# Novel Technologies, Engines and Mobiles in Language Learning

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## Introduction

The purpose of Educational Technology is promotion of learning by improving communication and interactivity using Computer Assisted Language Learning (CALL). Language laboratory has now become a place where CALL is engaged more actively.

Of all the languages taught in India, English is more advanced in using CALL. In this paper we present aspects of CALL as these relate to teaching and learning English in India.

## Language Laboratory

The Language Laboratory helps a lot in teaching and learning English. English lab is essentially an audio visual aid which has various devices such as CDs, audio cassettes and videos to impart instruction or information for learning English language to the user. Interactive computer network allows students to test the results of learning without the risk of being punished for any mistake that he may commit while learning. It permits the

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student to have his or her own pace of learning and monitor and evaluate their own performance if they are doing individual practice.

**Dramatic Change**

Since the early 1960s, language teachers have witnessed dramatic changes in the ways that languages are taught. The focus of instruction has broadened from the teaching of discrete grammatical structures to mastery of communicative ability. Creative self-expression has come to be valued more over recitation of memorized dialogues. Negotiation of meaning takes precedence over structural drill practice. Comprehension has taken on new dominion to provide comprehensible input that has become a common pedagogical imperative.

Culture has received a renewed interest and emphasis, even if teachers remain unsure of how best to teach it. Language text books have begun to distinguish spoken and written language forms by incorporating authentic texts.

It is in the context of these dynamic and still evolving changes that Computer Assisted Language Learning has come to influence both learning and teaching of languages. The learners can communicate either on a one-to-one or a many-to-many basis in local area network conferences to multiply their opportunities for communicative practice. The computer enhanced class room environment encourages not only the bright students but also the slow learners as they can sit with computer whenever and as long as they like. The difficulty experienced by the slow learners in a conventional class room is easily eliminated by using computers, internet, web sites and so on.

As Rajeshwar says, "The introduction of the computer into the language class room as a resource adds to the excitement and ease of teaching and learning. The multi-media computer simultaneously appeals to the senses of seeing and hearing in a way traditional teaching aid cannot. It offers a high degree of flexibility in the learning (8). … second language acquisition and instruction … make the teaching and learning of English an infinitely enjoyable experience"

**Three Phases**

The uses of Technology based environments for learning in general, and for second language acquisition in particular, differ from the traditional design of text-based and stand-alone systems.

Computer-Aided Language learning can be broadly categorized into three phases namely Behaviourist, Communicate and Integrative.

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1. In **Behaviourist phase**, computer is used as a vehicle for delivering varied instructional material to provide a lot of information to take the role as a tutor.

2. In **Communicative phase**, computer is used for practising skills with simulated programs and software with a greater a degree of student choice, control and interaction.

3. In the present **Interactive phase**, multimedia and internet are used to enable listening, speaking, reading and writing skills to be combined in a single integrated activity with the learner exercising a high integrated degree of control over the path she/he follows through the material.

**Two Important Features**

The philosophy of CALL puts a strong emphasis on student-centered lessons that allow the learners learn on their own, using structured and unstructured interactive lessons. These lessons carry two important features: bidirectional (interactive) learning and individualized learning. CALL is not a method; it is a tool that helps teachers facilitates language learning process. It can also be used as remedial to help learners with limited language proficiency.

**The Role of Teachers and Students**

Instead of handing down the knowledge from the teachers to students and being the centre of students' attraction, teachers become guides as they construct the activities that students can do and help them as students complete the assigned tasks. However, the teachers' presence is still very important to students when doing CALL activities.

Teachers should be familiar enough with the resources to be used to anticipate technical problems and limitations rather than passively absorbing information. Learners must negotiate meaning and assimilate new information through interaction. Because of the use of technology, less-able students can become more active participants in the class. Moreover, more shy students can feel free in their own students-centered environment. This will raise their self-esteem and their knowledge will be improving.

**Use of Call for the Four Skills**

Using current CALL technology, the development of speaking abilities has gained much attention. Most CALL programs are geared toward four language skills (LSRW). Most reading and listening software is based on drills. CALL helps speaking skills closely.

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Gains in writing skills have improved over the time, as better and more efficient grammar, spell check and punctuation software is developed.

