CHAPTER 2

CALL: Its Development and Types

Introduction

The use of computer technology in education can be classified into three categories (Plomp et al: 1997):

a. Computers can be considered as an “object” which students learn about (hardware and software).

b. Computer technologies can be an “aspect”, which means using them as tools in subjects, such as computer-aided design courses, or generals in educational settings, such as the use of graphic design software to create web pages for a school.

c. Computer technologies are a “medium” for instruction. In this category, computer technologies can be used for teaching and learning.

It is observed that computer technology can be used in different ways depending on the objectives of its use. The main objectives of using computer technology in education are:

i. To raise the standards of students’ achievement by increasing the use of ICT in their learning;

ii. To enable teachers to make sound judgments about when and how to integrate ICT in the Classroom; and

iii. To enable teachers to acquire the confidence and skills to make use of and to integrate ICT into their lesson plans and teaching of the subjects in the classroom.

Computer technology plays an important and effective role in language learning and teaching. de Szendeffy (2005) has pointed out that computers can bring about positive changes into language learning (p.4):

a. Computers can be an alternative and reliable source of target language knowledge.
b. Computers can make authentic materials in the form of multimedia contents accessible to the individuals who can make use of them at their convenience.

c. Computers can be utilized for providing the learners with additional or supplementary practice or exercise materials and feedback from time to time.

d. Students can develop their writing skills by trying to write for a larger audience via e-mail and web pages.

The Role of the Computer in Language Learning and Teaching

Though computer is used in language learning and teaching, its role is not always determined in one stereotyped manner. It can play the following three important roles in teaching-learning:

- Computer as tutor for language drills or skill practice
- Computer as a tool for writing, presenting, and researching
- Computer as a medium of global communication.

Computer can be used as an instructional tool for developing language skills of the students in teaching-learning process. According to Kotker (1984), “The computer is also a worthwhile teaching tool, and more important, it is a tool that does not duplicate what was already available. It is particularly helpful for developmental students, who seem to acquire some distance from their work when they put it on the computer screen” (p.6).

According to Wilson and Thayalan (2009) the use of computers in CALL for communication purpose is realized at three levels: computer as tutor; computer as stimulus; and computer as tool. Specifically, one can distinguish two types of roles for individuals engaged in CALL (ibid, 2009). They are:

1. Institutional: This includes classroom teachers, specialists of various kinds, language lab managers, language skill area specialists, etc. and professionals whose careers centre on CALL.
2. Functional : This includes practitioners, developers, researchers and trainers.
Many educators and researchers have begun developing their own programmes to encourage students to use computers as part of learning English (Higgins, 1993; Jarvis, 2003). As Navaruttanaporn (2010) has said:

In applying technology, computer programmes as part of teaching and learning English should be taken into consideration. It can promote students’ language learning proficiency and can fulfill the growing demand for proficient English speakers in the workplace (p. 4).

Thus Computer can be used in and outside the language classrooms to help students learn or conduct activities independently, in small groups, or individually with some support from teachers.

**Definitions of CALL**

Computer Assisted Language Learning (CALL) is an approach in which computer is used in the learning and teaching of languages. Many scholars and experts have defined it from different angles in different contexts. The following are some of the definitions given by experts and accepted by critics:

a. Computer-assisted language learning (CALL) was the expression agreed upon at the 1983 TESOL convention. This term is widely used to refer to the area of technology and second language teaching and learning despite the fact that revisions of the definition of the term are suggested regularly (Chapelle, 2001, p.3).

b. Computer Assisted Language Learning (CALL) may be defined as the search for and study of applications of the computer in language teaching and learning (Levy, 1997, p.1).

c. Given the breadth of what may go on in computer-assisted language learning (CALL), a definition of CALL that accommodates its changing nature is any process in which a learner uses a computer and, as a result, improves his or her language (Beatty, 2003, p.7).

d. CALL has come to encompass issues of material design, technologies, pedagogical theories and modes of instruction.
Materials for CALL can include those which are purpose-made for language learning and those which adapt existing computer-based materials (Beatty, 2003, p.7-8).

e. Torat (n.d.) has defined CALL as 'the use of computer technologies that promote educational learning, including word processing, presentation packages, guided drill and practice, tutor, simulation, problem solving, games, multimedia CD-ROM, and internet applications such as e-mail, chat and the World Wide Web (WWW) for language learning purposes'.

