Chapter 2

REVIEW OF THE RELATED LITERATURE

2.1 INTRODUCTION TO TELL

A wise person once said, “If students do not learn the way we teach, then let us teach the way they learn.”

That is what educators have been trying to do through the use of TELL. Molly Lee, Coordinator, Asia-Pacific Programme of Educational Innovation for Development (APEID), UNESCO, Bangkok once said that UNESCO believes integrating ICT into education can help to bring quality education to everyone, everywhere – a key goal of the Education for All initiative. The citizens of the future must be equipped with sufficient knowledge to keep up with technological advances and demands of the Twenty first Century.

2.1.1 The Concept of TELL

The use of technology in language teaching is not new. Indeed, technology has been around in language teaching for decades - one might argue for centuries, if we classify the blackboard as a form of technology. Tape recorders, language laboratories and video have been in use since the 1960s and 1970s, and are still used in classrooms around the world. Computer-based materials for language teaching, often referred to as CALL (Computer Assisted Language Learning), appeared in the early 1980s. Early CALL programmes typically required learners to respond to stimuli on the computer screen and to carry out tasks such as filling in gap texts, matching sentence halves and doing multiple-choice activities. Probably one of the best-known early CALL activities is that of text reconstruction, where an entire text is blanked out and the learner recreates it by typing in words. For all of these activities the computer then offers the learner feedback, ranging from simply pointing out whether the answer is correct or incorrect to provide more sophisticated feedback, such as showing why the learner is mistaken and offering remedial activities. The CALL approach is one that is still found in many published CD-ROMs for language teaching. As access to ICT has become more widespread, so CALL has moved beyond the use of computer programs to embrace the use of the Internet and web-based tools. The term TELL (Technology Enhanced Language Learning) appeared in the 1990s, in response to the growing possibilities offered by the Internet and Communications Technology.
Technology has created a profound impact on almost every aspect of our life including, of course, English learning and teaching. The rapid shift from computer-assisted language learning (CALL) to Technology-Enhanced Language Learning (TELL) reflects the fact that computers have become less visible and obvious at the same time as they have become ubiquitous. Computers often drive other types of technology, such as audio, video, and the World Wide Web. The focus is now on the communication facilitated by the computer, rather than on the machine itself.

The term technology covers a wide range of recent technologies, such as the Internet, CD-ROMs and Interactive Whiteboards. It also includes the use of computers as a means of communication, such as chat and e-mail and a number of environments that enable teachers to enrich their courses, such as VLEs (Virtual Learning Environments), blogs and wikis.

2.1.2 Use of Technology in Classroom

Although the use of technological tools by language teachers is still not widespread, the use of technology in the classroom is becoming increasingly important and will become a normal part of ELT practice in the coming years. There are many reasons for this:

- Internet access - either in private homes or at Internet cafes - is becoming increasingly available to learners. As per the information provided by International Telecommunication Union, in 2009, more than a quarter of the world’s population is using the Internet. Figure 2.1 shows that by the end of 2008 there were more Internet users in the developing world than in the developed world. Most Internet growth, however, is coming from the developing world, which accounted for 600 million of the 777 million new Internet users worldwide between the end of 2005 and the end of 2009.
Younger learners are growing up with technology, and it is a natural and integrated part of their lives. For these learners the use of technology is a way to bring the outside world into the classroom. And some of these younger learners will in turn become teachers themselves.

- English as an international language is being used in technologically mediated contexts. Internet hosts more than 80% of the web pages in English (Pradhan 38).
- Technology, especially the Internet, presents us with new opportunities for authentic tasks and materials, as well as access to a wealth of ready-made ELT materials.
- The Internet offers excellent opportunities for collaboration and communication between learners who are geographically dispersed.
Technology is offered along with published materials such as course books and resource books for teachers.

- Learners increasingly expect language schools to integrate technology into teaching.
- Technology offers new ways for practicing language and assessing performance.
- Technology is becoming increasingly mobile. It can be used not only in the classroom, lecture hall, computer room or self-access centre, it can also be used at home, on the way to school and in Internet cafes.
- Using a range of ICT tools can give exposure to learners in the four language skills - speaking, listening, writing and reading.

The context in which teachers are working with technology can vary widely and the access that teachers have to computers - the so-called digital divide - will affect what we can do with our classes in terms of implementing technology. A general lack of ICT training for teachers also means that we still have some way to go until the normalization of technology in language teaching, while the use of technology in teaching becomes as natural as the use of books or pens and paper.

With the advent of networked multimedia computing and the Internet, language teachers throughout the world have been warming up to use computers in the language classroom. This is particularly true in higher education, where students and teachers have greater access to computer laboratories and Internet accounts.

The growth of interest in technology is apparent not only in the number of websites springing up around the world, but in its practical application in all spheres of life. It is beyond doubt that computers and the Internet can add enormous potential to language teaching and learning, provided teachers and learners know how to make the most of technology.

However, the recent enthusiasm for technology in language teaching is witnessed, for example, by the large numbers of presentations at national conferences on this topic. Three decades ago, language programmes were also enchanted by promises of magic through technology. That technology—the audio-based language laboratory—brought disappointing results (and, indeed, it is the audio-based labs which are often being replaced by computer labs today). Thus, before looking at the
use of technology in language teaching today, it is worthwhile to take a brief look at
the use of technology in the language classrooms.

2.2 RESEARCH ON TECHNOLOGY IN LANGUAGE LEARNING

A sign of the maturity of computer-assisted language learning (CALL) is that a
respectable body of research, including quantitative as well as structured qualitative
and action research studies, has come into existence over the past five years or so.
More than five thousand research and pedagogy articles on CALL, published since
1988, have been compiled into a database documented by Jung (350-388). While
early writings about CALL often focused on the how-to-do-it aspect, there is now a
considerable body of quantitative investigation in CALL, often using the unique
features of technology as part of the research.

Further indications that CALL research has come of age are the appearance
and increased recognition of highly respected, refereed online journals in the field,
such as Language Learning and Technology, Reading Online and TESL-EJ.
According to a study published in Nature, articles appearing online are over 300
percent more likely to be cited than those appearing in paper text alone (Lawrence
260), so the presence of both appropriate research and a technologically appropriate
distribution of its results has been a major advance in the field of CALL. Beatty, in
2003, listed eight journals and newsletters devoted to computer technology in
language learning, seven international annual CALL conferences, and nine
professional organizations focusing on CALL issues. Those numbers continue to
grow every year. Recent issues of many major journals, System (2004, volume 32)
and Computers and Composition (2005, volume 22), International Journal of
Pedagogies and Learning (2009, volume 5), Indian Journal of Applied Linguistics
(2009, volume 35) have focused on concerns specific to language learners in
technology-enhanced environments, demonstrating the importance given to learners
in online environments and the interdisciplinary nature of such research. Apart from
this, many internationally recognized associations and organizations have started
publishing journals (Language Learning and Technology, ReCALL, CALICO
Journal, CALL-EJ) which focus exclusively on CALL and its related themes. These
journals support the solid body of research about CALL by providing information through how-to articles, anecdotal evidence and statistical data.

Another significant indicator of CALL’s importance and respectability in the field of language pedagogy is the changed focus of research. In case after case, teachers report that integrating technology into instruction goes beyond merely changing the media for completing course tasks and delivering assignments. Instead, students are being engaged in authentic learning projects (e.g., WebQuests, slide shows, photo Weblogs and video productions) that are facilitated by the use of technology and they are involved in quite different processes than more traditional forms of paper-based research and writing. Researching language learning or language development tasks in computer-enhanced environments must focus on context-sensitive, unique loci—each with its own cultural and rhetorical reality—from which other teacher-researchers can gain insights (De Pew and Miller 265).

Research on language learning with and through technology also crosses disciplinary lines, resulting in new research methodologies with concomitant instructional implications. Simply scanning the tables of contents of online journals indicates that recent studies in CALL draw on research in second language acquisition, foreign and second language learning, composition studies, applied linguistics (including corpus linguistics) and the cognitive and social sciences. Studies also cross international boundaries (Kollias et al. 295-315; Veermans and Cesareni 316-336). In addition, universities are gradually learning new ways to value research and service that integrate twenty-first-century technologies into instruction. Of greatest importance, research informs classroom practice and the impact of using technology on language skills of the students.

Learning Languages through technology reflects the fact that there are now as many ways to use computers and the Internet as there are traditional, land-based methods of teaching and it is becoming increasingly difficult to find classrooms that do not somehow make use of electronic technologies, even if it is simply a student e-mailing a teacher about next week’s test. Although many students around the world are just being introduced to technology in education, as diSessa puts it, yet computers are offering students the opportunity to learn “with a pleasure and commitment that only a privileged few now feel toward school learning”. In turn, instructors are “reinvigorated by a new way of teaching that encourages real-world problem-solving and individual student initiative” (ix).
2.3 THEORETICAL FRAMEWORK

Recently, the learning theory of constructivism has been proposed as a basis for the instructional design of technology (Lebow 13) and Brooks and Brooks claims it to be a viable theory for language instruction (qtd. in Stepp-Greany 168). This theory posits that students are not passive recipients of knowledge. Instead, they are active participants in the construction of new knowledge that is idiosyncratic and derived from the learner's prior experience and need to create equilibrium (i.e., find meaning or fill in an information gap) when faced with a new situation that creates cognitive dissonance. In this theory also, students assume responsibility for their learning, and the teacher is a facilitator rather than a purveyor of knowledge, fulfilling a role similar to that described by Kern (106).

2.3.1 Constructivist Approach in Online Learning and Teaching

Constructivism refers to the idea that learners construct knowledge for themselves building upon the foundation of their previous learning. Constructivism is being applied in different fields, one of which is in technology rich classrooms. Collins (29) pointed out that technology appeared to be coming down on the side of constructivists, who have been trying to change the prevailing societal view of education. According to Collins, studies show that in technology rich classrooms there are many observable changes as opposed to traditional instruction, some of which are: (a) students are more actively engaged, (b) students learn different things instead of all students learning the same thing and (c) an integration of both visual and verbal thinking instead of the primacy of verbal thinking. Lebow (13-14) described five principles of the application of constructivism on technology. These principles are: (a) provide a context for learning that supports both autonomy and relatedness, (b) embed the reasons for learning into the learning activity itself, (c) support self-regulation through the promotion of skills and attitudes, and (d) strengthen the learner's tendency to engage in intentional learning processes, especially by encouraging the strategic exploration or errors. These changes and principles come side by side with constructivism principles. Bailey (163) pointed out that new technology, such as the use of multimedia, can afford rich opportunities for constructivist approaches in the field of education. Hence, constructivism is an appropriate framework for this study as it will be able to explain any results yielded as a result of independent TELL methodology.
From the constructivist principles above it is so obvious that the achievement of these conditions for learning in the classroom and by course books only would not be possible. For this teachers and instructional designers need to liberate the learners from the restricting walls and pages.

Employing technologies like the Internet, websites and the virtual learning environments, creating microworlds and hypermedia designs for learning, applying collaborative learning, problem-based learning and goal-based scenarios, making open software and course management tools accessible to learners and using distance learning applications like computer-conferencing and videoconferencing could serve to implement the multiple constructivist conditions for learning. (Duffy and Jonassen 9; Can 449)

The Internet, websites and virtual learning environments provide autonomy, embedded learning in complex and relevant environments. Microworlds and hypermedia, with their potential for authentic language activities, assist in rich learner centered learning environment and social negotiation. Goal-based, Problem-based and collaborative learning prosper the task environments and skills, and contribute into the implementation of variety of resources, technology, solutions via multiple perspectives, multiple modes of representations and reality and helps in reflection on reasoning and ownership in learning. By creating conversation and collaboration among students, open software and course management tools supply rich resources in construction and creation of new knowledge, encourage ownership, autonomy and reflection in learning.

