Chapter 2

Review of the Related Literature
2.1. Overview

This chapter, in a stepwise manner, will explore the related literature, theories and researches on the area of Information and Communication Technologies in the field of English Language teaching in the world and India. To justify the research importance, the researcher will explore every topic related to the use of ICT, history, definitions, policies, advantages, disadvantages, barriers and obstacles, types and varieties in ELT and will come down to the theories of ICT adoption among English teachers to justify the basics for the research hypotheses and problems.

2.2. English Language Teaching Importance

To evolve a language which can become the lingua franca across nations has been many people's ambition. The most important factor which can popularize a certain language at the universal level is determined not by the comfort and easiness people enjoy using a particular language but by the power a country enjoys where the language starts to develop (Crystal, 1997). Common people think that easiness of the language is the reason why a language is chosen by a society; but, actually, the story is different. For example in Alexander the great era the common language among most part of the world's population was Greek because of the power of sword or during the Arab rule the official language of most of the countries was Arabic. However, the language being used by a large number of people throughout the world is English

According to Crystal (1997) in case of English the reason for spreading this language throughout the world has been initially the colonization and then the technological development of English speaking countries. The United States of America and the United Kingdom have been among those countries which have led many countries in technology. In the context of the language spreading in countries such as India, the popularity of English has been fluctuating, going down in the times of hate and rising to the top in the times of globalization.

There is a debate where some claim that the English language creates a social divide between those who can speak it and those who cannot, but many also believe that it is the only way to raise the living standards of the lower class by providing them the opportunities of speaking the English language.
Globalization and technological advancement have strikingly changed our ways of learning and teaching English as a lingua franca in the 21st century (Block & Cameron, 2002; Burns & Coffin, 2001; Warschauer, 2000). The fast growing information technology and the global network society have stimulated us to re-conceptualize international language use and foreign language learning and teaching (Crystal, 2003; Kramsch & Thorne, 2002). Globalization, defined by Appadurai (2001) as a multi-way process involving “flows of ideas, ideologies, people, goods, images, messages, technologies and techniques”, has maximized the spread of English since nations feel the need to utilize English as a lingua franca to develop their international trade, business and economics (Kachru & Smith, 2009). In Zughoul’s (2003) view, while globalization has eased the spread of the English language, the English language has also functioned as a tool for international communication to contribute to the globalization process.

In order to unite people throughout the world, one of the tools we need is the tool of linguistic communication; i.e. we need a common language, which is preferably in active use in a society with advanced scientific temperament and technological knowledge. As Crystal (2003) states, globalization has also initiated the age of information technology requiring the deployment of the Internet whose main language is English. Markee (2000) indicates that the spread of information technology worldwide is strongly linked with the diffusion of the English language. To put it differently, it can be stated that while English has contributed to the proliferation of this technology, information technology has also boosted the diffusion of English through Internet communication. Besides, since a number of studies in scientific and technological areas have been conducted in English, people require having a basic knowledge of English to conduct research (Kachru & Smith, 2009). According to Zhu (2003), people need knowledge of English to obtain information which has promoted the status of English to becoming a lingua franca and that in turn has influenced English Language Teaching in the world.

2.2.1. The Importance of English Learning in India

"I would have English as an associate, additional language, which can be used not because of facilities, but because I do not wish the people of non-Hindi areas to feel that certain doors of advance are closed to them. So, I would have it as an alternative language as long as people of India require it".

Jawaharlal Nehru
Although English is not an indigenous language, it remains an ‘Associate Language’ in India, alongside Hindi, the Official Language of the Union of India and twenty two National Languages’. According to http://en.wikipedia.org/wiki/Languages_of_India the Government of India has given 22 "languages of the 8th Schedule" the status of official language. Teaching English language in such a multilingual country is really a challenging task. The demand of English is increasing day by day as it has been titled as 'International language'; other than this, it has a unique place in India. Amidst the 22 regional languages and thousands of dialects it is enjoying the status of the most popular elite class language. English has not only continued to flourish in the educational and official network of India but has also become one of the official languages of the nation and thus continues to enjoy the patronage of the Indian elite.

