidney Hornby and C E Eckersley were two of them. Hornby is known as the pioneer of ELT. He was also a grammarian and a lexicographer. Eckersley is known for his contribution to design a special program for beginners in 1948. David Hicks added feather to the crown by his programme Calling All Beginners in 1950. In order to motivate learners for self study he started a bilingual radio series. This series had a book to offer instructions in learners’ first language.
A very important field for CALL is Applied Linguistic. In simple sense it is known as application of language in life. It is associated with Computer Medicated Communication closely. Its root is in multilingualism or bilingualism. In learning any foreign language learners come across certain problems. It tries to answer these real life problems pertaining to communication and sociology. In answering this, a new branch came in to existence as Generative Linguistic. The history of Applied Linguistics dated back in 1940 at the University of Michigan. An association for this was found in France in 1964 as International Association of Application Linguistics.

If we search in the history in the middle of 19th century technology was used for teaching learning purpose but the full proof evidence of the usage of computer for language teaching process, we can get in 1960. It was a kind of help kiosk where learners can get extra information about English language. In abbreviation it was called CALI that is computer assisted language instruction. The word instruction suggests that the main target of this program was giving instructions. As it was in its initial phase it was designed teacher centrically to give instructions relating to language learning.

When we discuss about history of CALL how can we forget about contemporary the Audio Lingual Method which was widely used during 1960. They both were originated during World War II. Audio Lingual Method was a reaction of Grammar Translation Method and it was similar to Direct Method. Audio Lingual Method and CALL both works on common agenda that language skills can be taught faster if we present them orally first and then in written form.

In the year 1960 a new endeavour by Donald Bitzer took birth as Programmed Logic for Automatic Teaching Operations. Its acronym is popular as PLATO. This was the first and proper stage of computer assisted instruction. It was first implemented at the University of Illinois at Urbana – Champaign. This university is known for intensive public research in United States.
Bitzer, regarded as the Father of PLATO, recognized that in order to provide quality computer-based education, good graphics were critical. This at a time when 10-character-per-second teleprinters were the norm. In 1960, the first system, PLATO I, operated on the local ILLIAC I computer. It included a television set for display and a special keyboard for navigating the system's function menus (Donald Bitzer).

Willingness to do and serve students and provide better makes one proactive. As a result of constant improvement very soon an updated version came in the market as PLATO II, in 1961. Lortiz artistically described computer based language learning as a child of language. He considers PLATO as an infant; Apple II is the childhood of call and early phase of micro computers as the adolescence of CALL. In this sense we can consider researchers are parents of CALL.

This new version had an improved facility for users that at a time two users can use the program. Focused and streamlined work of experts can make the work easier and faster. With this motive working team was expanded. Meanwhile updated technology also was ready for use. With the intense work of subject experts and technocrats in 1967 PLATO III came in to existence. PLATO III could be used by 20 users simultaneously. In 1970 computers became the central force for second langue learning in many developed country. Carol also points out that “The mainframe computers and their general purpose programming language of the 1970s were able to support the basic interaction.” (Chappelle 3) Now the idea was open for all to work upon. Many teams took up the task of serving English language. Every team thought differently and give various programs including MCQ, gap filling, simulation program, listen and record program and rearrange sentences. In 1974 language lab was becoming popular. Following picture gives the idea.
In early 1980 micro computers were in great demand. Computer became PC personal computer. Computers were in use in offices and companies. These computers were updated with improved technology. These PCs had more memory and the capacity to load graphics and audio-video. Now a learner can individually practice language at home. Many interactive exercises attracted learners for taking interest in language practice. In this decade Language learning programmes were designed for communicative learning purpose. As Carol writes “CALL was the use of artificial intelligence to recognize learners’ input to the computer and to generate responses in order to create a ‘meaningful’ conversation between computer and a learner.” (Chappelle – 9)
For educational institutions purchasing computer and maintaining computer lab was a big question. But keeping bright future of learners in mind few determined people took up the task to develop computer assisted language learning. For example in UK Rex Last and Graham Davies were given this task. Group research can lead a topic to any authentic result. This proved true as Carol “Davies’ experience also made him the logical choice to head the government founded National Centre for Computer Assisted Language Learning established in 1985.” (Chappelle – 4) These various researches promoted commercial software for learning English, for example the collaboration of Brigham Young University and Mitre Corporation for TICCIT. (Time Shared, Interactive Computer Controlled Information Television). It was full of exercises and collection of courseware. These types of software were designed to instruct learners. They became the experimental places for research in this new field of computerized learning. After many years of computerized teaching, some experts turn to Computer Assisted Language Testing (CALT). When personal computer became publicly available and very common, people were forced to use English. Now learning and teaching English as a second language has became need of the time.