Reinfried summarizes the constructivist principles in foreign language learning and teaching. According to Reinfried constructivist language learning should be action oriented where language is learned through collaboration, free creation is praised, learning is achieved by actively doing projects and self teaching. Constructivist language learning should be learner centered that supports individualization of learning and autonomy. Learner should develop awareness not only for learning but for the language itself and for the intercultural aspect as well. The last but not the least, constructivist language learning is to be holistic with focus on content, authentic and complex learning environment. In this aspect, implementing online applications, using instructional technologies and diverse media in the process of learning and teaching languages is advocated by constructivist approach.
The implementation of computerized online applications, CALL applications, the Internet, websites and the virtual learning environments (i.e., Second Life, interactive websites, chat-rooms, interactive games) in the context of language learning could benefit learners with enriched resources and possibilities for language use, creation and practice. Self study websites and CD ROMs have the potential to free the learners from the rigid rules of grammar and classrooms and taking learners away from classrooms could assist in self awareness and autonomy by providing opportunities for ownership in learning.

Creating microworlds and hypermedia designs for language learning where collaborative learning (i.e. working in groups for creating a content website, film making or preparing presentation on a specific language piece using wikis), problem-based learning (i.e. solving real life communication and interaction problems between people, creating focused wikis) and goal-based scenarios (i.e. creating scripts for events and texts, writing for blogs) are elaborated. This could construe a prosperous context for meaningful language input, real life and simultaneous language practice, comprehensive output, pragmatic and discourse awareness. Also this would boost the learning opportunities and contexts as well as other skills necessary for technology and knowledge creation.

Distance learning applications like computer conferencing and videoconferencing for language learning and teaching could be used by schools to enrich the classroom experience by connecting them to learning parks, museums, experts and even other schools worldwide through television monitors and video cameras. All other types of electronic communication (including typing, electronic drawing, the viewing and manipulating of websites, the playing of prerecorded video, etc.) can occur within, or concurrently with, a videoconference. Along with the instructor on one end a facilitator could be employed on the other end. Thus, a conventional classroom is enriched. The facilitator could act as a helper, guide, example or interactor, communicative pair in activities. These aspects of conferencing and videoconferencing could bring into language learning the real life, real interlocutors and the target culture, which in return could serve as a valuable resource for meaningful language input, real life and simultaneous language practice, comprehensive output, pragmatic and discourse awareness (Can 451).

In practical terms, the researcher aims at implementing the most relevant attributes of technology enhanced language learning: authentic materials,
hypertextuality, contextualized learning, interaction, temporal scaffolding and autonomy. It should be emphasized, in researcher’s view, that there is a close parallel between the theory of constructivism and the pedagogy of web-based learning which could be summarized as follows (Perez Basanta 112):

Table 2.1 Constructivism and TELL

<table>
<thead>
<tr>
<th>Constructivism</th>
<th>Technology-based Learning</th>
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<tbody>
<tr>
<td>Construction of learning through meaningful activities.</td>
<td>Authentic and multi-media materials</td>
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<tr>
<td>Emphasis on big concepts, not hierarchical knowledge</td>
<td>Hypertextuality</td>
</tr>
<tr>
<td>Collaborative learning</td>
<td>Communication tools through digital platforms</td>
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<tr>
<td>Coaching and scaffolding</td>
<td>Human mediation and interaction</td>
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<tr>
<td>Learner’s responsibility</td>
<td>Distance learning and learner autonomy</td>
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2.4 CHANGING ROLES IN TECHNOLOGY-ENHANCED CLASSROOMS

Kern (107) notes that a shift from the use of the computer for drill and tutorial purposes to a medium for extending education beyond the classroom and reorganizing instruction has resulted in role changes for both learners and teachers. Learners now view the computer as a medium through which they must negotiate meaning through interaction, interpretation, and collaboration rather than as a finite, authoritative informational base for carrying out a stipulated language task. Instead of delegating language instruction to the computer, teachers participate in students' communication and learning and "provide a scaffold for their students' learning with their own knowledge and experience -- even when they are not immediately involved in a communicative exchange" (Kern 108).

The present study reflects how TELL contributes to accelerate the process of role-changing in the teacher student relationship in language learning. Lamm and Lawrence (302) stated:
The advent of educational technology, notably computers (but not excluding other technologies such as audio lab programs), has helped to create an environment suitable to giving the learner more autonomy. Learners are able to proceed at their own speed, even according to their own interests, thereby giving them control over the learning process. They are still recipients, but recipients of their own choosing. The classroom becomes more learner centered, with the teacher being less of a ‘one-man show’ and more of a facilitator or a coach with whom learners can consult on an individual basis. This is in line with classrooms becoming more communicative and learner-centered. In this sense, education technology is not overly threatening.

In language learning, the teacher has usually played the main role. However, as Little (21) points out, the nature of this role is changing as we encourage and expect more autonomy from our students. In order to promote autonomy in online environment, the teacher’s role must change from purveyor of information (‘sage on the stage’) to facilitator of learning and manager of learning resources (‘guide on the side’). The teacher’s role, says Dreger (64), inevitably varies in an online classroom. As with any new technology, the initial role will probably be ‘teacher of a new technology’. However, once the students have learnt how technology works, the teacher’s role can change to that of facilitator, motivator and resource manager. Dreger (65) suggests that in order for students to use technology successfully, teachers must provide:

- Encouragement;
- Personal choices and opportunities for learning;
- Prompt feedback;
- Tools for becoming independent learners.
2.5 AUTONOMY IN TELL

Learner autonomy is obviously important in language acquisition. Successful autonomous use of the target language should be the ultimate goal of language instruction. As students progress toward autonomy, it is important that they develop the ability to self assess their own accuracy. However, some have suggested that the risk of losing control over the classroom may actually deter teachers from helping students strive for autonomy (Cotterall 222). Research has investigated a number of factors that can affect autonomy. Kupetz and Zeigenmeyer argue that autonomous learning can be achieved by encouraging students to “take responsibility and make informed choices” (63). Spratt, Humphreys, and Chan (249) suggest that motivation may be a precursor to autonomy. Benson recognizes the enormous potential for the development of autonomy through the use of technology, as well as the reliance upon autonomy in order to effectively utilize the potential of technology-based learning environments (qtd. in Kessler 81).

Students also appear to gain confidence directing their own learning. In a project at one of California’s Model Technology Schools, students who engaged in self-paced learning-by-doing within an interactive environment became independent learners who were labeled “knowledge navigators” (qtd.in Stepp-Greany 165).

The current study also seeks to understand students’ perceptions of the autonomous collaborative tasks. It is based on Littlewood’s framework of autonomy which identifies “autonomy as a learner” as including “(a) the ability to engage in independent work (e.g., self-directed learning); and (b) the ability to use appropriate learning strategies, both inside and outside the classroom” (431). To become autonomous, the learners need to be encouraged to be self-initiating, to solve problems independently and receive feedback that supports autonomy. The reversal of the hierarchical order, the “inversion of control” (Hinchcliffe) currently experienced in the Web 2.0 environment as outlined above, supports the idea of online learning environments as an enabler of a context in which that learner activity can happen, e.g. the structure of the blog is suited for student-initiated discussions of topics of their choice, wikis can be used for theme-based projects that feed from Internet-based materials.
2.6 COLLABORATION IN TELL

Many researchers like Bruce; Storch; Peyton and Batson have argued for the promotion of collaboration among learners (qtd. in Kessler 80). Arnold and Ducate (48) observed that the context, tools, and participants of a learning environment help to mediate collaborative learning. Swain concluded that collaborative activities, “lead learners to reflect on their own language production as they attempt to create meaning” (141). Researchers have found that collaborative writing contributes to an increased complexity in writing and willingness to utilize peer feedback (Sotillo 18) as well as increased grammatical accuracy and overall quality of writing (Storch 157). Some have identified that students are likely to actively engage in online collaborative activities due to the public nature of the information and sense of accountability (Sengupta 112). Through the act of collaboration, students are exposed to valuable input from others, encouraged to produce enhanced output (Oxford 448), given more opportunity for practice and provide effective linguistic feedback for themselves and peers. The evolution of collaborative writing may be intrinsically connected with iterations of technology since new developments provide new opportunities for collaboration. The current study incorporates wiki technology and webquests which support a group or many-to-many form of collaboration.

Collaborative CALL, proves how well the Internet supports content-rich curricula, both in the exploration of content Web sites and in the ability to ensure that students work collaboratively, locally as well as globally. In contrast to instructor-based learning, in which much of the input comes from the teacher and interaction often takes place primarily between the teacher and the class as a whole (e.g., lecture mode), computer-mediated communication tools dominate in this study and reflect how the researcher has planned and conducted courses and activities. The locus of power in the classroom shifts from the sage on the stage to students and student teams. Instead of depending upon imagined scenarios and hypothetical situations, students apply their technology skills in tasks with large doses of authenticity.

2.7 MOTIVATION AND TELL

Motivation is seen as playing a key role in the success of language learners. Gardner has demonstrated the positive relationship between motivation, attitudes and achievement (10). Gardner defines L2 motivation as “the extent to which an
individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity’ (10). Claims have even been made that motivation is the single most important variable to determine the success of adult language learners (Pulvermüller and Schumann, 698).

There is a wide variety of factors such as age, attitude, motivation, aptitude, amount of exposure and anxiety etc in second language learning. These are also responsible for individual differences in learning a second or a Foreign Language. In social psychology, it is a widely accepted fact that learner’s individual differences have significant impact on the learner’s overall performance. That is why the major focus of the recent research in social psychology has been on various social psychological variables like, attitude, motivation, age, aptitude, anxiety, intelligence etc, and their impact on Second Language Acquisition (SLA). Gardner further proposes that second language acquisition is ‘truly a socio-psychological phenomenon’. It is concerned with the development of communication skills between an individual and members of another cultural community (10).

Stephen Krashen hypothesizes the ‘affective filter’ that consists of various psychological factors, such as anxiety, motivation and self-confidence, which can strongly enhance or inhibit second language acquisition (27). An input rich environment is required where the learners can be relaxed, motivated and self-confident in acquiring the second language successfully. He contends that learners with high motivation, self-confidence, a good self-image, and a low level of anxiety are well-equipped for success in second language acquisition (27).

As many teachers have testified, motivation clearly seems to be a prerequisite for successful language learning and one of the responsibilities of a language teacher is to provide activities in which learners find intrinsically motivated. The Internet is clearly a motivating teaching and learning tool and language teachers need to harness this intrinsic motivational quality of the Internet to enhance the language learning experience and success of their learners. To do this one must ensure that there is a linguistic purpose behind Internet activities that our learners engage in. The Internet should only be used in the language classroom when it has something to contribute to traditional teaching methods or when it has considerable advantages over traditional methods. If the Internet is used purely for the sake of using new technology, the learner gains nothing. When learners simply locate and gather information from the Internet, there is unlikely to be any improvement in their linguistic competence. The
use of the Internet must always be supported by clear linguistic and pedagogic goals which teachers must communicate to their learners. It has been recognized by many language experts as Egbert, Fotos and Warschauer that CALL can positively influence language learner motivation (qtd. in Alm 30)

2.7.1 Internet As A Motivating Factor For Learners

1. One of the main motivating factors for the rapid uptake of Web-based language learning is the unprecedented availability of authentic materials. Web 2.0 has yet again extended this resource with “live” sites (Alm 33). These sites allow users to personalise webpages to their individual needs, to automatically receive updates through feeds (no need for bookmarks to check for changes). There is no lack of interesting and relevant materials, but it might still be a challenge for the teacher to structure the task in such a way that the chosen material leads to information sharing for interaction. Warschauer (Network 52) has found that activities for which learner understood the purpose and which they valued as socially and culturally relevant resulted in strong motivation. He also stresses that the technology supports the purpose of the activity.

2. Authentic materials found on the Internet provide information about the target language culture which is often missing from many coursebooks. Current pedagogical theories stress the importance of integrating the culture of the target language into the classroom (Canale and Swain 21), since an understanding of the culture of the target language may enhance understanding of the language itself and thus improve learners' motivation to learn the language.