Moving from being a much-hated foreign language, at least among certain communities, because of its association with the British colonizers, English, now has taken up the role of a second language and a lingua franca for a large number of people (Gupta, 2005; Baldridge, 2002). It is even considered a first language for some echelons of Indian society (Gupta, 2005) and a “second first language” for some others (McArthur, 2000). English is now welcomed by many Indian people. It is a major tool for acquiring international knowledge and understanding. It is one of the most important means of success in the job market for those who specialize in English. The number of the English speakers in India is on the rise. Although there are no hard statistics, (McArthur, 2000) it is estimated that a quarter of the Indian population use this language.

Accordingly, English is performing more functions in the Indian society. It is constantly taking on more roles in public and personal domains including the instrumental, the regulative, the interpersonal and the innovative, self-expressive functions (Kachru, as sited in Hohenthal, 2003)

In other words, English has been progressively gaining ground over the years. As Pandit (2010) states, there is a tremendous need for English today in India as English lies at the “heart of globalization” (p.56). Many teachers, students coming from the rural and underdeveloped parts of the country and the state find it very difficult to access information on how to teach and learn English better. Regarded as a 'neutral' language for wider communication and the language of technologies, modernity and development English is also a social status symbol. Parents see English medium schools as a way of pushing their children
up the social scale. It is however ironical that even though English enjoys a high status in the wake of globalization, its teaching and learning in the educational institutions is rather inadequate and unproductive. Current methods of treating the learning of English in the classroom however ‘communicatively’ they may be oriented are no longer sustainable (Aich, 2010).

As Sindkhedkar (2012) explains, the objective of teaching English in India should not be ‘producing bookworms’ or ‘linguistic robots’. What is important is to motivate the students, by creating awareness amongst them regarding the importance of English and then gradually helping the students to attain their goal. The basic objective should thus be, to make the students independent. It has rightly been said, "If you give an individual a fish you feed him for a day, but, if you teach him to fish you feed him for life." It is up to the teacher to make the student realize that by gaining competence in English, he will come to hold the master-key to success in the contemporary world.

India has roughly three kinds of school boards which regulate curriculum, syllabi, and examinations. They are (1) state government boards, in which an overwhelming number of Indian children are enrolled, (2) the central board of secondary Education (CBSE) and (3) the council for the Indian School Certificate Examination (CISCE).

Schools affiliated to state government boards are commonly called “government schools”. In most schools in the last two types of schools, many of which call themselves “public schools” though are actually private, children are taught almost all the subjects in English. Such private schools are also called “English-medium schools” where children are immersed in English not only in classes but also between classes.

2.3. Background of Technologies in ELT (English Language Teaching)

Technology and language teaching have walked hand in hand for a long time and technology has contributed as a teaching tool in the language and second language classroom. Long ago English language learning was perceived as a mental activity in which the language was seen as mathematical and where the learners had to memorize some rules deductively. There were no other aids except paper and pen and the blackboards through which the learners practiced the language. After the advent of Audio Lingual Method (ALM) in language teaching the teachers benefited from the presence of tapes and the recorder and
player for repeating drills because they believed in mimicry and repetition in learning. Gradually, after bringing together the cognitive psychology and the language theories, the English teaching profession entered a new era. Around the same time the invention of PCs in the 1970s helped the theorists to complete their theories. After some time the humanistic and social theorists stated that though the human mind is like a computer and can store, analyze and process information, it is not a machine and does not function like one.

Cakir (2006) assumes that technologies are a part of society, thus language teachers cannot be far away from using them since they have a prior aim of addressing social needs. Over the last few decades, foreign language teaching has welcomed many rapid changes. The most apparent change is the traditional grammar-based instruction leaving its place to promote communicative ability of learners. Communicative Approach spread roots with its emphasis on the actual use of language, student engagement, interaction and contextualized discourse (Warschauer, 2000).