Many colleges and universities in the United States have obtained such software and make them available to their students in their English classes. Our institutions have not begun to look at the use of such software for their English classes, as these do cost a lot of money. What we can do, however, is to identify the many free websites that offer help by providing learning materials.

A list of these websites must be prepared by the concerned English departments, and the teachers asked to evaluate the usefulness of such websites from the point of our syllabi, and then offer links with formal and explicit instructions to our student to do the exercises. These websites also provide the key at the end after doing the exercises. So, students can self-evaluate their own performance and move from one set of exercises to another.

In the successful application of speech processing technology or Automatic Speech Recognition (ASR), the computer "understands" the spoken words of the learner. The first is pronunciation training. Learners read sentences on the screen and the computer gives feedback to check the accuracy of the utterance, usually in the form of visual sound waves. The next is software where the learner speaks and commands the computer to do. One of the main promises of CALL is the ability to individualize learning.

**Multimedia - A Powerful Media to Learning**

A potentially powerful option that computers offer is the provision for rich multi model input in the form of full motion video, text, sound and colour graphics. Multimedia is a media that uses a combination of different context forms.

In education, multimedia is used to produce Computer-based Training courses and reference books like encyclopedia and almanacs. 'Edutainment' is an informal term used to describe the combination of education and entertainment, especially multimedia entertainment. The possibilities for learning and instruction are endless, particularly in higher education. Software engineers use multimedia in computer simulations for anything from entertainment to training such as the military or industrial training. The sophistication of software with an increase in the speed, storage capacity and memory size of computers together with developments now enable computers to facilitate video, sound, text and graphics for language learning. The use of these combinations in communication is Multimedia which makes CALL more effective.

**Internet**

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"The World Wide Web (WWW), the jewel of the internet comes as a great resource for language learning and teaching and can be used effectively in the language classroom. The English teachers have to adapt to the new technology to maximize their teaching potential," stresses M. Rajeshwar (10).

The Internet and the World Wide Web are ideal communication tools as they provide the medium for conveying thoughts and for negotiating with others. This makes them particularly useful for second language acquisition. In Dorothy M. Chun and John P.Plass' opinion, "The ultimate goal of learning a new language is to be able to successfully express one's own ideas and to comprehend the thoughts of others, in other words, to understand and to be understood" (153).

There are hundreds of websites offering programs in English, ELT and related areas. S. Thiruvenkataswami says in his "Online Sources for ELT", "Some of the available CALL Software items are GAPMASTER, TEXT MASTER, PINPOINT, STORY BOARD, MATCHMAKER, GARMMAR and VOCAB" (57).

## Non-Call Software

Computers assist in teaching and learning of English skills as well as other skills (retrieval) also. Such learning helps the students when they conduct research. P. Sudipta in "Information Technology and English Language Teaching" says: "Every institution reported using non-CALL software. Word-processing and spell correcting software is used in ELT writing classes. Other programs included grammar correcting software and software in training computer skills such as keyboard and mouse utility skills. There is also non-CALL software in the form of CD ROMS which included reference material such as encyclopedia, dictionaries, thesaurus and on-line magazines like US Today, CNN and Time Capsule" (43).

However, this software is used only as reference material and not very popular among the users.

## Virtual Learning

Virtual Learning Environment (VLE) is a software system designed to support teaching and learning in an educational setting. A VLE will normally work over the internet and provide a collection of tools such as those for assessment of communication, questionnaires, peer assessment etc… Originally VLE was created for distance education; but now it is used to supplement traditional face to face classroom activities, commonly known as Blended Learning. Here, learning is not confined to a particular building or

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restricted to any single location or moment. Universities and other institutions of higher education are increasingly turning to VLEs in order to provide a service for students who increasingly look to the internet as the natural medium for finding information and resources.