3. The nature of the Internet encourages learners to become involved in authentic projects and to write for a real audience of other learners of English or native speakers of English from around the world rather than simply write assignments for their teacher. Motivation to write for authentic communicative purposes for real audiences is provided through the use of e-mail and WWW projects between individual learners or whole classes. When learners are given project topics that are of interest to them, they are more motivated to search for meaning and explore issues in greater depth. Internet projects are more stimulating and motivating than traditional classroom language exercises and
activities that concentrate simply on form. As learners work together in groups on e-mail or web activities, they develop project and research skills as in solving a webquest.

4. When the Internet is used in an educational context, learners have to take more responsibility for their own learning and this leads to greater learner autonomy and a more learner-centered classroom. Learners are involved in real communicative situations and have to make many decisions and choices for themselves. The nature of computer-mediated communication is very much in keeping with current pedagogical theories on the roles of teachers and learners in the classroom. Increased learner autonomy leads to greater learner motivation.

5. The interactive and multimedia capabilities of the Internet make it a motivating learning tool (Chun and Brandl 258). E-mail, Blogs, wikis, Internet chat rooms are, by their very nature, interactive and many web sites have e-mail addresses which learners can send their comments to. The opportunity for such interaction is motivating for learners.

6. The novelty of working with a new medium is also a motivating factor. Learners are often keen to work with the Internet as it is fashionable (Muehleisen) and they are keen to learn Internet and e-mail skills which they see as important for their studies and future careers.

7. Many learners, especially young ones, love working with the Internet. Younger learners who have grown up in the Computer Age are completely comfortable using computers and are very motivated to use the Internet to learn. They rather enter the academy with the perception that technology is a natural part of their environment and should be equally as natural, pervasive and transparent in the educational environment. They have grown up with technology and are much more comfortable and competent with what we label as ‘emerging technologies.’ They are able to adapt their previous technological experiences to newer versions or models of technology.

8. The Internet provides a less threatening environment in which to communicate than face-to-face interaction, especially for less confident learners. In computer-mediated communication, there is less peer pressure and more reserved learners participate more and are much more open in expressing their opinions than in normal classroom activities. A more relaxed atmosphere
motivates learners to perform better and produce more output than in the traditional writing classroom (Shen).

9. The immediacy of the feedback and the reinforcement that the learner receives through visual or auditory signals after responding to an item on the screen is also a motivational force. Learners receive fast and frequent feedback through the use of latest technological tools. Although this feedback is not explicit, it acts as a model of correct English and learners can notice the ‘gap’ between this and their own output which motivates them to learn more and to improve. The technology allows teachers to create a learning environment in which students (instead of teachers) initiate discussions with fellow learners and receive feedback through their replies as in a blog or a wiki.

10. While a sense of relatedness can be important to initiate the learners’ engagement in a task, it is also crucial that the task is situated at the right level. If the task is too hard, the learner is likely to give up. If it is too easy, no learning will occur. Web 2.0 supplies an abundance of online resources which make it relatively easy to locate materials at the learners’ proficiency level and to develop tasks around this material (Alm 33).

2.8 TECHNOLOGY FOR LEARNING LANGUAGES

Technology is vital to any nation’s mission of improving lives. It erases boundaries, bridges oceans, collapses time and stretches resources. It can reach millions or focus on a few. Drawing on this powerful asset, the researcher has used innovative, cost-effective technology applications—customized software, user-focused Web tools and more—to empower language learners.

2.8.1 Productive Use of Technology

Morgan suggests that there are three strategies language teachers can follow to ensure that technology fits their needs. First, investigate new media to see if it is suitable for classroom use. Then identify how new media changes language learning. Finally, set English Language Teaching objectives before selecting any tools of technology.

Investigate New Media

A thorough investigation of a new medium may reveal a teaching tool that provides students with important bits of information or expose it as a needless
communicative activity. Fused into any new medium are other media that are not new. Ironically, Marshall McLuhan, famous for embracing new technology, provides teachers with this starting point to investigate new media. McLuhan’s famous aphorism, “The medium is the message” is deceptively simplistic. He explored new meanings of content (Levinson 2). To McLuhan, “The content of every medium is always another medium” (151). For example, “the content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph” (McLuhan 151). PowerPoint evolved out of slide and overhead projectors. Speech, radio news reports and cassette players are the predecessor media for podcasts. Logs, diaries and editorials are recast on the Web as blogs. Letters and fax machines are the predecessor media for e-mail. At the high end are Internet browsers which have absorbed most of the media that predated them—everything from print to TV and movies. Teachers would be remiss not to include the World Wide Web as part of ESL/EFL instruction. Still, teachers must guard against replacing instruction with Web searches.

Colaric and Jonassen list three faulty assumptions that can entangle instruction in the Web (qtd. in Morgan):

1. That the World Wide Web is a vast library that can be used to convey knowledge.
2. That searching and finding information on the Web equals learning.
3. That hyperlinking is good instruction. (Bates 198)

Too much focus on the Web obscures the deeper processes of learning ESL/EFL. Sometimes teachers should “let the bits go” (Hurst167).

**Identify How New Media Changes Language Teaching**

Once ESL/EFL teachers identify the predecessor media within a new medium, they have a better grasp of how to implement the new medium, or if it should be implemented at all. To paraphrase McLuhan, the “message of any medium or technology is the change of scale or pace or pattern that it introduces into TESOL (152).” PowerPoint did not pioneer the display of large print on a screen, but its bullet-point lists changed the pattern of print used on overhead projectors (OHP) from complete sentences into chunks that are formatted to appear and disappear quickly. Whether the message of PowerPoint and its bullet-point lists have improved upon the complete sentences on OHP gels or Word handouts should be a factor in a teacher’s decision to utilize PowerPoint. Teachers can click through bits of information at a
faster pace, but content becomes less meaningful. E-mail introduced a rapid pace of message delivery, and E-mail’s scale has changed the delivery by allowing students and teachers to send to many contacts at once. The pace of text-messaging is speedier than e-mail, but the pattern of text-messaging shorthand hardly resembles English. Worse, the pace and pattern of texting in class activities lures students to embrace texting as a manner of communication and steers them away from face-to-face communication so crucial to language learning. Scale, pace and pattern help teachers identify how new media changes language learning and teaching. The changes may or may not be helpful.

**Set the Objectives before Selecting the Technology**

Setting English Language Teaching objectives before selecting the technology safeguards the objectives. For instance, identifying main ideas, listening for details, or giving opinions are three objectives that might work with a podcast, but English Language Teaching objectives should not be compromised to fit technology. Making students listen to a podcast just because it is a new medium diminishes any English Language Teaching objective added as an afterthought. However, if the selected objective is, for example, to encourage self-conscious students to express their opinions, then teachers can consider how to exploit technology to achieve the objective. It can be achieved through Web-based software learning systems which upgrade student-to-student as well as student-to-teacher communication. Some Web-based software learning systems have features that enable students to engage in threaded discussions. Students from certain cultures that discourage public disagreement discover a freedom to disagree provided by the impersonal nature of technology. Threaded discussions free them from embarrassment. Voices are not raised and nobody’s face turns red. Threaded discussions change the scale and pattern of student-student interchanges. It is a unique way to acculturate foreign students so they are able to engage in lively discussions. Meanwhile, teachers can monitor the threads to advance a discussion or reign in dead-end digressions or inappropriate interjections.

**Form-Focused Instruction Supported by Technology**

When objectives are set to focus on form, technology offers powerful support. Renewed interest in form-focused instruction has led to a “preemptive focus on form” (Ellis 413). One way that “preemptive, teacher initiated exchanges” occurs is when the teacher models a “linguistic form” for students (Ellis 422).
technology of PowerPoint’s templates offers an excellent way to model chunks of grammar, vocabulary or anything else that doesn’t require content-based instruction. The pattern and pace of teacher-student interchanges increases. To illustrate, PowerPoint introduces adjectives impressively through font size, color and animation. Students are eager to focus on form when the slides show vocabulary/adjectives that are big, small, red, and beautiful (with animation). Also, aiming the projector at a whiteboard can provide blanks for students to fill in their own answers (Morgan) when, for instance, correcting comma splices. On one slide the independent clause “Make sentences correct” joined by a comma to the independent clause “fix them with periods” can be displayed right above two blank lines that each end with a period. Students then write two complete sentences for the blank lines. On the next slide “Jill went to the store” joined by a comma to “she bought a coat” can be shown directly over a line that contains nothing but a comma followed by the conjunction “and” in the middle point of the line. Again, students supply the answer.

Because PowerPoint’s electronic templates are minimalist, they force ESL/EFL teachers and students to keep their exchanges simple, focused and comprehensible.

2.8.2 Five Ways Technology Can Help Language Learning

Wang, L. suggests language teachers by saying that technology is just a tool and designing creative instruction is the key to successfully integrating technology into classrooms (14). To do this, teachers must first know what the technology can do for language learning. He suggests that teachers can use technology to help education in the following five ways (14-15):

1. Word processing — Word processing is a great way for students to engage in writing, prewriting, drafting, revising, editing, saving, printing, inserting tables and graphics, and publishing. In this information age, word processing is a necessity for any language class.

2. Technology texts — Electronic books are rich supplements for printed textbooks, though they will never completely replace traditional books. Stories on the Internet are enriched by multimedia to dramatically motivate reading-reluctant students, leading to better literacy results.

3. Publishing students’ work — Because students are motivated, and invest themselves in their work when they are engaged in authentic tasks, a primary
goal in teaching literacy is for students to engage in meaningful and purposeful assignments. Computer technologies make students’ work easy to publish in multiple ways, such as on blogs, wikis etc.

4. Communication through the Internet — While language is for communication, the Internet has broken down communication’s distance barrier. Therefore, students can build up partnerships with learning peers in target languages through the Internet. The main ways of communicating on the Internet include e-mail, instant messaging, chat rooms and bulletin boards. With MSN and Yahoo! Messengers and skype students can not only send instant messages, but also have audio and video conversations that greatly motivate and improve their speaking and listening abilities.

5. Searching for online information — The Web offers valuable resources from around the world (e.g., databases, online journals, news, instructional materials, etc.) that enable many teachers to use the Internet as their “virtual library.”

With technological tools increasingly available in educational contexts around the world, language professionals are incorporating a variety of applications into their administrative and teaching duties. The review of literature identifies three types of practices that typify current technology uses for teachers:

• Administrative - A teacher uses computer for administrative or organizational functions, such as record keeping; word processing to produce texts (i.e., creating lesson plans and student materials); e-mailing parents; or participating in professional development.

• Blended - A teacher uses computers with students in an environment that combines face-to-face (f2f) classrooms with computerized tasks. Blended practices include:
  ➢ using single, stand-alone computers in the corner of a classroom for group information gathering or writing projects
  ➢ taking classes into a computer lab or classroom on scheduled days
  ➢ teaching in a fully computerized classroom (one workstation per student) with a combination of f2f and computer collaborations
  ➢ using home or public computers as the site for information retrieval and discussion outside of class. (Egbert 25)
• Distance—A teacher uses computers to support distance learning, where learners meet only virtually. Distance courses maximize the use of the computer as a communications tool and a nexus of information through the various multimedia functions that are increasingly accessible on and through the Internet. Distance courses usually employ a course management system.

The researcher has used the second method i.e. Blended learning for the present study and tries to create the suitable conditions for the same advocated by Egbert (25) and Sharma (7). Language teachers and administrators are turning to computer technologies to make many of their tasks more efficient. Many studies indicate student approval of new technologies. To understand why using technology can make language learning faster, easier, less painful, and more engaging, we refer to the conditions that make language learning possible, which we as educators try to incorporate each time we prepare our lessons. The following eight conditions for optimal language learning environments were outlined in Egbert and Hanson-Smith’s now classic CALL Environments: Research, Practice, and Critical Issues:

• Learners have opportunities to interact with each other and negotiate meaning.
• Learners interact in the target language with an authentic audience.
• Learners are involved in authentic tasks.
• Learners are exposed to and encouraged to produce varied and creative language.
• Learners have enough time and feedback.
• Learners are guided to attend mindfully to the learning process.
• Learners work in an atmosphere with an ideal stress/anxiety level.
• Learner autonomy is supported. (6)

If one thinks for a moment of multimedia CDs or DVDs, it is evident that learners are exposed through such materials to a wide variety of language (Condition 4); they get instant feedback (Condition 5); they are able to repeat words and phrases as often as they wish during practice (Conditions 5, 6, 7, and 8); they are given rewards and incentives to practice, such as games and entertaining challenges, as well as opportunities to explore and manipulate language (Conditions 6 and 7); and they are able to access the disks where, when, and as often as they want (Condition 8). Adding the Internet to this mix, especially live text and voice chat, curricular collaborations, and Web-based media projects, provides abundant opportunities for
interaction with native speakers and peers, the negotiation of meaning, authentic audience, and authentic tasks (Conditions 1, 2, 3, and 4).