Use of computer in education has started but there was a need of research in this field. So an organization named Computer Assisted Language Instruction Consortium (CALICO) came in to existence in 1983. CALICO is a separate research and development organization at Brigham Young University. It works internationally in the field of Computer Assisted Language Learning. To bring change in any field collective minority works wholeheartedly. It is also applicable with CALICO. A few language devotees began a group to work upon producing technology-based materials. They were mainly concerned with second language teaching. It started work up to improve the effective use of computer in education. To achieve its goal the comity collectively decided to take views of experts as well as users. Conferences and workshops on language learning plaid a key role in this venture. One important work was the evaluations of the current status of CALL and its material. To encourage research CALICO started awarding the best researcher yearly in the fields of language learning with technology.
WorldCALL was started with a view to spread English teaching through computers. It also aims to bring together all the birds of same fathers. Those who are willing to work for English teaching through technology are always welcome at WorldCALL. It is a platform for language lovers to discuss on any point pertaining to English Language. 1998 First WorldCALL conference was held at Melbourne. They also introduced their first scholarship program for scholar students in 1998. If we talk about CALL we must talk about the founder of CALL Mike Levy. He is a scholar under whose motivation and guidance CALL has achieved its success. His erudition is noteworthy in the field of Applied Linguistics and Computer assisted Language Learning. He is also the Executive director of WorldCALL.

With the speed and availability of broadband video materials became popular. All experts who were making teaching learning material started uploading their material and expert lecture on their blogs in video form. Podcasts became highly popular after 2005. ICT4LT website is a collection of training modules for English language teachers. It was started in 2000 with the help of European Commission. It was started with a view to train English Language Teachers. It promoted online study material so that it can be used by every English teacher for Language teaching. It uses modern technology in teaching learning process for the betterment of English Language fraternity.

In 1997 a company working for educational technology was found with the name Blackboard in Washington DC. The founders were Michel Chasen and Matthew Pittinsky. They collaborated their company with a small software provider company CourseInfo LLC and got a new name Blackboard Inc. The merger of this two came up with e-learning products like Blackboard Classroom and Blackboard Campus. Initially these were given to teachers for testing and then launched successfully in the market. 2006 was the year it was widely used in many colleges of US. In 2014 the company successfully reached to 17,000 educational institutions.
In mid 1990s Internet was easily available. As microcomputer commenced communicative learning internet made it worldwide. Now it was possible for a learner to communicate with learners of the any country. An English learner became a global learner. It was an upheaval for cross cultural communication which affected many sociocultural factors. Now it was easy for a learner to discuss problems with other learners and experts of subject. They can also share their achievements and experiments internationally. Students and experts have started forming English learning groups. A new trend of social learning came in to existence. Internet became an open source for getting resources. Some of the resources were uncontrolled or untested as to monitor any activity on internet was very difficult. There was a dire need for a control point for authentic information.