Visual and auditory activities in CALL Learning facilitate multi-model. The key element for language learning is the synchronized activation for the auditory, phonological and visual systems in the brain, especially important for listening and reading development.
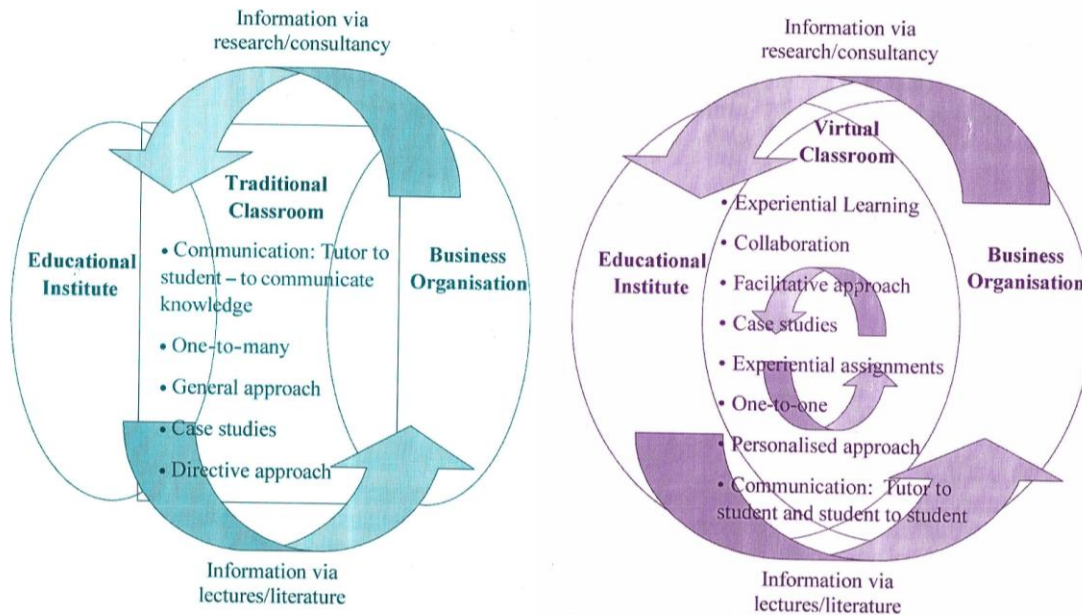


New features in those systems include Wikis, Blogs, RSS, 3D virtual learning spaces.

**E-Learning**

The electronics revolution in the 1980s also marked the era of personal computing. The term 'electronic learning' is also analogous to online education. Paulsen and Keegan define this form of education as: "The provision of two-way communication via a Computer network so that students may benefit from communication with each other, teachers and staff" (en.wikipedia.org). Time and place are no longer restrictions as the learning experience can be tapped anywhere if one has a computer and access to the Internet. E-learning is self-paced and the learning sessions are available 24x7. Learners are not bound to a specific day/time to physically attend classes. They can also pause learning sessions at their convenience.

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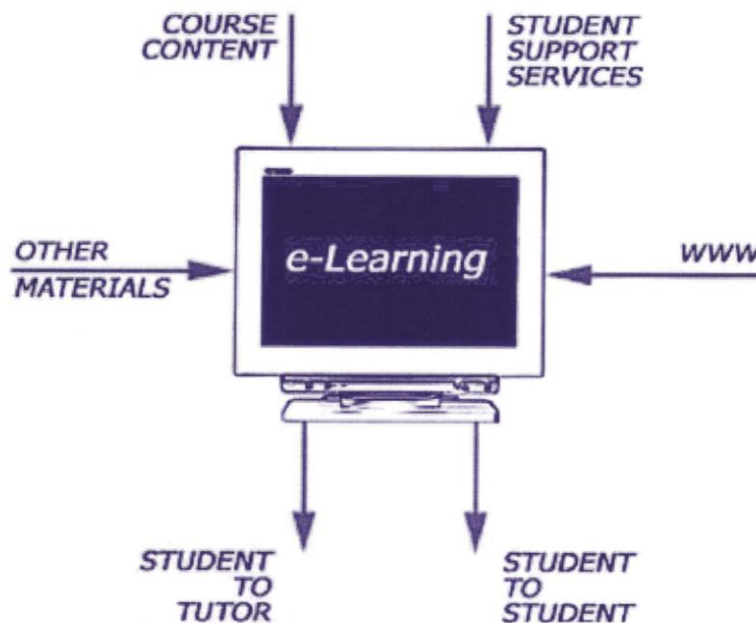10 : 2 February 2010
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The following model shows how e-learning works.