A technology-rich environment can support all these conditions and thus become an optimal setting for language acquisition, a setting that breaks out of the constricted environment of the typical paper-and-chalkboard classroom. However, these eight conditions refer to learner activity, and it is often unclear to teachers how they can best provide a technology-rich environment that supports these types of activities.

There are various technological tools which can be exploited in the language classroom but here is the description of the tools used by the researcher in her project.

2.8.3 World Wide Web

The Internet is proved to be an effective tool for language learning. In recent years, its use in language classrooms has gained popularity as it has the potential to contribute to students' experiential learning and their language achievement. In several studies, the Internet has been found to strengthen students' linguistic skills by fostering their overall language learning attitudes (e.g., Felix 157; Kung and Chuo; Stepp-Greany 170-173; Yang and Chen 865), self-instruction strategies and self-confidence. Similarly there is evidence that students can improve their perceptions, attitudes and motivation in language learning by using the Internet (e.g., Keengwe 85; Bas 32; Alm 34).

The Internet has additionally been found to facilitate the development of language skills. Stepp-Greany, for example, used the technology to teach reading and found that the interactive Web-based reading program which he used strengthened his participants' language skills and learning across diverse topic areas (169). Similar positive effects were observed in the integrative teaching of reading and writing. In a project called Web-based English language learning, P'Rayan (103) discovered that there was improvement in his participants' reading and writing skills after they took part in various email exchanges, discussion forums and commenting activities based on the reading materials that were presented on the Internet. There were also studies done on grammar acquisition through Internet-based instruction (Al-Jarf 180). Many other similar studies conducted by Nagata; Collentine; and Zhuo showed that students learned grammar more effectively when they were involved incidentally or directly in grammar tasks and activities in the Internet-based learning environment (qtd. in Al-Jarf 180).
How to take advantage of Internet resources to facilitate language learning is an issue considered in many eloquent articles, publications and books (see Osuna and Meskill 84; Singhal; Alm 34; Sharma, Pete and Barney Barrett’s book ‘Blended Learning’; Gavin Dudeney’s ‘The Internet and Language Classroom’; Dudeney, G. and Nicky Hockly’s ‘How to Teach English with Technology’). Numerous websites present compilations of online resources for language teachers and can be accessed free of cost (www.eslcafe.com, www.englishclub.com, www.eslbase.com and many more). Still other sites such as the Internet TESL Journal at http://iteslj.org and Teaching with the Web at http://polyglot.lss.wisc.edu/lss/lang/teach.html, Nik Peachey’s blog http://nikpeachey.blogspot.com/ contain rich ideas for using web resources as a language teaching tool.

According to Li and Hart, the web’s multimedia capabilities and interactive functions have made it an attractive medium to conduct instruction (375). Sharma and Barney says that using the web and web-enhanced activities in ESL learning not only increase student motivation but also provide authentic language, up-to-date content, flexibility and global awareness(45-46).

Despite these advantages, potential drawbacks of using technology always exist. Wang, L. highlights some of the main disadvantages regarding technology integration in language classrooms include (14):

- A few common pitfalls of Internet use include objectionable materials, predators, copyright violations and plagiarism, viruses and hacking, netiquette behavior and privacy issues. Teachers must be prepared to deal with these issues as they use technology in their classrooms.

- Startup costs, which include hardware, software, staffing and training, are expensive. Warschauer and Meskill (qtd. in Wang, L. 14) indicate that intelligent use of new technologies usually involves allocations of about a third each for hardware, software, and staff support and training. It is often the case in poorly funded language programs that the hardware itself comes in via a one-time grant (or through hand-me-downs from science departments), with little funding left for staff training, maintenance or software.

- Technology may not be good for every language at all levels. For logographic languages, computer typing may not help improve efficiency in composition, especially with lower level learners. It also takes a longtime for students to
become familiar with computer typing; therefore, teachers should creatively use technology but not rely on it alone.

- Spending too much time on computers is considered harmful to a child’s development of relationships and social skills. The American Academy of Pediatricians calls for limiting children’s use of media to only one to two hours per day (qtd. in Wang, L. 14).

2.8.4 Blogs

A blog (short for weblog) is a frequently updated website that often resembles an online journal. It's so easy to create and update a blog - it requires only basic access to the Internet and a minimum of technical know-how. Because of this, it is one of the easiest ways to publish student writing on the World Wide Web. It is almost as easy as sending an e-mail.

Entries are posted chronologically, with the most recent at the top, and provide commentary or news on a particular subject. A typical blog combines text, images, and links to other blogs, web pages, and other media related to its topic.

A blog is a viable option when a public space is required to display the students' work or where the students can share experiences, opinions, or creations that reflect the best of their learning. Godwin-Jones characterized them as “on-line journals” (13).

Blogs have been well received in education because of their multimedia features, simple web publishing, interactivity, and ability to support cooperative and autonomous learning. Bloggers can read other blogs, give their comments on them and refer them in their own blogs. The worldwide blog audience enables students to interact with and have their work viewed by others outside the classroom (Godwin-Jones 13). Richardson defines a blog as “an easily created, easily updated website” (17).

Studies conducted by Bloch; Betts and Glogoff have lent support to the assertion that blogs can effectively facilitate language teaching and learning, especially in terms of learners’ language complexity, grammatical correctness and fluency (qtd. in Sun 89). In addition, bloggers tend to have a greater sense of freedom to express their ideas and to make their arguments than classroom-based participants. When a language teacher introduces blogging activities within the language classroom, the opportunities for student interaction and the horizons of that “learning
space” (Williams and Jacobs 232) are expanded exponentially, providing student writers with a far greater audience both within and outside the classroom.

While traditional Web sites that feature hyperlinks and reflect the Web site developers’ content-related priorities and usually contain a static, limited scope of content, blogs with Really Simple Syndication (RSS) present readers with diverse ideas, questions and links and, thereby, help develop collective intelligence (Richardson; Warlick qtd. in Sun 89). One of the technologies used by blogs to alert users to new postings, as well to help sort information coming from multiple blogs and other Internet sources, are RSS feeds. RSS is a format for delivering regularly changing web content. Many news-related sites, weblogs and other online publishers syndicate their content as an RSS feed to whoever wants it. Web feeds benefit publishers by letting them syndicate content automatically. They benefit readers who want to subscribe to timely updates from favored websites.

Figure 2.2: The blog creation process as shown on the welcome page of www.blogger.com

Principles in Support of Blogging as a Language Learning Activity

Chapelle recommended six criteria for CALL task appropriateness based on Second language Acquisition (SLA) findings (1) language learning potential, (2) learner fit (presenting tasks “appropriate to learners’ linguistic ability level”), (3) meaning focus, (4) authenticity, (5) positive impact (resulting in “effects beyond its language learning potential”) and (6) practicality (499-500).
Similarly, based on the experiences of a world wide teacher survey, Warschauer and Whittaker have compiled a set of considerations for teachers planning to implement CALL tasks. Their suggested considerations include the following: (1) understanding of one’s goals, (2) aiming for the integration of skills activities, (3) understanding the “complexity” of CALL tasks, (4) providing strong teacher support, and (5) involving learners in decision-making (368-371).

With these considerations and principles in mind, the researcher selected blogging as the CALL activity that would best serve the students. This was done for a number of reasons. First, it was evident from the researcher’s own experience and from an understanding of the prior research on blogs that blogging’s popularity has grown rapidly, parallel to that of the Internet and its potential in language teaching and learning has been encouraging, though not fully known. Research on the effect of blogs on education is still in its infancy and even less has been explored on the effect of blogs on language learning and teaching (Sun 89). In fact, on a global scale, according to Internet World Stats (n.d.) data for 2007, the number of Internet users in Asia is now approaching half a billion, while in North America and Europe the number is close to 600 million. Between 2000 and 2007 the growth in worldwide internet usage has been 250%. Concurrently, articles in BBC (Blogosphere sees healthy growth, 2006), summarizing data from the blog tracking firm Technorati, puts the number of new blogs created daily at 100,000 and the number of posts posted every day at 1.3 million. Murray (2007) states that as of October 2007 Technorati was tracking “more than 108.8 million blogs” (26); and BBC’s another article (Children who use technology are ‘better writers’, 2009), states that children who blog text or use social networking websites are more confident about their writing skills.

**Benefits of Blogging for the Composition Class**

For the language teacher the weblog is a timely arrival which can fulfil many of the needs identified for the effective teaching of writing. The weblog provides a genuine audience, is authentically communicative, process driven, peer reviewed, provides a dis-inhibiting context and offers a completely new form with a great creative potential.

**Genuine Audience**

Teaching writing for an audience is a challenge especially when teaching to students who have never written anything in English except assignments for their teacher. These students may not only have difficulty adjusting their writing to fit the
reader, but may have trouble getting started because, aside from the final grade, what they write does not mean anything to them because it does not need to mean anything to anyone else. However when writing for a weblog, “the [online] audience is not only anticipated but expected and thus influences and structures the very manner in which the writer articulates, composes and distributes the self-document” (Kitzmann 48). Kitzmann describes how the potential of online celebrity provides a powerful motivating force for the writer, playfully re-appropriating Descartes’ maxim to describe the existential stimulus of the compulsive blogger, “I write about myself, therefore I am” (54).

**Authentic Communicative Content**

In Classroom Practice: Authentic Audience on the Internet, Opp-Beckmann describes the benefits of having an audience that is multicultural, responsive and networked. She celebrates how the developing technology of new media also enables students to become both the author and the audience, and can even provide communication between the different audiences (p.80). Because weblogs can offer two-way communication through group blogs and comments, there is literally a new dimension to this type of composition. As Wrede points out that Weblogs are both monologues and dialogues and therefore can benefit from the advantages of both forms and they also intersect e-mail, discussion forums, instant messaging and conventional electronic publishing, they are continuous in the sense that they are not result oriented but process oriented.

**Process Driven Composition**

Indeed, continually updating a weblog, like regularly writing in a journal, may help writing students to appreciate that writing is an ongoing process, but with the added bonus of an instant and interactive audience. This advantage is described in writing with weblogs where Kennedy describes how weblogs “combine the best elements of portfolio-driven courses where student work is collected, edited, and assessed, with the immediacy of publishing for a virtual audience” (4).

**Peer Reviewed Writing**

Furthermore, the audience brings its opinions, advice and criticism which as Stiler explains may “enhance the development of student reflectivity” (2). This point is also discussed by Welch in his article “Blogworld and its Gravity” in the Columbia Journalism Review, where he explains how journalists’ stories are discussed and evaluated for factual details online and how this has led to some reporters changing
their stories after being challenged by bloggers (21-26). The popularity of blogging can possibly be explained through the need for relatedness, the need to be seen and recognised by others. This would also explain Pinkman’s observation that the most motivating factor about blogging in an ESL class was the comments learners received from peers and teachers to their posts (20).

**Disinhibition**

In addition to providing a critical audience, another advantage that the weblog provides is the ability to communicate without the inhibitions and preconceptions that accompany most face-to-face interactions. Roed investigates this factor in her article, ‘Language Learner Behaviour in a Virtual Environment’, and explains how people behave differently when communicating online compared to a face-to-face situation. After observing her students, Roed reports that when communicating online, they show fewer inhibitions, display less social anxiety and reduce their public self-awareness” (155). He also describes how the, often false, notion of anonymity that people have when communicating via the computer can be a major advantage for the language learner because it cuts down on anxiety and helps develop confidence. She explains that the term “disinhibition” has been coined to identify this factor. Disinhibition has been described by Johnson as “any behaviour that is characterised by an apparent reduction in concerns for self preservation and the judgement of others” (qtd. in Roed 154). Roed also looks at how this phenomena affects the class as a whole and observes that, “The group dynamics of the classroom are altered once the classroom becomes virtual” (157).