**Types of Language Lab**

Lab was widely in use in 1990 for many language learning purposes. Many professionals were learning English in lab as well as many were making course ware and software. This was the time to study about lab. If we analyze these lab types we can observe what lab does. First and foremost it introduces the structure of target language and gives some practice about the same structure. After practice it provides reinforcement to learner’s responses. It is also being used to test imparted language skills. It was difficult to decide that which software can be used where. Some specific research was desperately needed to classify language laboratories. Mark Warschauer, who was worried about it and working for the same. He is a professor at the University of California. He is a renowned man in the field of education and language teaching. After his experience of various language labs he has divided lab in three segments. The first phase on development of lab is Behaviouristic Lab, the second phase as Communicative Lab and the last phase is classified as Interactive Lab. After a few years he renamed these three types as 1. Structural Lab 2. Cognitive Lab and 3. Sociocognitive Lab
The other such name is Stephen Bax he is a professor in Applied Linguistics and also works for English language teaching through technology. According to his opinion also there three types of language lab. He classifies Language labs in three types in his article CALL – past, present and future as Restricted Language Lab between 1970 to 1980 second type as Open Language Lab 1980 to 2003 and last part is Integrated Language Lab and this period is yet to come. Mark Warschauer’s view is more acceptable and practically visible. Deborah Healey also gets agree with Warschauer’s observation. She is a well known scholar of teaching English as a second language at University of Oregon in Canada. Deborah Healey and Mark Warschauer both work in the same field of CALL and its usage.

I. Structural or Behaviouristic Lab

With the beginning of Language lab this first phase started and specifically denoted during 1960 to 1970. As it is clear that this phase was the initial phase of computer based language learning, computer technology was also in its primal stage. It is also known as the childhood of language lab because it was working on a trial error base. Its name suggests its category. Structural knowledge was the priority of the time so all the language teaching activities were structure centric. This clearly suggests that it was under the deep influence of Grammar-Translation & Audio-lingual methods. Donald Bitzer’s PLATO is a product of this age. If we take PLATO as an example we can understand that drilling practice was considered as the best exercise. Learners are supposed to practice a prerecorded study material. Computer provides a text and learners respond to the exercise in text. Computer provides feedback for the same after analyzing it. There was a provision of error correction and re-teaching. Structural type of lab was aimed at accurateness in language. The question was that how is it possible to bring accuracy directly without using it frequently.
Image – 3  Structural Type of Language Lab

Characteristics:

1. Repetition of one point or exercise for many times is preferable and also recommended.
2. It takes the advantage of computer as a machine. It has no feeling so without any hesitation or bias it provides immediate feedback.
3. One to one dealing allows learners to work at their own speed.
4. Learners are trained to master sentence patterns.
5. Situations are used to give provide real life conditions.
Type of Exercises:

To teach simple present tense first of all introduce structure of the tense

Affirmative Sentence = Subject + Verb
Negative Sentence = Subject + do/does + not + Verb
Interrogative Sentence = Do / Does + Subject + Verb?

Examples
Affirmative Sentence = He speaks English.
Negative Sentence = He does not speak English.
Interrogative Sentence = Does he speak English?

Ex – 2 Select verbs from the given sentences.

(1) I like reading.
(2) What does she do?
(3) You cannot open this box.

Its second name is Behaviouristic Lab. When we come across the word ‘Behaviourism’ we remember two words ‘stimulus and response.’ This approach was emerged in America in 1930 but it was very popular during the same period of Structural or Behaviouristic Lab. In other subject teaching also, this approach is adopted which was given by a psychologists Skinner. This theory believes that situation is the key to learn any language. According to this theory practice makes a man perfect. Language can be learnt only through its use and continuous practice. First two skills can be listening and speaking. A learner speaks what one listens from the environment. When it is formal learning, teacher has to give reinforcement and suggestions when learner is practicing the language. This will provide long term retention to the memory of a learner.
In Behaviouristic lab, to teach proper pronunciation in target language situation plays an important role. Teachers should put learners in the same situation in which one wants to train the learner. Daily life is the best example for situational learning. On the other hand it is also believed that learning is more dependable on learner’s efforts. Teacher can give reinforcement but not the learning itself. Learner has to answer provided exercise by then the teacher gives feedback. One important and all over accepted point of Behaviourism is learner acquires spoken language faster than written language.