Obviously, information and communication technology (ICT) has changed the language learning and literacy acquisition environment as well as the dynamics of language learning settings. The paradigm shift of computer-assisted language learning (CALL) from the cognitive approach to the socio-cognitive paradigm and the use of computer-mediated communication (CMC), make language learning settings more socially interactive, collaborative, communicative and student-centered (Kern & Warschauer, 2000).

The principal paradigm in second language education has shifted from positivism to post-positivism, from behaviorist psychology and structural approaches to socio cognitive psychology and integrationists approaches of language (Jacobs & Farrell, 2001). The researchers summarize the major features of this shift as follows:

1. Moving from teacher-centered instruction to learner-centered instruction.
3. Focusing greater attention on diversity among learners and considering individual differences.
4. Connecting school with the world beyond as a means of promoting holistic learning.
5. Helping students to understand the purpose of learning and develop their own purposes.
6. A whole-to-part orientation rather than a part-to-whole approach.
7. Focusing on the importance of meaning rather than drills and other types of rote-learning (pp. 1-3).

The changes listed above have led to changes in the methods of second language teaching and learning accordingly. As a result of this substantial change in language teaching, teachers experienced the need for extra aids to provide learners with the desired learning environments and foster exposition to authenticity. In the meantime, the emergence of new technological tools in foreign language teaching built teachers’ hopes up to fulfill the requirements of communicative settings.

Language teaching and the use of technology in classroom have a long lasting relationship. Technology has been used not only for the development of the individual language skills, like reading, writing, listening and speaking but also for wider communicative purposes (Ybarra & Green, 2003).

2.3.1 ICTs in ELT

The term IT has recently been expanded to Information and Communication Technology (ICT) in recognition of the growing significance of communications technology to access the Internet, send email to other institutions, video conference, and so on. ICT therefore combines telecommunications, computing and broadcasting and covers any product that will store, retrieve, manipulate, transmit or receive information electronically, including telephones, faxes, computers and televisions.

ICTs can expand access to language programmes and improve the quality of teaching and learning in general. The World Wide Web (WWW) expands the classroom context and provides access to current, up-to-date materials from the country or countries of the target language, offering learners and teachers a plethora of materials in different modes, bringing the foreign culture and language to life and making it more tangible. In environments where the teaching staff are not able to fulfill all requirements of the curriculum with regard to the skills and knowledge required, ready-made, high quality audio-visual and print programmes may provide sufficient backup for them to offer appropriate courses without having to engage in time-consuming and expensive (re)training. Andreas Lund’s article points out that there is a strong tradition of Computer Assisted Language Learning (CALL) addressing materials, software packages and technologies that aid and promote cognitive development and linguistic performance, but emphasizes that we must pay more attention to how technologies
are embedded in larger social and cultural practices for them to be truly effective. The professional isolation of teachers may well be relegated to the history books, if they learn how to use the potential for networking, which ICTs offer.

Previously the field of ELT was indebted to some very simple technologies like blackboards, whiteboards and respectively TVs, Radio and the like. But, under the influence of newer technologies in the field of education, English teachers have benefited from the presence of IT technologies like WWW, videos, video conferencing, distance learning and other technologies are not limited in numbers.

<table>
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<tr>
<th>Instructional strategy</th>
<th>Reading</th>
<th>Seeing</th>
<th>Listening</th>
<th>Saying</th>
<th>Doing</th>
<th>Further examples of appropriate technology</th>
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<tr>
<td>Presentation</td>
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<td>Video, TV</td>
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<td>Demonstration</td>
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<td>PowerPoint, overhead projector</td>
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<td>Discussion</td>
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<td>Group inquiry</td>
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<td>Internet, LCD projector</td>
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<td>Problem solving</td>
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<td>Online tools, blogs, wiki, podcasts</td>
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<td>Cooperative learning</td>
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<td>Social networks, Teachers.com</td>
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<td>Instructional games</td>
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<td>Quiz, HotPotatoes</td>
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<td>Simulation</td>
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<td>Sims, SecondLife</td>
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Recesso and Orrill (2008) depicted different appropriate technologies used by English teachers in different instructional strategies. Technologies like Video, TV, Email, social networks, chats and many more are among them which are used for discussion, cooperative learning, problem solving and so forth. They are all being used in different activities like reading, seeing, listening, saying and doing.