CALL is a confusing term. A number of alternatives have been used for CALL. Some of these are: as Computer-assisted learning (CAL), Computer-based learning (CBL), Computer-assisted Instruction (CAI) and so on. Blease (1986) has used the term CAL and has divided it into following categories (as cited in Beatty, 2003, p.140):

1. by subject;
2. by mode of presentation (relations between the teacher, learner and computer);
3. by internal technique (models, simulations, chance and probability, information retrieval);
4. by educational paradigm (instructional, revelatory, conjectural, emancipatory);
5. by psychological theory; and
6. by clarity of structure (interface).

**History of CALL**

Computer-Assisted Language Learning (CALL) can be discussed in three different phases historically, viz., (i) 1950s and 1960s, (ii) 1970s and 1980s and (iii) 1990s.

1950s and 1960s: In this phase the large mainframe computers which were available at the University Campuses were first used for language learning. These mainframes were very costly and a very limited time was allotted for teaching and
learning. The three pioneering institutions Stanford University, Dartmouth University and University of Essex took the lead in creating first CALL programmes. In these CALL programmes, the focus was given on teaching the Russian languages but gradually other foreign languages were also taken up and included in these programmes (Beatty, 2003, p.17-18).

The Programmed Logic/ Learning for Automated Teaching Operations (PLATO) was the first CALL programmes used on the computer for language learning (Ahmed et al, 1985, p.30-32). The University of Illinois developed it in 1959 with a business partner Control Data Corporation.

1970s and 1980s: With the advancement of technology micro-computers were developed and sold in the mid 1970s. Small computer applications on language teaching and learning were also developed during this period. During this period, the focus of CALL research was videodisc technology – a high volume storage system. This format has been replaced with Compact Disc Read-Only Memory (CD-ROMs). The CD-ROMs have a greater installed base in personal computers and feature a format that is smaller, more convenient and less prone to warping. With the development of technology, the CD-ROMs were again replaced with Digital Videodiscs (DVD).

Some of the main features of videodisk learning are priority of listening over speaking; exclusive use of the target language; implicit rather than explicit grammar, etc. There are many learning programmes on videodisc technology but the researchers have suggested that the following three were mainly developed for learning purposes:

1. Macario,
2. Montevridesco and Interactive Digame, and
3. ALLP (the Athena Language Learning Project).

CALL in 1990s: With the development of multimedia technology and Internet, thousands of CALL software programmes have been published but there is a lack of guidelines for preparing the programmes to be used in a multimedia CALL environment.
The Development of CALL from the Pedagogical Perspective

Since its inception in the 1960s, CALL had to cover various stages from the pedagogical perspective. These stages have been analyzed by many researchers, e.g. Hardisty, 1988; Warschauer, 1996a; Bax, 2003, etc. Hardisty has said that two basic ideas were paramount at the start of the CALL:

- Firstly, there should be a principal approach to the use of CALL, integrating it into the general language curriculum.
- Secondly, the technology should be made as easy to use as possible for teachers and students.

Hardisty (1988) has proposed three stages of CALL:

<table>
<thead>
<tr>
<th>STAGE</th>
<th>FOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Paper-like</td>
<td>classroom</td>
</tr>
<tr>
<td>2. Application-like</td>
<td>classroom/world</td>
</tr>
<tr>
<td>3. World-linking</td>
<td>world</td>
</tr>
</tbody>
</table>

Main features of these stages are given below:

Stage 1: Paper-like

During the first stage of CALL, we see similar activities on screen as one would on paper and students have to fill in blanks which are a familiar exercise on paper. According to Hardisty (1988), the advantage of doing this type of activity on the screen is that the computer can interact with the learners and enable them to obtain the right answer e.g. through various help devices.