2.8.5 Wikis

A wiki is a website that allows visitors to add, remove and edit content. It is a collaborative technological tool for organizing and synthesizing information on web sites. Wikis have been described by the creator of the first wiki (wikiwikiweb), Ward Cunningham, as “the simplest online database that could possibly work” (Leuf and Cunningham 4). In addition, they are also very fast. In fact, Cunningham adopted the term wiki (intended to be pronounced weekee) from a Hawaiian word for “quick.” Wikis allow for linking among any number of pages. As the content is editable there is a history of changes to enable users to revert back to earlier versions. This ease of interaction and operation makes a wiki an effective tool for mass collaborative authoring. The most famous example of a wiki is Wikipedia, an online encyclopedia written by its readers.
Wikis and Language Learning

The emergence of the wiki, which has introduced a new way of interacting on the Web has made it possible to create and share information and knowledge in a more authentic way than before. Not only does wiki technology foster communication among participants through writing, but it also facilitates important activities such as collaboration, reflection, and critical thinking for knowledge creation.

Educators such as Lin, Li, Hu, Chen, and Liu explain that “students through the wiki are able to post information that they want to share and easily interact with each other” (p. 343). Similarly, Lin, Bonk, and Sajjapanroj describe that in collaboration with other persons, the wiki is an online place wherein one can write information and exchange knowledge with others (qtd. in Lee and Bonk).

In summary, a wiki can be defined as a Web tool that everyone can build collaboratively – information and knowledge interact on a common document, which the participants then want to share. This process allows them to repeatedly improve the content, as well as facilitate interaction among group members. The permanent retention of each iteration of posts in a wiki provides users the opportunity to explore the evolution of any wiki page, and, if deemed appropriate, replace the current version with a previous iteration. Wikis allow for the complete revision of text by any user. Thus, a contribution is not a comment or response (as it might be in a blog), but an alteration to the previous contribution. This means that a wiki-based text is in a constant state of potential collaborative change.

As mentioned above, due to the unique characteristics of wikis, teachers and students using wikis have several advantages for collaboration and learning. As this happens, teachers can assume the role of guide and facilitate their students’ development by efficiently monitoring their activities with the functions supported by wiki technology.

As Godwin-Jones states, “Wikis are intensely collaborative.” (15). Discussing the emerging technology of wikis, Godwin-Jones states, “Such a system only works with users serious about collaborating and willing to follow the group conventions and practices” (15). Such responsibility is representative of characteristics associated with autonomy among language learners. Wikis work well for group projects, particularly when students have conflicting schedules and have problems getting together.
Table 2.2 Comparison of Wikis with Conventional Web Pages

<table>
<thead>
<tr>
<th>S. No</th>
<th>Wikis</th>
<th>Conventional Web Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Open-editing</td>
<td>Limited editing</td>
</tr>
<tr>
<td>2</td>
<td>Simple text formatting language</td>
<td>Conventional HTML</td>
</tr>
<tr>
<td>3</td>
<td>Earlier versions stored in online database</td>
<td>Earlier versions not automatically stored</td>
</tr>
<tr>
<td>4</td>
<td>Easy to create new pages</td>
<td>Harder to create new pages</td>
</tr>
<tr>
<td>5</td>
<td>Low security</td>
<td>Higher security</td>
</tr>
<tr>
<td>6</td>
<td>Equal user roles</td>
<td>Hierarchical user roles</td>
</tr>
<tr>
<td>7</td>
<td>Multiple anonymous authorship</td>
<td>Limited know authorship</td>
</tr>
<tr>
<td>8</td>
<td>Collaborative</td>
<td>Individual</td>
</tr>
<tr>
<td>9</td>
<td>Pages considered always in process</td>
<td>Pages considered finished</td>
</tr>
<tr>
<td>10</td>
<td>Informal, human voice</td>
<td>Formal</td>
</tr>
</tbody>
</table>

**Blogs vs. Wikis**

The open style of a wiki can be useful for group projects, while a blog may aid in brainstorming or generating discussion. Also, a combination of the two may best suit educational purposes. Because a wiki can limit which users can login and edit the content, facilitator control can virtually be the same as a blog, where comments and posts can be pre-screened. The main difference, then, between a wiki and a blog becomes the layout and organization of information. A wiki becomes a continually modifiable easy-access web page, while a blog's journalistic style catalogs and dates content so readers can see the interchange of ideas related to the blog topic in question.

**Educational Benefits of Wikis**

- Help students to communicate and collaborate
- Motivate students to participate
- Provide opportunities to read and write
- Postings can be created by students any time, any place
- Own sense of ownership
• Get experience with practical, legal and ethical issues of creating a hypertext document.

The recent explosion of Web 2.0 technologies holds “incredible potential for foreign language instruction”, yet “the literature contains no evidence of research into the use of wikis in the context of language learning” (Kessler 80).

Figure 2.3 Home page of www.wikispaces.com

With regard to wiki usage, much research (Lin et al. 342-344; Parker and Chao 63-65) reports the benefits and the successful cases of using wikis through online and distant education. Specifically, Parker and Chao examined the current literature related to wiki usage and argued that wikis can be used for writing instruction as well as learning the process of collaborative writing. They found it quite beneficial in online/distance education, especially as a way of motivating teams to interact and complete group projects. Parker and Chao viewed wikis as a key tool for collaborative learning and constructivist forms of instruction (65). Lamb also states that the most frequent use of wikis in education is to support writing instruction (42).

Wikis also are valuable for the distribution and sharing of members’ ideas and views for the purpose of interacting within a group. Lamb (42) describes the wiki as a sketchpad or a space for brainstorming online. He gives an example of wiki usage to support the planning of meetings including building on previous agendas, distributing
URLs to participants in order for them to comment or add freely their own ideas to the agenda and so on.

Suffice to say, the wiki is a highly social and collaborative tool. It is “a website where anyone can edit anything anytime” (Richardson 59). Augar et al. examined the use of wikis as an icebreaker to solve the scarcity of communication among online learning participants. This research confirmed that wikis increase social interaction and collaboration among participants in online education. If online educators take advantage of this enhanced student interactivity and teamwork, wikis can serve a highly useful function in students’ motivation, retention, and satisfaction in their courses (qtd. in Lee and Bonk).

Wikis are particularly suited for cooperative writing activities. On the same principle as Wikipedia, an entire class can be involved as the “collective intelligence” (O’Reilly) in the writing, rewriting, correction and modification of a theme-based foreign language wiki site (Alm 32). Parker and Chao, on the other hand, report that wikis can be utilized not only as a device for the collaborative writing and as a base of information and knowledge, but also as a tool for facilitating interaction among participants to support student course engagement and ultimate completion (67).

**Previous cases related to the use of the wiki**

Presently, research on wikis has been done from various angles in order to explore areas of proper application as well as the ability to utilize its functions.

Pedro et al. conducted survey research after using wikis with college students for two years. When done, they summarized the advantages and disadvantages associated with the use of wikis in the college classroom. The results showed high value for wiki technology. For instance, users can approach a wiki activity easily and quickly, recover former document versions and view detailed histories of former documents. In particular, the students appreciated the collaborative writing methodology base of wikis because they could cooperate without meeting, observe the development of their members’ work, and participate actively in communication.

Kessler used wiki collaborative task with his students to promote autonomy in them. The wiki task was initiated by the teacher and left up to the students. It was their responsibility to collaboratively construct the wiki as a reflection of what they had learned in the class as a community. There was no intervention from the teacher. This was intentional to determine if the autonomous constructivist activity would
enable students to establish a sense of responsibility for the ongoing maintenance and revision of the document. At the end of the project, Kessler achieved success in promoting autonomy among students but the task could not contribute to increase their grammatical accuracy (82, 90).

Augar et al. explored the role of the wiki as an icebreaker in reading new postings added by community members of a particular university. More specifically, they provided students with simple and clear guidelines to prevent improper postings and to build a dynamic and friendly atmosphere. Augar et al. report that the use of wikis increased students’ online activities such as viewing, creating and editing the documents. In the end, they suggested that wikis can be used to distribute information as well as encourage learner social communication (qtd. in Lee and Bonk).

Lin et al. were interested in how each member’s role, when using a wiki, impacted learning. In their study, students were allocated to particular roles to complete a team project and developed stances and skills of given roles from the real learning context of wikis. In addition, Lin et al. confirmed that students collaboratively participated in supporting the writing and related activities among members (342-344).

Langie et al. also conducted international research that used wikis to support peer coaching for collaborative composition between Dutch and Belgian students. This research was part of a two-year project on wikis to encourage cooperative and dynamic context within groups based on the outcomes of the first year of the project. This research was successful for several reasons: (1) the use of a common language for international cooperation; (2) a strongly constructed project with obviously shared guidelines and high standards for the evaluation; (3) support for interaction in the use of wikis for smooth communication between students; and (4) support by the instructor as an expert who monitored and scaffolded student processes (qtd. in Lee and Bonk).

Notari indicated that a wiki is a powerful tool for constructivist learning. She suggested the use of a script to support cooperative wiki-based activities. According to her explanation, a cooperative script is an educational scenario. Notari also argued for the development of “communication and comment culture” to create a context of smooth comments and editing activities since the beginning of a class. In particular, she insists that teachers need to focus more on encouraging students to participate in input activities than quality control of contents student has made (131-132).
In addition, there is an important case related to writing instruction through computer technology even though this does not directly relate to using wikis. Dalton explored the advantages of writing instruction based on the results of case studies using computers. Several implications are mentioned as follows. First, as might be expected, allowing students to use computers to collaboratively write is one of the most useful methods in encouraging students to develop their writing skills. Second, through this collaborative writing process, students can interact with other students outside the classroom through activities such as newspaper publishing using computer communication. Third, it is critical for students to have chances to share documents and to obtain individualized feedback from teachers and other members about the revisionary needs of their own documents. In particular, Dalton mentioned the positive effects of “collaboratively writing a series of round robin stories on the computer” (2) by three students and a teacher (qtd. in Lee and Bonk).

Judging from the relevant research to date, one can conclude that wikis are a sound tool to support the collaborative activity of composition among learners who have different cultural backgrounds. As such, wikis require thoughtful reflection by educators before incorporating them in the classroom as a writing, idea generation or teamwork tool.

2.8.6 ESL Websites

Using websites is one of the easiest and least stressful ways of getting started with technology in the classroom. There is a large and constantly expanding collection of resources on the web, at a variety of levels and covering an amazing array of topics. One can choose from authentic (written for Internet surfers in general) sources or ELT-specific sites (made by, and for teachers), monolingual or multilingual sites, sites with multimedia, or just simple text, for those on slower connections.

The web is a source of content which can be used as a window on the wider world outside the class, and is of course a readily available collection of authentic material. As such, it is a much larger repository of content than would previously have been readily available to the teacher and the students.

The technology needed to use the Internet for teaching is relatively limited and the chances of something going wrong are greatly reduced over more complex technology approaches such as attempting to carry out live chat, wiki projects or video-conferencing sessions.
Another advantage of this tool is that you don't necessarily have to rely on a constant Internet connection if you bear in mind that it is possible to save local copies of websites on teacher’s computer or print out potentially useful pages for later use. Indeed, one can use web pages in the classroom in a variety of ways:

- As printed pages, with no computers. Although printing is not necessarily the cheapest option, it is certainly a viable one in places where there may be limited access to the Internet. Indeed, a lot of activities using web pages will only necessitate the printing of one or two pages, which can subsequently be photocopied.

- With one computer with an Internet connection. This can be enhanced by connecting the computer to a data projector or even an interactive whiteboard, allowing for greater visibility in class, but it is also possible to make use of a single computer on its own connected to the Internet for reference.

- In a computer lab with a set of networked and connected computers. If you're lucky enough to be in this kind of situation, then you are ideally placed to incorporate Internet content into your regular teaching.