2.3.2. The changing methodology: the new roles of language teachers

In traditional language teaching methodologies, teachers teach facts from books. Teachers are seen as the main source of knowledge for the students. The new teaching
methodologies focus on the teaching of strategies of deciding what information is needed. The teachers’ roles are that of guides or facilitators to help learners to be skilled in selecting, accessing, evaluating, organizing and storing information. Tapscott (1998) demonstrated a paradigm to show the shift in a teachers’ role as:

These strategies are important to manage vast amounts of information. The teachers also need to manage time and courses and construct knowledge autonomously in virtual learning communities. Besides performing this new role, the teacher is also the motivator of the whole learning process, and can facilitate intellectual group discussion. The teacher must reflect critically on the context of learning (mediated by technology), the methods (different from those used in the traditional classroom), the students, the teacher’s own computer literacy (hardware, software and technical support), and other matters pertaining to digital literature. Learning through technology has many advantages. The Internet provides current and up-to-date data. It stores vast amount of information that can be retrieved quickly and easily. For language learning purposes, it provides text in authentic language, unlike the contrived language usually found in books. Technology enables the teacher to transmit greater amount of information to a larger number of students in a shorter time. Teachers have to play their part to facilitate a learning environment that will open learners’ minds to new possibilities.
As Zepp (2005) points out, teachers should relate the goals of education with effective use of ICT. In other words, teachers must be aware of the impact of technology on education and the required changes to enhance their teaching. They need to adjust their teaching process to suit the new ICT environment. The teacher's role in an ICT environment is that of a facilitator instead of a purveyor of knowledge. This transformation from the old to the new method in delivering knowledge is a global phenomenon. The modern teacher in the ICT era is no longer described as 'a sage on the stage' but a 'guide by the side'. Teaching within such settings can be a transforming experience as it opens new windows to the world and creates a lifetime of opportunities. In reference to the ICT, it implies changes in the teacher's role, i.e. the teacher playing not just as a teacher but a monitor of participation and a practitioner of research, all of which possibilities are accelerated by the technological resources. Queiroz (2003) insists lecturers or teachers need to go through a continuous process of competency improvement and meet the demands of lifelong learning for their professional development. Without this, teachers may be complacent and merely duplicate their practices electronically. If this happens, learners would not benefit from the technological advancements happening around them. Therefore, ICT training for teachers should focus merely on use of technology per se. Berge (1996) and Warschauer, & Healey, (1998) listed several recommendations for teachers: pedagogical (use of discursive resources to facilitate learning), social (incentive of human relations among members of the group), managerial (establishment of general procedures for discussion and development of activities) and technical (transparency of technology for an adequate relation between the system, the software and the interface selected). As for teachers' roles, Holec, (1981) lists a few considerations that teachers and lecturers have to keep in mind to optimize the use of IT. Tools such as chat rooms, e-mails and web forums need to be designed to enhance interpersonal and social skills. As the teachers' roles change, they may ensure a good learning environment at all times. A good learning environment should not neglect human needs of socializing and interacting with one another. A good learning environment needs to co-exist with a good teaching environment. This can be achieved if the teachers have a positive attitude towards ICT. Instructors, teaching the use of electronic mode must have a positive attitude to motivate, facilitate and guide learners (Pramela 2006). Loveless & Ellis (2001) explains that the impact of technology on pedagogy has created major differences in terms of teacher roles, teaching activities, learning activities and learner roles. The changes have led to a redefinition of learning and the learning environment. Naidoo (2003) suggests that ICT can also be used to support teachers who lack adequate skills and content knowledge, thus contributing to
improving the quality of learning. Teachers who are hesitant to sit in classrooms or feel they are too old for the formal education system would find the interactive and asynchronous nature of ICT helpful for their professional development. Yet ICT is not always used. Lee (2000) lists some reasons why ICT is not used in classrooms. According to him, the limitations of using ICTs as an educational tool are: financial barriers, availability of computer hardware and software, lack of technical and theoretical knowledge and reluctance to accept technology. A closer look at research shows that technology is most effective when teachers receive training in its instructional applications. When a training programme is used to supplement a well thought-out programme of classroom instruction, it is expected to include appropriate amount of learner control, helpful feedback and sound pedagogical design. Pramela (2006) emphasizes on the importance of feedback in teaching and learning in the electronic media because helpful feedback given to learners means creating social presence which is crucial in the virtual mode of learning. Teachers must also be prepared to go through a continuous learning process to improve teaching efficiency. This is because 'technology cannot replace good teaching but it can enhance it'. In the online process, teaching concerns the relationship between the teacher-student and student-knowledge. The student is guided to learn to be more autonomous for his or her own learning. This mode of learning leads the teacher to find educational practices that stimulate this type of online learning.