Stage 2 Application-like

During this stage of CALL, personal computers are used for writing text, which may or may not include graphics, storing information, calculating and communicating with other computers or users of computers. Software which enables the computer to carry out these tasks is called application software, for example, word processors, etc. Though this application software was not made for
educational use, it was possible to use it in many creative ways. This stage has encouraged teachers/designers to develop word processing lessons which ‘encourage the communication possibilities of transferring information on a Network’ (Hardisty, 1988).

Stage 3 World linking

The third stage of CALL, according to Hardisty (1988), involves the following:

a. Expanded use of application packages.

b. Bringing the real world into the classroom- experientially and linguistically.

c. Enabling the students to communicate with the real world from the classroom.

Thus Hardisty has summarized the three stages of CALL:

There are ways in which CALL can be used to bring the real world into the classroom, and communicate with the real world from the classroom. Language itself and its use and skill components are changing and more channel-specific sub-skills are occurring (1988).

Hardisty has concluded:

[...] good use of CALL involves attaining a degree of compute-racy where one can mix one’s general professional pedagogic approach to lesson planning and syllabus design with the unique potential of this technology and produce stimulating material for all participants involved in the teaching and learning process.

Warschauer's Analysis of CALL

According to Warschauer (1996 a) the three stages of CALL are:

1. Behaviouristic CALL

   Early CALL developments in the 1960s and 1970s were based on the technological possibility of programming computers to respond to user input. Computers could be programmed to ask questions, receive answers and tell the
users whether the answers were right or wrong. It is believed that repeated exposure to the same material is beneficial or even essential to learning. This phase corresponds with the Behaviourist approach to learning in which importance has been given to drill and practice of the same material. The main propagator of the behaviouristic approach is B.F. Skinner whose theory is based upon the idea that learning is a function of change in overt behaviour. Changes in behaviour are the result of an individual’s response to events (stimuli) that occur in his or her environment. When a particular stimulus and response pattern is reinforced through rewards, the individual has been conditioned to response. Beatty (2003) has said:

“Within the area of CALL, behaviourist aspects generally include stating the purpose of the programme or task, offering reinforcement through the text, images, audio, animations or video and providing a marks system for each task summarized at the end with grades or some other statement of progress” (p.85).

During this phase, a computer is used for carrying out repeated drills, since the machine i) does not get bored with presenting the same material, ii) it can provide immediate non-judgmental feedback and iii) learners can practice the same thing at any time outside the classroom even. Thus, a computer is used as a tutor, presenting material and feedback on an individualized basis, allowing students to proceed at their own pace and freeing up class time for other activities. Drill and practice still exist for vocabulary study and grammar practice ‘because repeated exposure to such material has been shown to promote its acquisition’, and the computer provides both immediate feedback and presents material at the learner’s pace’ (Fotos & Browne, 2004, p.5).

2. Communicative CALL

Around the late 1970s, the development of personal computer applications, including games and word-processors opened up new technological possibilities for CALL. Language learning software applications modelled on games became
popular and were often used as a stimulus for communicative language practice. Word processors and desk-top publishing application were also used as a resource for writing instruction. Personal computing applications were essentially used as tools to support communicative language teaching activities.

Motteram (1999), in his review of Levy (1997), has pointed out that the PC, the beginnings of communicative language teaching, and teacher programmers came together in the seventies and eighties. He has also said that the PC allowed ordinary teachers to produce their own software for language teaching.

The principal use of the computer in this stage is communicative exercises i.e. to practice language use in non-judgmental format. During this phase, computers are used to stimulate discussion, writing or critical thinking. As Fotos and Browne (2004) have said, “CALL software followed a cognitive model of language learning that aimed to stimulate students’ motivation, critical thinking, creativity, analytical skills rather than merely the achievement of a correct answer or the passive comprehension of meaning” (p. 5-6). Students are encouraged to generate original utterances rather than just manipulate prefabricated language. Warschauer (1996a) has referred to Underwood (1984:52) who, according to him, advocated certain principles of Communicative CALL. However, what Underwood had said was in connection with CLT in general, not in connection with communicative CALL in particular.

During this phase, computers were used as a tool (e.g., word processors, spelling and grammar checkers, and concordancers) and the target language was used exclusively because the principal objective of this phase was to develop fluency in the target language.