It's important that both teacher and the learners see the use of the Internet as an intrinsic part of the learning process, rather than as an occasional activity which has nothing to do with their regular study programme. Therefore it is recommended that, if a teacher plans to use the Internet, she should talk to the learners and explore the reasons for using this resource with them. This can be done at lower levels in their own language or in English with higher-level classes. Show them how the course book and other materials can be enhanced by extra material from the Internet, but above all, make it clear that this is not a toy, not something that you are just using to fill in the time.

Technology, especially the emergence of the Internet, is affecting every aspect of education and changing the way we teach and learn. “It is no longer a question of whether to take advantage of these electronic technologies in language instruction, but of how to harness them and guide our students in their use” (Paulsen). Innumerable websites, articles and books containing information for a language teacher are accessible free of cost, the only condition is that the teacher must have the desire to use technology in language classes. As Zisow stated:

I am convinced that the greatest factor affecting whether a teacher
does or does not use technology in the classroom, is teaching style.

Technology is merely a tool. Whether it is used or not depends on a teacher’s motivation and desire to use new tools. (36)

Despite the abundance of resources on the Internet, those resources are not likely to be useful unless the students can locate them and know how to use them to enhance their language learning experience. Egbert cautions us against having students do research in order to practice English in a way that the learner spends more time looking for resources than focusing on reading or writing English (Software 22). Being exposed is not enough if the student does not have time or the English proficiency to analyze any of them. The degree to which the Internet is useful in language learning depends fundamentally on how well the materials found match the needs of the students and their ability level. For students with limited language ability, ever websites specifically designed for ESL students will not prove helpful unless the content is relevant and the instructions understandable. In this regard, the researcher designed her own website as a platform to introduce students to selected ESL websites according to their proficiency level and to find ways to use these sites to supplement their learning experience. The overall purpose of this website was to put all the important ESL web links on the one page and to make an easy and instant access to the ESL websites related to their proficiency level.

How to Evaluate Websites

Having found potentially useful websites, the next step is to evaluate how useful and appropriate they are for the classroom. You will also need to think about the aims and objectives of your lesson. Does the website you have found fit in with these, and does it enhance and complement the other materials and activities you have planned for the class? Sometimes the Internet content will be the core of a particular lesson but at other times it will merely serve as a jumping-off point into something more closely related to a particular course book theme or unit, or be a source of extra material to follow up on the core classroom content. There are various standard criteria for judging websites which can serve as a starting point for your evaluation:

1. Accuracy
   • Who wrote the page? Is this person an expert in the subject matter?
     Check qualifications, experience -look for an 'about me' link.
• Is the page content reliable and factually correct?
  Cross-reference with other similar websites and encyclopedias.

2. Currency
• Is the content up-to-date?
  Check factual information against other reliable sources.
• When was the page last updated?
  Check for information at the bottom/top of the page.

3. Content
• Is the site interesting and stimulating?
  Consider the content from your learners' point of view.
• Is it attractive and easy to navigate?
  Check the colour combinations, the logic of the links and visual structure.

4. Functionality
• Does the site work well? Are there any broken links?
  Be sure to check all pages, and follow all links to all pages you intend to use.
• Does it use a lot of large files or alternative technologies (e.g. Flash)?
  Check how quickly it loads for learners; check sound, video and animation
  work.

After identifying the proficiency levels of the students and the relevant websites
for them, the researcher created a website and used it as a platform to host important
external web links. The students were asked to use those web links for self study.

Figure 2.4: The Student’s page of the Researcher’s website
2.8.7 Language Lab Software

The review of literature shows that students of elementary and intermediate levels find language lab software very useful. Its motivational force can be linked to the immediacy of the feedback and the reinforcement that the learner receives through visual or auditory signals.

Pedagogy of Learning through Language Learning Software Technology

1. Assimilating what has been learned
   These are generally guided exercises. They are used to help students assimilate grammatical and lexical structures. They consist of the following:
   - Repetition Exercises (Word Pronunciation, Sentence Pronunciation).

2. Putting the rules into practice
   These are guided exercises. Their objective is to highlight specific functional components within a language:
   - Reflection on the organization of sentence components (Word Order).
   - The use of vocabulary and grammar in fill-in-the-blanks exercises, which require students to analyze a sentence in its entirety in order to place the correct word (The Right Word, Fill-in-the-Blanks).
   - Vocabulary practice with association exercises, which consist of matching a word with its synonym, antonym or a related image (Word Association, Picture/Word Association).
   - Reflection on vocabulary or grammar using texts or lexical groups, in which students must identify words belonging to a specific grammatical or lexical group (Words and Functions, Words and Topics).

2. Mastering the language
   The objective of these types of exercises is to put the acquired knowledge into practice through written expression. The exercises consist of:
   - Guided expression, consisting of the transformation of context (Text Transformation).
   - Semi-guided expression, in which it is necessary to write texts based on an image or video, or to write a summary of a longer text (Written Expression).
Interference of the teacher instructor is very less by using teaching software, as the interfaces are user-friendly and activity-driven. No specialized IT skills are needed in the comfortable teaching and learning environment provided by the interface.

4. To ensure the best learning results

Language Learning Software gives learners access to resources for independent or supplemental learning and study. This unique learning-on-demand feature creates additional learning opportunities and reinforces classroom activity. It is possible to conduct and practice tests and get results in individualized manner.

Techniques to Improve Reading and Writing Skills through Language Laboratory

The key to learning a language is the frequent exposure and use of vocabulary and grammar. The average person must be exposed to a word or phrase 100s of times before integrating it into fluent conversation. The major thresholds of gaining language fluency are the learner’s ability to:

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

a) Grammar Exercises – Reading, Writing, Comprehension

The goal of these exercises is to build the knowledge of how the words fit together to make sense. Some of the exercises may be translations; others can be designed to teach the learner to think in English by asking them to change a phrase in a specific way. This feature requires to type responses within the exercises, providing a practical and effective form of writing instruction.

Reading Comprehensions can be given in the form of stories, case lets, cases, descriptions and narrations. The learners can be encouraged by allowing them to follow the different methods of reading such as, skimming and scanning. They can be followed by activities in groups through exercises on word meanings, vocabulary, fill in the missing information, writing summary / gist. Note taking, thought provoking questions for group discussions, brainstorming sessions etc.

b) Writing Exercises:

Writing can be practiced through typing on gap fill exercises and model format for E-mail, letter, memo, reports and resume. They can also prepare the paper
for presentations. These can be observed and edited by the instructor through the Teacher’s Console.

c) Written Assistance: -

The teacher can send messages to guide learners with their work and the learners can reply. The teacher can also initiate a text chat session with single and multiple learners. In this feedback can be given on the spot.

**Track learning progress through Language Learning Software**

Language learning software provides teachers with a number of methods for evaluating students’ performance and tracking their progress. 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.

### 2.9 STUDIES RELATED TO THE USE OF TECHNOLOGY IN LANGUAGE LEARNING

The teaching and learning process has been altered by the convergence of a variety of technological, instructional and pedagogical developments in recent times. Technology is challenging the boundaries of the educational structures that have traditionally facilitated learning. Recent advances in computer technology and the diffusion of personal computers, productivity software, multimedia and network resources over the last decade heralded the development and implementation of new and innovative teaching strategies. Research on learning languages through technology offers many surveys of how language learning takes place with and through computer technologies. The authors, from educational institutions in many regions of the world, offer examples of a wide variety of technologies, from the lowest levels, such as word processing and scanning, to high-end multimedia and interactive communications through web 2.0. Educators who advocate technology integration in the learning process believe it will improve learning and better prepare students to effectively participate in the 21st century workplace (Sharma and Barney 11; Dudeney and Nicky 10).

In a review of existing evidence of the impact of technology on learning, Marshall found strong evidence that educational technology "complements what a great teacher does naturally," extending their reach and broadening their students’
experience beyond the classroom. "With ever-expanding content and technology choices, from video to multimedia to the Internet," Marshall suggests "there's an unprecedented need to understand the recipe for success, which involves the learner, the teacher, the content, and the environment in which technology is used." (qtd. in Wang, Yan 499).

Taking an instance from the recent past, Intermediate students of Polish in California correspond by e-mail with counterparts in Cracow, Poland to plan a bilingual web site they will be jointly producing on the World Wide Web. The students work in international teams to plan, design, and edit the web site, which includes textual information about their two universities as well as student-produced video (Barson and Debski 52-56).

In a 2000 study commissioned by the Software and Information Industry Association, Sivin-Kachala and Bialo reviewed 311 research studies on the effectiveness of technology on student achievement. Their findings revealed positive and consistent patterns when students were engaged in technology-rich environments, including significant gains and achievement in all subject areas, increased achievement in preschool through high school for both regular and special needs students and improved attitudes toward learning and increased self-esteem (67).

Ayres examined students' attitudes towards the use of CALL and reported that the subjects' attitudes towards English Learning increased significantly. The study also revealed that there was a link between pupils' attitudes and their level of computer literacy, language level and age (241-249).

Some writers devoted whole books for the discussion of CALL. For example, Kulik, C. and Kulik, J. stated that a meta-analysis of findings from 254 controlled evaluation studies showed that computer-based instruction usually produces positive effects on students. The studies covered learners of all age levels from kindergarten pupils to adult students (75-94).

Likewise, Chikamatsu pointed out that CALL gains popularity and is becoming standard in foreign language classrooms. The researcher examined the effects of computers on writing efficiency and quality among intermediate learners of Japanese. One of the findings was that accuracy rates and the length of the script were significantly different, indicating that learners benefited from computer writing (114-127).
The study conducted by Al-Seghayer explored the efficacy of multimedia annotations for learning unknown lexical items. The results of this investigation suggest that a video clip in combination with a text definition is more effective in teaching unknown vocabulary than a picture in combination with a text definition. Participants learned and recalled more words when video clips were provided than when pictures were made available (222).

Stepp-Greany’s descriptive study illustrated the perceptions of one group of university students about language learning in a technology environment. It presents survey data of the first year students using a combination of technologies: Internet activities, CD-ROM, electronic pen pals and threaded discussions. Goals of the study were to determine students’ perceptions of (a) the role and importance of the instructor in technology-enhanced language learning (TELL), (b) the accessibility and relevance of the lab and the individual technological components in student learning, and (c) the effects of the technology on the foreign language learning experiences. Students attributed an important role to instructors and perceived that cultural knowledge, listening and reading skills, and independent learning skills were enhanced but were divided in their perceptions about the learning or interest values of the individual components (175).

More recently, Noytim’s study investigated the potential value of weblog use on English language learning in the context of a university in Thailand. It examined students’ attitudes towards using weblogs. A content analysis was used to analyse the data that derived from short questionnaires, interview questionnaires and student blogs. The findings indicated that the students perceived weblog as a tool for the development of their English, in terms of writing, reading, vocabulary, and recording their learning experience. The students also viewed weblog as giving an opportunity and freedom for self-expression in English, writing for both a local and global audience, fostering creative, analytical and critical thinking skills, creating social interaction and good relationships between writer and reader and supporting the learning community. Overall, in spite of some minor limitations, they had positive attitudes towards weblog use. These findings suggest that weblogs can provide learning motivation and opportunities for authorship and readership, as well as the development of writing and learning strategies, including critical thinking (1127-1132).
Sun's study uses voice blogs as a platform for an extensive study of language learners' speaking skills. The results of this study reveal that students went through a series of blogging stages, including conceptualizing, brainstorming, articulation, monitoring and evaluating, and used a wide variety of strategies to cope with blogging-related difficulties. In addition, students perceived blogging not only as a means of learning, but also as a means of self-presentation, information exchange, and social networking. Furthermore, the findings suggest that blogs constitute a dynamic forum that fosters extensive practice, learning motivation, authorship and development of learning strategies (88-103).

The findings of the study conducted by Bas conclude that Computer Assisted Language Learning helps to develop positive attitudes among students towards language learning. The purpose of his study was to examine the effects of the CALL method supported with a language learning programme on students’ achievement levels and attitudes towards the lesson. This method was also supported by teachers because CALL helps to motivate students and increase their learning and achievement (26).