2.3.3. Position of ICT

Generally, a definitive line has been drawn to define whether ICT is a separate subject to learn or a supportive pedagogical tool across curriculum. However, when ICT is used in an integrated way across curriculum, a careful thought needs to be given to reveal the subtlety in the role of ICT. There are two main aspects where ICT is used in English teaching and learning: ICT is used as a tool for teaching English; English is presented in an ICT environment.

In the former aspect, English teachers and learners are aware that they use ICT, particularly computers and network communication, to support teaching and learning. A wide range of ICT applications are used as a tool. For example, teachers and learners use a word processor to enable correcting and redrafting of an essay; they use PPT, Flash and other software to prepare lectures or presentations; teachers and learners use BBS, blog and computer conference to develop cross-cultural understanding. Under this condition, a
proportion of attention is paid to ICT itself and the related knowledge. ICT awareness becomes a psychological burden and, in turn, leads teachers and students to feel inadequate in ICT knowledge, causing anxiety.

In the latter aspect, ICT facilities become the environment in which English language materials and cross-cultural knowledge are presented. Teachers and learners don’t necessarily consider what software or hardware they need to process the English language materials or how to present these materials using ICT. They only focus on English language and culture. Because the materials are presented in real contexts provided through ICT facilities, teachers and learners feel at ease and more interested in teaching and learning them. For example, when learners write e-mails to native speakers, read English newspapers online or watch videos, these English materials become their only focus and ICT facilities become pedagogical and environmental agents. ICT as English teaching environment imposes little psychological burden on both teachers and learners.

As a matrix designed and produced by IFIP in 2000 for a purpose to help determine the stage of ICT development suggests: “To move to the next phase, the school chooses to implement an ICT-curriculum that increases the use of ICT in various subject areas with specific tools and software” (UNESCO/IFIP, 2000). This has guided the schools to integrate ICT in various subjects at the completion of ICT curriculum. When both English teachers and learners become adequately proficient in ICT in terms of skills and knowledge, and there is an easy access to computers and intra and inter-networks on campus, their variable skills and attitudes as major factors limiting appropriate use of ICT in English teaching and learning will gradually diminish and finally be completely removed.

In most universities, ICT-integrated English teaching is at a point between ICT-as-a-tool phase and ICT as an-environment phase. English teachers and learners are more or less distracted by their ICT skills and knowledge. But it will become a general trend that ICT will evolve from a tool for teaching and learning into a pedagogical agent in itself through integration.

Technologies have become powerful tools to communicate with people around the globe. They are faster, easier and more convenient to use than the older media. Specifically, the roles of computers in language education are increasing worldwide. This is because
learners of language, with the use of the Internet, can simultaneously communicate with other learners or speakers of the target language all over the world. According to Warschauer (1996), technology and the Internet play a vital role in teaching the second and foreign language as an aid to the teacher. As is evident, a large amount of foreign language materials available nowadays e.g., textbooks, programme courses and dictionaries are included with and supplemented by other media such as CDs, videos, which require computer and technologies.