During this period a number of professional organizations were formed. Some of them are: Computer Assisted language Instruction Consortium (CALICO) in the United States and European Association for Computer Assisted Language Learning (EUROCALL) in Europe. A number of journals also came to be published. Among them are: CALICO Journal and ReCALL’ (Fotos & Browne, 2004, p.5). [See Appendix A for a list of CALL Organizations/Associations]
3. Integrative CALL (1990s - present)

Since the advent of local networks and the Internet in the early 1990s, the use of computers for authentic communication has become widespread in language teaching. Web browsing and authoring; email and chat are now widely used in language teaching - often in the context of project work. In such projects, the computer tends to function as a messenger communicating information to and from the learners. This kind of learning is often called 'network-based language learning'. Much of the concept for integrative CALL is derived from the Vygotskian socio-cultural model of language learning in which interaction is regarded as essential for the creation of meaning. Writing through LANs and e-mail exchange programmes among students, classes, and institutions are examples of interactive learning activities. Because of flexibility and self-paced access to information (Warschauer, 1999), another feature of integrative CALL, both teachers and students increasingly view computers and CALL as means to an end—the end being authentic, web-based communication for meaningful purposes—rather than merely as a tool for language learning (Fotos & Browne, 2004, p.7).

In integrative CALL, the view of language is socio-cognitive, that is, language is developed in social interaction through discourse communities. In this phase of CALL, the principal use of computers is for authentic discourse (to perform real-life tasks).

**Bax’s Analysis of CALL**

Bax (2003), on the other hand, was sceptical about Warschauer’s analysis of CALL and found a number of significant weaknesses in it such as ‘inconsistencies’, ‘unclear criterion’ and termed Integrative CALL as ‘doubtful assertion’ in his framework. He extended an alternative analysis of CALL which is presented below in Table 3:
<table>
<thead>
<tr>
<th>Types of task</th>
<th>Restricted CALL</th>
<th>Open CALL</th>
<th>Integrated CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closed drills</td>
<td>Simulations</td>
<td>CMC</td>
</tr>
<tr>
<td></td>
<td>Quizzes</td>
<td>Games</td>
<td>Web-based programmes</td>
</tr>
<tr>
<td>Type of student activity</td>
<td>Text reconstruction</td>
<td>Interacting with the computer</td>
<td>Frequent interaction with other students</td>
</tr>
<tr>
<td></td>
<td>Answering closed questions</td>
<td>Occasional interaction with other students</td>
<td>Some interaction with computer through lesson</td>
</tr>
<tr>
<td></td>
<td>Minimal interaction with other students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of feedback</td>
<td>Correct/ incorrect</td>
<td>Focus of linguistic skills development</td>
<td>Interpreting, evaluating, commenting, stimulating thought</td>
</tr>
<tr>
<td>Teacher role</td>
<td>Monitor</td>
<td>Monitor/ facilitator</td>
<td>Facilitator/ Manager</td>
</tr>
<tr>
<td>Position in curriculum</td>
<td>Not integrated into syllabus-optional extra</td>
<td>Toy</td>
<td>Tool for learning Normalized</td>
</tr>
<tr>
<td></td>
<td>Technology precedes syllabus and learner needs</td>
<td>Not integrated into syllabus-optional extra</td>
<td>Integrated into syllabus, adapted to learners’ needs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Technology precedes syllabus and learner needs</td>
<td>Analysis of needs and context precedes decisions about technology</td>
</tr>
<tr>
<td>Position in lesson</td>
<td>Whole CALL lesson</td>
<td>Whole CALL lesson</td>
<td>Smaller part of every lesson</td>
</tr>
<tr>
<td>Physical position of computer</td>
<td>Separate computer lab</td>
<td>Separate lab- perhaps devoted to language</td>
<td>In every classroom</td>
</tr>
</tbody>
</table>
The three stages of CALL discussed above are closely inter-related and so there cannot be a clear-cut boundary line among these stages. Pascoe and Wiburg (2003) have said that there was a close relationship between the use of different types of CALL programmes and the stages of language acquisition (p.9):

In the pre-production stage, the behaviouristic approach is more emphasized. CALL software is used to provide comprehensible input and ask learners to give limited responses through controlled exercises.