Researchers are also making progress on the more complicated task of investigating the impact of technology use on higher order thinking skills as measured through means other than standardized tests. They are examining students' ability to understand complex phenomena, analyze and synthesize multiple sources of information, and build representations of their own knowledge. At the same time, some researchers are calling for newer standardized assessments that emphasize the ability to access, interpret and synthesize information.

Results from other studies (Perez-Prado and Thirunarayanan 195-202; Cooper 52-58) also suggest that students can benefit from technology-enhanced collaborative learning methods and the interactive learning process.

A good example of a collaborative writing project is the ‘International Environment Activity’. It was a task-based writing project that involved international teams of university students from three different countries. In this activity the students worked together in teams to find solutions to real-world environmental problems. Each team had to choose a problem and collaborate to complete a series of writing assignments related to the solution of the problem (e.g. a technical report recommending solutions to the problem). The outcome of the projects was the oral
Jor describes an interesting one-class collaborative publishing project that was designed to teach Technical English, focusing on memos, minutes of meetings and technical reports for authentic communicative purposes. Students had to report on software or Internet resources useful to their discipline. They commented on peers’ work and selected the best texts to be published in an Internet newsletter of the class (368-374).

Kelsen investigated the use of YouTube as supplementary material in an EFL setting in Taiwan. It was hypothesized that YouTube could be used as authentic material input and as a motivational tool. The results from questionnaires given on the first and last days of the class showed that students found the experience of using YouTube to be interesting, relevant, beneficial and somewhat motivating in class. So, he suggested that both teachers and students can be involved in creative ways to incorporate YouTube in a variety of classroom activities to enhance learning outcomes and provide a positive classroom environment. However, using YouTube in class to motivate students to use this website as a medium to study English outside of class and develop some degree of learner autonomy remains less clear.

Akram’s study aimed at investigating the impact of CALL strategy (The Internet) on the King Saud University students’ grammar achievement in English. The experimental group was taught according to CALL strategy (using internet); while the control group was taught according to the conventional way (Lecture Method). The results revealed that the achievement of grammar of the students in the experimental group significantly improved. The study also proposed a number of recommendations and suggestions for future research.

Hung conducted a study to determine whether e-mail exchanged with American key pals can effectively improve Taiwanese college students’ English writing skills. The results of this study revealed that the treatment group did better than the control group in 14 weeks (one semester). Therefore, he suggests that language teachers can use CALL (Computer-Assisted Language Learning) teaching methods to teach ESL or EFL students in their English learning (91).

Felix, U. provides a comprehensive survey of research into CALL in her article “The unreasonable effectiveness of CALL: what have we learned in two decades of research?” In her conclusion she writes:
We are beginning to see enough data in CALL that suggest positive effects on spelling, reading and writing. There is also a substantial body of data that indicates that student perceptions of CALL are positive on the whole, provided technologies are stable and well supported. On the negative side there are still concerns about technical difficulties interfering with the learning process; older students not feeling comfortable with computers; younger students not possessing the necessary metaskills for coping effectively in these challenging environments; training needs in computer literacy for both students and teachers; problems with group dynamics; and time constraints. (156).

As mentioned before most of the empirical studies were about a single application used in a few days. Only two studies evaluated the effectiveness of more comprehensive uses of technology over a longer period of time. The first study (Adair-Hauk et al. 269-305) was conducted in 1996 and the second study took place in Fall 1998 and Spring 1999 (Green and Youngs 89-123). Participants of the first study were second-semester French students and those of the second study were first-semester French students and first- and second-semester German students. Both studies followed the same format: the treatment group participated in technology-enhanced language learning activities, while the control group attended a regular class for one of the class periods each week. The technological applications included computerized multimedia grammar and vocabulary exercises, instructional video, online spell checker, French-English glossary and the web. Measures of listening, reading, writing, cultural knowledge and student attitudes were taken during the course of both studies. Speaking was assessed in the first study. The findings are summarized below:

1. For study 1, when change over time was considered, there was no significant difference between the treatment group and the control group in cultural knowledge, speaking or listening. For study 2, there was no significant difference in any of the skills measured (cultural knowledge, listening, reading, and writing) (p < .05).
2. However, the difference in writing was significant in study 1. The control group’s homework writing scores decreased, while the treatment group’s increased. Writing test scores also indicate a significant difference between the two groups favoring the treatment group (p < .001). The treatment group also scored significantly better than the control group in reading (p < .001).

3. Both studies found that students in the treatment group spent about the same amount of time completing the tasks as their peers in the control group.

Both studies concluded that technology-supported independent language learning is as effective as classroom instruction, if not more.

In order to gain a better sense of the overall effectiveness of technology applications in language learning, a meta-analysis was conducted by Zhao indicating an overwhelmingly positive effect of technology applications on language learning. The review found that existing literature on the effectiveness of technology uses in language education is very limited in four aspects: a) The number of systematic, well-designed empirical evaluative studies of the effects of technology uses in language learning is very small, b) the settings of instruction where the studies were conducted were limited to higher education and adult learners, c) the languages studied were limited to common foreign languages and English as a foreign or second language, and d) the experiments were often short-term and about one or two aspects of language learning (e.g., vocabulary or grammar). However the limited number of available studies shows a pattern of positive effects. They found technology-supported language learning is at least as effective as human teachers, if not more so (Recent 7-27). Thus judging from this analysis, it is reasonable to conclude that technology has been shown by the published empirical studies to be very effective in improving student language learning.

Toralovic conducted a study that aimed to examine whether CALL grammar instruction contributes to improving learners’ performance and confidence in positioning adverbs in an English sentence. Results showed a significant improvement on the intuition task and a significant confidence improvement on both intuition and production tasks for the computer group (203-235).

Frigaard investigated the effects of Computer Assisted Language Learning for learning grammar in English classes. Students educated by the CALL method achieved higher scores than students educated by traditional language teaching methods, but the result was not significant at the 0.05 level. He found a significant
difference between the retention levels of the students in the experimental and the control groups. Students educated by the CALL method had higher retention levels than students educated by traditional methods.

On the other hand, a study conducted by Gonzalez and Carlos does not show a statistically significant difference in the writing achievement in English of Puerto Rican university students who receive CALL and those who receive regular instruction only. Similarly, the results of Suda-Dunn's study (135) aimed at investigating the effects of animation on the beginners' learning of Japanese vocabulary does not show any significant improvement in the performance of the students on the post-test but the questionnaire responses, however, indicate that the students found the learning process more interesting.

The research conducted by Nutta offers an indication that computer directed grammar instruction is an effective teaching method for students from varying regions of origin and levels of proficiency (49-61).

In terms of overall effectiveness of technology on language learning, there is evidence suggesting that technology-based language instruction can be as effective as teacher-delivered instruction. Although the number of available experimental studies is limited, a consistent pattern of positive effects is found across the studies. But Lamb suggests that using the technology to replace traditional classroom instruction should not be the primary concern of educators, but using them to "fill a gap in existing practice" (48) provides the greatest promise. To remain a viable institution, to develop and change with technology rather than because of technology, one must find ways to integrate the new technology into teaching and learning.

2.10 TECHNOLOGY IN INDIAN CONTEXT

The turn of the century has witnessed the profound impact of technology on education and ELT is not an exception. Technological tools like blogs and wikis in collaboration with Internet and language software has resulted in a totally different concept of the language teaching. Though India is a technologically sophisticated country yet the use of technology in ELT is rare. The impact of globalization on the Indian economy is so significant that educators have now realized that Internet can supplement a teacher as it provides greater opportunities for language input, thus promoting language learning. The penetration of the Internet has gone beyond urban
areas and now provides online education even in rural areas on a regular basis. With the advent of portals like 24x7guru [http://24x7guru.com] and the India Times Test Center [http://testcenter.indiatimes.com/etesting/], subject knowledge is now imparted with the help of the Internet at the primary and secondary levels (Viswanathan). When the use of technology at the primary and secondary level is bearing fruit then the researcher is hopeful that the present study will explore the positive impact of technology on ELT in India at the tertiary level as well.

2.10.1 Attitudes to Technology

Many people are afraid of new technology and with the increasing presence of the Internet and Computers. The term technophobe has appeared to refer to those who might be wary of these developments. More recently, the term digital native has been coined to refer to someone who grows up using technology and who thus feels comfortable and confident with it - typically today's students. Their parents, on the other hand, tend to be digital immigrants, who have come late to the world of technology, if at all. In many cases, teachers are the digital immigrants and students are the digital natives.

Factors responsible for negative attitudes of teachers towards technology are: lack of confidence, lack of facilities or lack of training, resulting in an inability to understand the benefit of using technology in the classroom. It is also often the case that teachers may not be fully in control of their work situation. A teacher may want to use more technology in teaching, but the school may not have the facilities, or, on the other hand, a teacher may be instructed to start using technology for which they feel unprepared or untrained.

Despite the negative side of the coin, is still believed that integrating new technologies should be an important goal of language programs. Even Indian government is realizing the importance of technology integration and making efforts at a large scale to promote its use and bring awareness among people about it through motivators and guides (Natl. Mission on Educ. through ICT 6). The most effective technology-enhanced language programs take many years to develop, provided they are supported by administration, teacher experimentation and collaboration.

In the history of language learning, few topics have ignited such public debate as the use of technology in language learning. New communication technologies are part of the broader ecology of life at the turn of the century. Much of reading, writing and communicating are shifting from print, telephone, etc. to the screen. In such a
context, one can no longer think only about how to use technology to teach language, but must think about the types of language students need to learn in order to communicate effectively via computer. The main advantage of new technology is that they can be used to help prepare students for the kinds of international and cross-cultural communication that are increasingly required for success in academic, vocational, or personal life. Educational technology, especially computers and computer-related peripherals, have grown tremendously and have permeated all areas of life.

2.10.2 Constraints in Using Technology for Language Teaching in India

1. To begin with, teachers face difficulty in integrating technology with their regular classroom teaching. The language curriculum designed for science and humanities courses in arts and science colleges does not accommodate the use of technology as a part of the syllabus. The examination focuses mainly on testing students' content knowledge and hence teachers give utmost importance to the completion of the prescribed syllabus within the stipulated time.

2. Similarly, large classrooms are a serious issue that teachers often face. It is considered a Herculean task to orient students to use technological tools. Furthermore, as a large number of students exhibit below average proficiency in using language skills at their entry to colleges they need to be given individual attention in the classroom. Paying individual attention through technology is not considered to be an attainable goal.

3. The foundation English that students learn in the above mentioned courses is hardly perceived to have any relevance to their employment and this curtails the interest of the students to use technology for language learning purposes.

4. Language labs exist neither at the secondary level nor at the undergraduate level in the schools and colleges in India. If they exist in some colleges they are hardly used by the teacher as well as by the students.

5. Unfortunately, most teachers today do not have sufficient technological training to guide their students exploring computer and its assisted language learning programs. Therefore, the benefits of computer technology for those students who are not familiar with computer are inexistent.
2.10.3 Role of Indian Government in Promoting Use of Technology in Education

India has seen a tremendous surge in the services sector over the past two decades powered by a large talent pool in the country. With over 1.25 million government and aided schools, 400 universities and 20,000 higher education colleges, India has one of the largest education systems in the world. The government has allocated approximately INR 300 billion or 0.7% of the GDP for higher education.

For India to emerge as a knowledge super power of the world in the shortest possible time it is imperative to convert the demographic advantage into knowledge powerhouse by nurturing and honing the working population into knowledge or knowledge enabled working population. Human Resource Development would certainly be the key for it to happen (Mission Document, 2009).

Realizing the importance of ICT, the Task Force on Human Resource Development in Information Technology was set up under the aegis of the Ministry for Human Resource Development in order to enhance the reach and quality of education in the country. India is trying to actively promote the use of information and communication technologies (ICTs) in education in the formal education sector today. Following are the highlights of some of the projects undertaken by the government of India with the support of a governmental or a non-governmental agency.