II. Communicative Lab or Cognitive Lab

With the development of computer technology lab got updated. At the end of 1980 communication technology was full-fledged. Common people could communicate faster with technology but the condition was to learn English as computer provides English language which is common to all. Many people started language learning with a view to communicate with others. Communicative Lab types started in 1980 and lasted up to 1990. In Communicative Lab the language is taught for interaction. Language is to communicate that’s why priority is given to communication. Most people of the world are fluent of speaking their mother tongue though one has no knowledge of grammar. It means that without the knowledge of grammar and structure one can speak any language with practice. Anyone who is fluent in speaking can use the language well so fluency is the target of Communicative Lab. Computer becomes a medium for communicating effectively. In Communicative Lab all the computer based exercises are also communicative one. Communicative Lab teaches English language rather teaching about language. Rather teaching rules and structure directly if we start teaching a foreign language with communicative practice it improves learner’s willingness to learn an unfamiliar language. The Communicative Lab is contemporary to the hike of personal computer. It would be just to say it a quick and right utilization of computer technology.
Characteristics:

1. Complete grammar teaching is aimed.
2. Learners are motivated for independent thinking with the help of computers.
3. Natural pronunciation is aimed rather than mere imitation.
4. Any response by learner is always welcomed and never criticized.
5. English is taught with the help of computers and maximum practice is in English.
Exercises

Most of the Lab software of Communicative type Lab provides skill practice but the drilling was disappeared.

Ex -1 Read this paragraph silently.

What do people do when they meet?

Nowadays shaking hands is the most common gesture used by people all around the world. Every country has its own traditions. In different countries we will find different greetings. The Japanese people are very polite. When they meet for the first time, it is customary to bow to one another as a sign of respect. In Arabic countries they touch their heart when they meet. In India people do Namaste.

Ex – 2 Read the paragraph and then reconstruct it.

Sunil is a student of 11th commerce. This week he has his semester exam starting from Monday and will last till Friday. On Tuesday evening he will visit Watson museum. On next day he will attend a birthday party of his friend. On Thursday he will prepare for his last paper and on Friday he will go to watch a movie at Galaxy theatre. On Saturday morning he will leave for his village.

(After reading the paragraph student will not able to see the paragraph again.)

Reconstruct the paragraph you read.

______Sunil will prepare for his last paper.

______He will reach his village.

______Sunil will go to for a movie.

______Sunil will visit a museum.

______His friend has arranged a birthday party.
Ex -3 See the map and guide your friend to reach at Mega Mall.

![Virtual Communication](image)

Image – 5 of virtual communication type games

This time frame was about to use a language to learn a language. For any practical use students were given real life task in computer lab like asking for direction. It’s a platform to use target language. A famous computer game ‘SimCity’ is the best example for it. In this game task is to build a city according to one’s development zone. Students correct their errors on their own trial and error method. Computer plays a role of a stimulus. It is not limited as a tutor only.

### III. Integrative Lab or Sociocognitive Lab

Within ten years of Communicative Lab users were fed up with Communicative Lab. With some modifications and alterations a new type of lab came in to existence in 1990s as Integrative Lab. Language is taught in social contexts. This was student centric and fulfilling social needs as well. It very important to point out that during 1990s and
2000 the wind of social media was blown. With computer and telephone people have started using Pagers and Cell Phones. To learn various skills of English learners have to interact. In Integrative Lab learners provided a chance to share their thoughts with their classmate or teacher. Unlike previous lab types it provides regular chances to use technology in language learning. With the development of technology Integrative Lab has developed subtypes but it is very popular even today.

Technology and transportation facility made this world a group. People became more mobile and started attempting multiple tasks at a time. English became mandatory for any student and professional. Everyone who was interested in self development turned to learning English. Learners wanted to learn English for a specific purpose like to get a job, for promotion, for simple communication, for business etc. These needs gave birth to ESP. (English for Specific Purpose) Students started tacking admission in foreign universities were English was a language of instruction. Non English speaking students started learning English for Academic Purpose (EAP). They are not interested in the technicalities of English but they want to interact with others. Few common needs of the time was to know how to write a resume, how to answer and email, how to write any application or how to interact with anyone.