In the advanced stage, the communicative and integrative approach is more emphasized. Telecommunications activities and interactive video and simulation programmes of real-life experiences that foster critical thinking and problem solving are more needed. Learners are encouraged to manipulate technology to complete tasks or communicate with audiences around the world.

In the history of CALL, each stage did not exactly replace its predecessor. For example, much of the language learning software produced on CD-ROM today follows a structural/computer-as-tutor model. Therefore, when we look at current CALL applications and methods, we can often evaluate them in terms of three interrelated factors:

a. Pedagogical approach
b. Level of technology
c. Role of the computer

According to Kern and Warschauer (2000), each stage corresponds to a certain stage in the history of language teaching. These three inter-related factors are presented in the following manner:
Table 4: Differentiation between early CALL and modern CALL:

<table>
<thead>
<tr>
<th>Early CALL</th>
<th>Modern CALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>- behaviouristic</td>
<td>- communicative and integrative</td>
</tr>
<tr>
<td>- individualized drills</td>
<td>- task-based, collaborative activities</td>
</tr>
<tr>
<td>- programmed learning</td>
<td>- providing alternatives to learners</td>
</tr>
<tr>
<td>- viewing language as discrete components</td>
<td>- viewing language as whole</td>
</tr>
<tr>
<td>- emphasizing the importance of control guidance</td>
<td>- emphasizing the importance of feedback</td>
</tr>
<tr>
<td>- giving extrinsic feedback</td>
<td>- giving both extrinsic and intrinsic feedback</td>
</tr>
</tbody>
</table>

Source: Pascoe and Wiburg, 2003, p.9

**Types of CALL**

Two types of CALL: Multimedia CALL (CD-ROMs) and Web-based CALL (on the Internet)

**A) Multimedia CALL**

Advancement in computer technology has triggered the development of multimedia CALL programs which can present information in different formats using graphics, sound, text, and video with links to other chunks of information.

Davies (2004) has defined multimedia as follows:
Nowadays multimedia refers to computer-based materials designed to be used on a computer that can display and print text and high quality graphics, play pre-recorded audio and video material, and create new audio and video recordings.

According to Hofstetter (1994), interactive multimedia is the use of computers to present and combine text, graphics, audio, and video with links and tools that let the user navigate, interact, create, and communicate. In interactive multimedia individual learners can set their own pace and branch according to their interest. The interactive multimedia provides an opportunity to learn by doing and increases attention, understanding, and retention of information being communicated (Kalmbach, 1994).

Characteristics of multimedia CALL can be summarized below:

a. They create a more authentic learning environment using different media.

b. Language skills are easily integrated through multimedia.

c. Students have a high degree of control over their learning through hypermedia.

B) Web-based CALL

The characteristics of the Web-based CALL are as follows:

A) CMC

Language learning takes place most effectively in social settings through communication. An important part of teaching is to structure opportunities for communication for the learner - the learner must be communicating about something real and interesting. Through Computer Mediated Communication (CMC) a wide range of communication channels are possible. Main advantages of computer mediated communication (CMC) are:
It provides authentic synchronous and asynchronous communication channels. CMC can be divided into synchronous where interaction takes place in real time such as online chat, computer, audio, and video conferencing, and asynchronous where participants are not necessarily online, such as email, discussion forums and mailing lists (Simpson, 2002). Language learners can communicate directly, inexpensively, and conveniently with other learners or native speakers of the target language at any time and in any place.

CMC can be carried out in several forms; it can be one-to-one, one-to-many, or many-to-one.

The types of computer-mediated communication (CMC) with a brief description of each are given below:

<table>
<thead>
<tr>
<th>Type</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic mail</td>
<td>Electronic communication (written or voice) between individuals</td>
</tr>
<tr>
<td>List Servers</td>
<td>Applications which will distribute messages to all subscribers on a list which includes facilities for subscribing, un-subscribing and moderation of postings.</td>
</tr>
<tr>
<td>Computer Conferencing</td>
<td>Software which manages conferencing on computer Networks.</td>
</tr>
<tr>
<td>Bulletin Boards</td>
<td>An electronic space for notices for particular interest groups.</td>
</tr>
</tbody>
</table>

(B) The Web

Students can search through millions of files around the world within minutes to locate and access authentic materials exactly tailored to their own personal interests.