COURSE CONTENT

STUDENT SUPPORT SERVICES

OTHER MATERIALS

e-Learning

WWW

STUDENT TO TUTOR

STUDENT TO STUDENT

Wired virtual learning environment of today, Keegan 2002

The screen is the computer screen where the students receive course content, student support services and have access to the web and other materials. The student can communicate with the teacher or peers from here via e-mail or chat session. E-learning, which includes online learning, web-based training virtual learning, and digital learning, depends on the availability of a wired network connection to the Internet.

**Web Search Engine**

It is a tool designed to search for information on the World Wide Web. Web search engines work by storing information from many web pages which they retrieve from the html itself. Some search engines, such as Google store all or part of the source page as well as information about the web pages, whereas others such as Alta Vista store every word of every page, they find. When a user enters a query into a search engine, the engine examines its index and provides a listing of best matching web pages according to its criteria, usually with a short summary containing the documents title and sometimes

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parts of the text. The engine looks for the words or phrases exactly as entered. A site like this would be ask.com.

**M-Learning**

COURSE CONTENT

STUDENT SUPPORT SERVICES

OTHER MATERIALS

m-Learning

WWW

STUDENT TO TUTOR
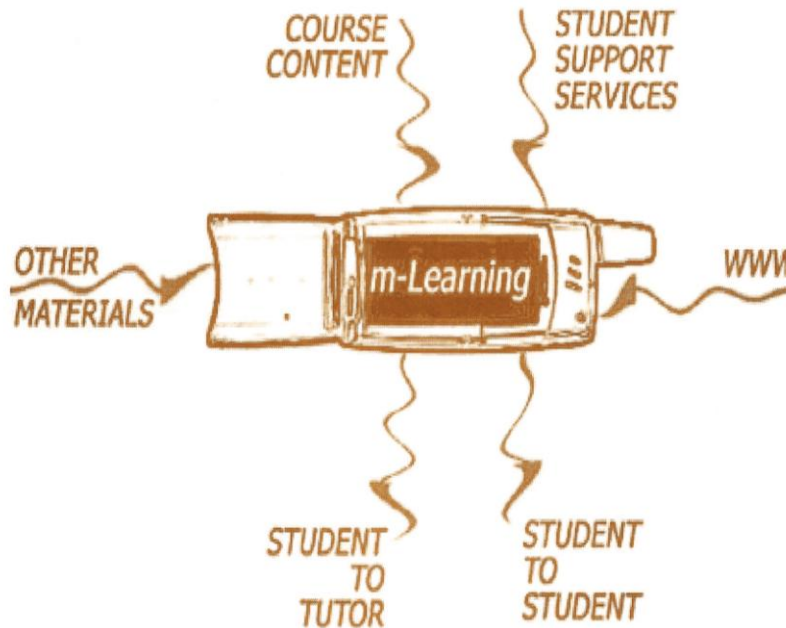
STUDENT TO STUDENT

Wireless learning environment of to-morrow, Keegan 2002

With the use of a hand-held wireless device and software/hardware solution, the students are exposed to a new educational experience to access educational content through mobile learning. Keegan in "The future of learning: From e-learning to m-learning" quotes Harris' definition "The point at which mobile computing and e-learning intersect to produce an anytime, anywhere learning experience." (en.wikipedia.org).

M-learning is learning that can take place anytime, anywhere with the help of a mobile computer device. The device must be capable of presenting learning content and providing wireless two-way communication between teacher(s) and student(s).

Quinn says, "It's e-learning through mobile computational devices; even your digital cell phone" (en.wikipedia.org). By means of a wireless Internet, the students can receive course content located on a remote server. The main difference in this model compared to

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e-learning is that all communication is wireless. M-learning not only breaks the barriers but also presents new challenges in the educational area.

## Summation

Technology based language learning does not represent a particular technique, method or approach. Richard Kern and Mark Warschauer says, "It is a constellation of ways by which students communicate via computer networks; and interpret and construct on-line texts and multimedia documents, all as a part of a process of steadily increasing learning process among learners" (17).

To  sum up, the advantages in using these technological manifestations result in an exposure to new ideas and experiences; development of logical thinking and reasoning abilities; support for training in skills or for remedial activity and the simulation of real life situations.

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