Integrative Lab is also known as Sociocognitive Lab. The main reason for this is learner’s learning and receptive abilities are used in a social framework. Learners work as a team not as individual. It’s a wonder that computer network is used to build social network of learners. Contradictory to Communicative Lab here the aim of learning is not fluency but the agency or group. Learner takes one’s decisions and learns according to one’s choice. It provides a learner more freedom than any other type of lab. The use of computer is to render students for real life and task based learning. It is a tool for discourse making.
**Multimedia Lab**: Multimedia Lab is a Lab for those who are in developing phase of language learning or teaching. If any school or educational institute is in its initial stage Multimedia Lab is for them. Apart from computer it also uses CD-ROM, a projector and a set of speakers for common and controlled listening. Multimedia used for presenting images, audio, video and text at one place and mostly on common screen. It is very helpful for those learners who are not comfortable with computer and technology or for kids.

**Characteristics:**

1. Use of multimedia helps to inculcate language skills in learners.
2. It provides more reliable and real learning situation.
3. Functionality of language is emphasized over functions of language.
4. Learners get a stream line learning of language which provides command over target language.
**Web-based Lab:** This sub type of language lab is the result of advancement of web technology. When Web became worldwide and commonly accessible it benefited language field also. Warschauer divides Web Assisted Language Learning in two further divisions.

A. Computer Medicated Communication (CMC)

In Computer Medicated Communication learner has both the options the option of Web and trainers guidance. Here learner can be a global language learner. For his query he can refer to any expert across the globe through the facility of Web. He can use group chat to develop his skills. One can also listen to audio clips and watch expert lecture. It is the best way to learn listening skill. Trainer’s guidance plays important role in learning process and learner’s curiosity can be resolved through open source material from Web.

Characteristics:

1. Communication is possible directly with selected person at a nominal cost.
2. The communication is either single channel or multi-channels.
3. Time and place is not a problem in communication.
4. CMC can be carried out in several forms; it can be one-to-one, one-to-many, or many-to-one.

B. The Web

In the second type learn uses web for all the guidance. Trainer is not there to guide the learning module also is selected by learner. It cannot be the controlled learning. There is a possibility of distraction if the learner is not matured. It is most useful for working people or adult learner. Those who have basic knowledge of English can take benefit of it. A popular game based on this type of lab is ‘Who is Oscar Lake?’ It is a simulation game which takes the learner to a city of any foreign country. Learner gets a puzzle in target language and by solving it learner learns target language. Here the chance is to learn through listening, observing and doing.
Characteristic

1. Learners can learn through common resource uploaded on internet.
2. Area of interest of any learner can be developed.
3. Learners learn through sharing own experiences and to related persons and get feedback as well.

Dr. Butler Pascoe is the Systemwide Director of the TESOL programs and international language education in the Hufstedler School. According to her point of view the history of CALL can be divided as in educational technology and in second or foreign language acquisition. She studied that internet facility and technology vindicated task based learning and content based teaching.

When we talk about technology aided learning we refer to optimum use of technology in teaching. As CALL is a cluster of teaching and technology, teachers and techno craters both have to work in supplement of each other. To prepare any software for CALL is an enormous and painstaking task. It is a great team work of skill full people. To design any major CALL project we require a subject specialist first who designs what to teach and how to teach. He provides the content and decides pedagogy for the project. Mostly it is a work of two or more subject specialists. Second important person is a programmer who can better use the selected programming language and other tools. After preparing the content and program a graphic designer works for the beautification of the project. Graphic designer works on related images or icons and also advises about suitable fonts, font colour and background colour and screen layout. Then it comes the turn of a sound engineer for proper recording of audio clips.

Each type of lab mainly does three type of work. 1. Presenting the rules and examples 2. Reinforcing learners for their activities as a feedback 3. Testing their knowledge. Students and teachers can use it as a tool of language learning. With the updating of technology lab has modernized itself to cater the need of language learners. Warschauer and Healey are amongst pioneers of this field think that
“The shift to global information-based economies has meant a dramatic increase in the need to deal with large amounts of information and to communicate across languages and cultures. Memorisation is less important in this information-rich time than effective search strategies, and students need the ability to respond and adapt to changes rather than training in a single way to approach a task.” (Warschauer and Healey 58)

In the early phase of Language Lab many language teachers were against Language lab. They considered lab as the end of their profession and it is not good for students as well. After using lab consistently they realized that lab is their friend not the foe.

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