Students can use the Web to publish their texts or multimedia materials to share with partner classes or with the general public.
History and Development of the Internet

In Western and European countries, now-a-days, computers are used in most language classrooms and Internet is also being introduced in the second language classroom as teachers have become more familiar with it. First of all, it is necessary to look at what exactly the Internet is. The Internet is an international network of computers, which makes it possible to share information between the various computers in various ways. People sometime think that Internet is same as WWW and/or E-mail but it is a misconception and not the proper observation. Internet is an infrastructure through which we receive information; we share our views in various ways. It is a confederation of thousands of computers from various sectors of society. Internet is the world’s largest computer network, the network of networks, scattered all over the world. Any single individual, company or country does not own this global network.

We live in the Information Age, where knowledge is power. The Internet leads this knowledge revolution by accessing, sharing and disseminating information globally beyond geographical boundaries to millions of users. The Internet helps us in three obvious ways:

a. to get information,
b. to provide information, and
c. to compile information.

The Internet is a computer network that connects millions of computers globally and provides world-wide communications to business, schools, homes and governments. The Internet is the outgrowth of a network established in the 1960s to meet the needs of the researchers working in the defence industry in the USA then called the ARPANET. The network was chiefly experimental, and was used in research, and to develop and test networking technologies. From a handful of computers in 1971, the ARPANET or Internet grew to 10,000 computers by 1987 and to more than 100,000 by 1989. In 1973, ARPANET went beyond the boundaries of the United States by making its first international connections to England and Norway. In 1990, ARPANET ceased to exist, but the Internet
continued to grow to estimated 1 million computers in 1992, 2 million in 1993. The Internet now offers both information access and a fast and inexpensive means of communication to the public.

In the 1970s and 1980s, we saw a number of significant developments in the networking system. FTP (file transfer protocol) for standardizing the transfer of files between network computers was introduced. The other significant events include the introduction of desktop computers, the development of the networking tools such as telnet, FTP and WWW, and the release of graphical browsers. The number of people who use Internet is growing exponentially and will continue to grow faster. Today, Internet provides fast, easy and cheap access to information and people around the world.

The newest Internet service World Wide Web (WWW) has revolutionized and reshaped computer-mediated communication (CMC) and its use in second language classroom. The World Wide Web (WWW) began as an experimental project in 1989 at CERN in Switzerland and was perfected in 1993. It consists of thousands of documents— all are linked by ‘hypertext’— documents that have links embedded into other documents. The World Wide Web is a part library, part publishing house, part telephone, part interactive television. Users are attracted to the World Wide Web because it is very easy to use, and because it combines graphics, text, sound and animation making it a rich medium of communication. It also provides a network of interactive documents and software for accessing them. The users ‘surf’ from one page to another by pointing and clicking on the hyperlinks in texts and graphics.

Since Internet does not have a governing body or central authority, it is difficult to estimate the number of people who have access to the Internet. Computers and Internet are so common today that Naughton (1999) has observed:

The Internet is one of the most remarkable things human beings have ever made. In terms of its impact on society, it ranks with print, the railways, the telegraph, the automobile, electric power and television (as cited in Crystal, 2001, p.vii).
Teachers have been using the WWW in different ways and for various purposes, for example, for providing linguistic exercises (Li, 1995), for accessing authentic language materials (Lixl-Purcell, 1995), and as a medium of student publishing (Bowers, 1995).

The rapid development of ICT resulted in the growth of interest in computer-mediated communication (CMC). This computer-mediated communication (CMC) is an umbrella term which refers to human communication via computer. This communication can be either synchronous or asynchronous. During synchronous communication, all users logged on and go on chatting at the same time. This communication is called real-time communication and can be achieved either by using special software programmes for LAN (local area network) or via Internet—Internet Relay Chat or Web Chat programmes. Discussion/chat over LAN has been very popular in the United States in foreign language, ESL and English composition classes. Synchronous communication is very helpful in focusing on the question of participation, language use and writing improvement. This can be used as a supplement to general language classes.