The National Programme on Technology Enhanced Learning (NPTEL)

NPTEL, a project funded by the Ministry of Human Resource Development (MHRD), was first conceived in 1999 to pave the way for introducing multimedia and web technology to enhance learning of basic science and engineering concepts. Significant infrastructure has been set up earlier for production of video-based teaching material by the Indian Institutes of Technology (IIT) and Technical Teacher Training Institutes (TTTI). In the first phase of the NPTEL project (June 2003-June 2007), seven IITs and the Indian Institute of Science (IISc) worked together to develop web and video based material for basic undergraduate science and engineering courses in order to enhance the reach and quality of technical education in the country. The broad aim of the project NPTEL is to facilitate the competitiveness of Indian industry in the global markets through improving the quality and reach of engineering education. The operational objective of NPTEL is to make high quality learning material available to students of engineering institutions across the country by exploiting the advances in information and communication
technology. The target group for this project consists of students and faculty of institutions offering undergraduate engineering programmes in India.

**Education Development Center (EDC)**

EDC in collaboration with USAID (an American based organization) has successfully completed their programme (September 2002 - September 2008) “Technology and Tools for Teaching and Training (T4)” which employs communications technology to educate children from relatively impoverished backgrounds studying in public schools in the states of Karnataka, Chhattisgarh, Madhya Pradesh, Jharkhand and Bihar. T4 currently reaches more than 22 million children.

The schools in these states usually have high dropout rates. Using various technology tools combined with capacity building for effective teaching, monitoring and community involvement, EDC and its allies were able to:

1. Develop and deliver high-quality, interactive technology driven programmes to enhance children’s learning experience, increase in attendance and improving learning outcomes
2. Impart training to teachers to use these interactive tools in their classrooms
3. Create an accessible digital library that makes digital learning materials in several Indian languages more widely available to teachers throughout the country
4. Leverage resources and ownership from state governments and build their capacity to implement and monitor such programs effectively.

This programme’s success in improving educational quality and reaching vulnerable populations has generated greater demand for technology based programs in the classroom in target areas, and has also generated interest among other state governments. T4 produces and implements programs in response to state government demand and need for various levels, in various subjects and using various languages as the medium of instruction.

**SAKSHAT- One Stop Education Portal**

The Department of Higher Education had launched a pilot project called 'SAKSHAT' - One Stop Education Portal on October 30, 2006 by His Excellency, the then President of India to facilitate life long learning for students, teachers and those in employment or in pursuit of knowledge free of cost to them. The project SAKSHAT was massively successful in providing various services to the student
community. The vision is to scale up this pilot project ‘SAKSHAT’ to cater to the learning needs of more than 50 crore people through a proposed scheme of ‘National Mission in Education through Information and Communication Technology (ICT).

The National Mission on Education through Information and Communication Technology (ICT)

The success of SAKSHAT encouraged the government to launch National Mission on Education through Information and Communication Technology in February 2009. This initiative will connect 20,000 educational institutions with internet and will promote the use of modern technology in higher education in a more widespread manner.

The National Mission on Education through Information and Communication Technology has, under its aegis, created Virtual Labs, Open Source and Access Tools, Virtual Conference Tools, Talk to Teacher programmes. Union Minister for Human Resource Development Kapil Sibal (2010) said that the Mission is encouraging development of low cost access-cum-computing devices to facilitate participation of masses in the e-learning process. It is obvious that emphasis on ICT is a crying need as it acts as a multiplier for capacity building efforts of educational institutions without compromising the quality.

The objectives of the National Mission on Education through ICT shall include (a) the development of knowledge modules having the right content to take care of the aspirations and to address to the personalized needs of the learners; (b) research in the field of pedagogy for development of efficient learning modules for disparate groups of learners; (c) standardization and quality assurance of contents to make them world class; (d) building connectivity and knowledge network among and within institutions of higher learning in the country with a view of achieving critical mass of researchers in any given field; (e) availability of e-knowledge contents, free of cost to Indians; (f) spreading digital literacy for teacher empowerment; (g) experimentation and field trial in the area of performance optimization of low cost devices for use of ICT in education; (h) providing support for the creation of virtual technological universities; (i) identification and nurturing of talent; (j) certification of competencies of the human resources acquired either through formal or non-formal means and the evolution of a legal framework for it; and (k) developing and maintaining the database with the profiles of our human resources.
The Mission would also endeavour to blend soft skills with knowledge modules and inculcate a discipline of holistic thinking in the learners so as to make them job creators rather than job seekers.

Besides the above mentioned efforts of the government, Table 2.2 shows the list of the Digital ICT applications in India in the last decade.

**Table 2.3** Digital ICT Applications in India (source: UNESCO Meta-survey on the Use of Technologies in Education 2003-04)

<table>
<thead>
<tr>
<th>Project and Its partners</th>
<th>Objectives</th>
<th>Outcomes</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNDP and IIT-Roorkee</td>
<td>E-services Establishment of 1,000 Suchna Kutirs for information access.</td>
<td>Running smoothly</td>
<td><a href="mailto:picaa@iitr.ernet.in">picaa@iitr.ernet.in</a></td>
</tr>
<tr>
<td>COLLIT</td>
<td>sustainable use of ICT in literacy education</td>
<td>Completed successfully</td>
<td><a href="http://www.cemca.org">www.cemca.org</a> <a href="http://www.col.org">www.col.org</a></td>
</tr>
<tr>
<td>TARAHaat</td>
<td>Literacy through ICTs; quality education at affordable prices right at the learner’s doorstep; TARAHaat learners range from 8-35 years of age, school and college students, unemployed youth, professionals and</td>
<td>Has helped tremendously in learning, creating and maintaining interest</td>
<td><a href="http://tarahaat.com">http://tarahaat.com</a></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Organization</th>
<th>Activity</th>
<th>Outcome</th>
<th>Website/Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Information Technology</td>
<td>Reaching the unreached</td>
<td>ICT awareness, training, cadre-building, human capacity-building</td>
<td><a href="http://www.cic.nic.in">www.cic.nic.in</a>; <a href="mailto:cic@cic.nic.in">cic@cic.nic.in</a></td>
</tr>
<tr>
<td>Operation Headstart A joint UN-Government of India collaboration</td>
<td>Imparting quality teacher training through Headstart, including computer-based interactive training</td>
<td>The programme was helpful to develop computer-enabled self-learning approach</td>
<td><a href="http://www.education.nic.in/">www.education.nic.in/</a></td>
</tr>
<tr>
<td>Tata Literacy, Tata group and Tata Consultancy Services</td>
<td>Computer-Based Functional Literacy programme (CBFL) To increase the productivity of services sector</td>
<td>Running Successfully</td>
<td><a href="http://tataliteracy.com/">http://tataliteracy.com/</a></td>
</tr>
<tr>
<td>Mission 10X by Wipro</td>
<td>To increase the employability of passing out engineers 10 times by changing the way they are being taught</td>
<td>Successfully trained 10,000 teachers of Engg. colleges in years time (September 2007 to September 2010)</td>
<td><a href="http://www.mission10x.com">www.mission10x.com</a></td>
</tr>
</tbody>
</table>
2.10.4 Organizations Promoting Use of TELL

Even though teachers may have mastered the traditional pedagogies in teaching their students, the rapidly changing world dictates that these are no longer sufficient. The teachers must acquire new knowledge and skills themselves before they can prepare their students to meet the demands and challenges of the 21st century. Opportunities to do so are increasing through both formal and non-formal channels. Following is the description of few of these:

**India CALL**

India CALL (The Indian Association of Computer-Assisted Language Learning) is an affiliate of Asia CALL. It promotes the use of technology-enhanced teaching and learning of languages, particularly that of English in India. It also aims to bring educators and professionals together from India's diverse cultural and linguistic heritage and emphasizes the interconnected and holistic nature of Indian education. Its objectives include:

**Objectives**

1. Promotion of interaction and integration with educational, instructional and learning technology.
2. Development and dissemination of technology-based educational innovation mainly in English language teaching and learning in India.
3. Development of linkages of the resources provided by international and national CALL organizations, research bodies, universities and the educational needs of India.
4. Establishment of interaction between educators and government bodies, NGOs, and semi-government organizations and offering consultancy.

**Vision**

1. Raising awareness about TELL (Technology-Enhanced Language Learning) through state level and regional level seminars and workshops.
2. Publishing three e-bulletins per year with focus on activity reports, articles, new web tools or, programmes, e-platforms and innovative practices.
3. Sending peer-reviewed publications submissions of India CALL members' to Asia CALL Online journal for publication.
4. Developing state-level action groups, conducting educational programmes, networking with the educators and professionals and reporting to India CALL executive.
5. Maintaining constructive linkages between India CALL and associations promoting technology-enabled education through frequent communications and publications.

**Shiksha India**

Shiksha India, a non-profit organization initiated by the Confederation of Indian Industry (CII), works with schools and institutions across India to help promote the use of technology for making teaching-learning more effective. (http://www.shikshaindia.org/). Shiksha collaborated with the Ministry of Human Resource Development (MHRD) in CLASS (Computer Literacy and Studies in Schools) scheme. This scheme has 19 states for their respective IT educational initiatives. Shiksha acted as the monitoring and evaluation partner for the CLASS, in the initial years. The Vidya Vahini project of the Ministry of Information Technology gave Shiksha a platform to deliver education content to government schools. Shiksha India has several projects which offer a broad range of workshops to focus on content and coaching, for example:

**Project E-learning through Open Source:** A range of open source tools (e.g., Learning Management System, Animation Tools, and Image Editing Tool) are introduced in the schools to start them off on the e-learning platform. Regular workshops are conducted for teachers to empower them with knowledge and give them hands-on practice to make them comfortable in using the tools.

**Thin Client Solution:** This project delivers an effective technology solution for low-end, old/obsolete machines owned by the institutions. The project provides ready-made solutions to establish a Unix-based client-server setup where a host of different applications can be installed on the server and various diskless nodes (clients) can access it. A large number of open source applications and tools can be installed easily on the thin-client. This solution is very useful for institutions that use donated computers and have supporting software/applications to run.

**Web-Enabled Education:** Teachers are exposed to some of the latest web technology like blogs and wikis. These technologies help teachers understand the potential of the World Wide Web as a teaching-learning tool. One day workshops familiarize the teachers with using blogs and wikis, help them to use the Shiksha portal effectively, and maximize the web as a tool for their teaching-learning processes.
ELTAI (English Language Teachers’ Association of India)

It is the largest network of teachers of English in India for professional development and an associate of the International Association of Teachers of English as a Foreign Language (IATEFL).

ELTAI hosts annual conferences and regional conferences on specific areas relevant to the ELT including TELL. It brings out a bimonthly journal "The Journal of English Language Teaching", an official organ of the association.

Objectives:

- To provide a forum for teachers of English to meet periodically and discuss problems relating to the teaching of English in India.
- To help teachers interact with educational administrators on matters relating to the teaching of English.
- To disseminate information in the ELT field among teachers of English.
- To undertake innovative projects aimed at the improvement of learners’ proficiency in English.
- To promote professional solidarity among teachers of English at primary, secondary and university levels.
- To promote professional excellence among its members in all possible ways.

2.10.5 Relevance of Present Study in Indian Context

On the basis of a review of literature on TELL and extensive discussions with teachers and educators in India, it becomes clear that there is relatively little general information on the role of technology in English language teaching. The number of systematic, well-designed empirical evaluative studies of the effects of technology uses in language learning is hardly found in the scholarly literature. In India, the use of technology for language teaching has not been explored significantly. The present study is an experimental based effort to address the lacuna.

In response to the researcher’s a query about the use of technology to improve the communication skills of Engineering students in India on ELTAI Discussion forum (eltai_computertechnologysig@yahooogroups.co.in ) dated Sunday, 17 January, 2010, Dr. S. Rajagopalan, President ELTAI said:

So far as I know no worthwhile research studies, particularly of the experimental type have been undertaken in our country (India) in the
use of technology in ELT. Gurleen would be making a signal contribution if she does.

So, with a limited body of research on the use of technology-enhanced language activities in the classroom in India, the researcher embraced the opportunity to experiment and observe students’ performance and attitude towards it.