In asynchronous communication, participants are not necessarily online simultaneously. It is based on delayed message system, which is carried out most frequently via e-mail and mailing list, etc.

There are three types of Internet access that can be used by the ESL/EFL teachers:

a. World Wide Web (WWW)
b. E-mail and mailing lists
c. Newsgroups

A primary goal for many is to harness the intrinsic motivational quality of technology by learning Internet as Carrier (1997) has pointed out:

The Internet can not teach students to speak English, but as a resource in the hands of a skilled teacher it can provide a wealth of
authentic materials, with which the skilled teacher can build motivating and productive activities.

While discussing the use of Internet for developing language skills, Carrier has also suggested that students would be able to use Internet to:

a. research and locate authentic materials, texts and programmes
b. develop searching skills as a group problem-solving activity
c. develop reading skills and vocabulary via extensive reading of Internet material
d. develop writing skills in reporting on their research
e. develop academic skills of research and selection, and formalizing of writing.

One does not have to follow a hierarchical path for finding out resource or resources. Thus one can:

(i) jump from one link (source) to another;
(ii) go directly to a resource if URL is known (its address); and
(iii) even jump from specific part of a document to another link.

That is why it is easy to browse the pages and find authentic materials for learning and teaching second language and also for research purposes. There is great flexibility in organizing, presenting and describing the information resources. The World Wide Web (www) can be used by teachers of English as a tool for their own development and as a resource for classroom teaching. There are authentic resources and materials, places where the teacher can find prepared lesson plans and worksheets where he or she can share his/her ideas and thoughts with other teachers around the world. As Chapelle (2003) has rightly observed:

“An hour of browsing through English language teaching Web sites reveals a wide variety of activities for learners, from ESL chat-rooms, and discussion boards, to resources for listening, sites for finding communication pals, and pages and pages of quizzes” (p. xii).
There are several billion pages of content and that number is growing all the time. It is not very easy to locate all the relevant materials because as Eastment (2001) has remarked: "The Web is open to all, however, and as long as any one can publish, the junk will remain: the 'cobweb' sites, which have not been updated for years; the 'under construction' pages which are never completed; the trivial, dull and the simply misleading. For the teacher finding worthwhile material is not an easy task." Therefore, one of the most important skills to develop is that of effective searching. A number of new tools have been developed that enable information published on the web to be searched and discovered more effectively. There are two independent approaches:

i. Browsing through subject trees and hierarchies (web indexes); and

ii. Keyword searching using search engines.

Information resources related to ELT are also available on the web. These can be found via a 'link page'. These papers are part of a larger site and are maintained 'either by the site owner directly or by inviting the owners of other web pages to register their sites' (Eastment, 2001). The most important example of 'link page' is The Internet TESL Journal (http://iteslj.org) which has links to over 6000 ELT related web pages. These web pages are well-designed and well maintained. Some other important sites are Eva Easton's site (www.eleaston.com) which focuses on the English language and Dave Sperlang's ESL Café (www.eslcafe.com/search/index.html) which links to over 3000 links. Apart from these information resources there are ELT discussion forums for students on the web: ESL Partyland and ESL Café (www.eslpartyland.com & www.eslcafe.com).

For teachers of English, some sites are very reliable and worth mentioning. The Internet Public Library is a key resource for teachers. It has a set of research guides on web materials. There are two newspaper supplementary for English teachers: The Guardian and the New York Times. In The Guardian, there is a TEFL section named Guardian Unlimited (www.educationunlimited.co.uk/tefl) which provides articles, county profiles and other specific information helpful for

**Conclusion**

As the Internet has changed the way we think about the transfer of information, it has eliminated the sense of distance between the citizens of other countries and us. International contracts are an integral part of many careers. People without the skill and sensitivity to deal with other cultures are at a disadvantage. Many college programmes are adopting innovative ways of teaching language that involve the use of computers and the Internet which connect the students of one country with those of other countries.