2.4. ICT-Integrated ELT Policies in India

The dynamism and fluidity of the position of English Language in India has entailed a change in language teaching methods. Language classrooms are bidding farewell to age-old teaching methods like grammar translation and audio-lingual methods. Equipped language labs are making their way in to schools and computer-assisted instructions, which came to India around 1985 (Gupta, 2006), are coming to the aid of the language teachers.

Over the years integration of ICT across the curriculum to ensure enhancement of teaching efficiency became a common trend for Educational policy makers. Hence, the government of India through the ministry of education encouraged the establishment of technology in various institutes. Such a step entails the teachers changing their roles as traditional teachers and adapting to the situation. Sarva Shiksha Abhiyan (SSA), GyanDarshan, Gyan Vani and EDUSAT are among the most significant programmes through which a teacher is obliged to follow the policy. By 2014 the teachers are expected to reach the state in where they can manage a class using different technologies.

As Bhushan (2011) to support the technology in the region states:

“21st century is witnessing tremendous impact of technology on educational activities. The whole process of teaching and learning has been digitalized. Because of technology, language teaching has undergone a complete transformation. May it be Computer Assisted Language Learning (CALL), Language Laboratories, use of CDs & Cassettes, Internet etc, a modern learner has all the technology to learn not only English but any foreign language provided he/she has the money to buy this. But it is very painful that a rural learner is still in those dark ages and is completely marginalized as far as technological exposure is concerned. When even chalk, duster and blackboard are missing, expecting technology will be asking for sky. With this I am not saying that
English language can't be taught without technology. Nobody can undermine the value and effectiveness of human interaction/interface and moreover we all have learnt English without using technology. But that is no excuse to deprive rural learners of the basic technological devices like TV, Tape recorders, Computer etc. I would like to bring in EDUSAT, which is an educational satellite launched across the country to provide qualitative and uniform education particularly communication skills to rural students or students residing in difficult areas. If I am correct, except the State of Kerala, EDUSAT has failed in its objectives; at least in a State like Haryana; in fact it has been withdrawn. The equipment worth Crores of rupees is gathering dust in various schools/colleges. The reasons for its failure lie with the administrators, schools, and teachers but certainly not with the innocent students. Now the question is what should an English teacher do in such an unsupportive situation? The only solution left is face-to-face interaction in form of debates, discussions etc. Using a traditional cassette player could do wonders as far as listening and speaking skills are concerned. Having said that technology cannot substitute a teacher, it can definitely act like an effective teaching aide making the whole process of language teaching and learning faster and easier."(p.48) Further, he discussed various programmes of the government commenting on them: says Bhushan (2011).

2.4.1. ICT promoting organizations in India

Institutes both private and those affiliated to various governments, are helping students and teachers to arrive at desirable levels of achievement in use of technology. There are some companies and institutions throughout the country working towards these goals.

Edu comp smart class is the first of its kind which has dramatically improved learning outcomes in private schools. Powered by India’s largest Digital Content library of curriculum-mapped, multimedia rich, 3D content; smart class is today a market leader in this domain. The number of Edu comp smart class enabled schools grows at almost ten schools a day.

In the last eight years, over 80 million smart class sessions have been held in schools. This has given Edu comp some invaluable insights into the real challenges that teachers encounter and their ever growing expectations from the programme. These insights have helped to understand the pain areas to develop a whole new school transformation system.
Educomp has now flagged off the next generation of smart class. The smart class Class Transformation System (CTS) and the smart class Digital Teaching System (or DTS) are the biggest and most innovative initiatives in the space of digital classroom content and digital classroom hardware respectively. The DTS is the world’s first fully integrated one-switch Digital Interactive Teaching system, specially designed to work in high ambient temperatures and dusty conditions prevalent in most Indian classrooms. The CTS broadens the choice of teaching tools available with the teacher beyond invaluable rich 3D Animations to bring abstract concepts to life. The arsenal of solutions now available for teachers also includes tools like ready to use Multiple Choice Questions (MCQs), Virtual Laboratory of Simulations, Work Sheets, Mind maps, Teaching Ideas, Real Life Applications, Topic Synopsis, Web links and Diagram Maker. The CTS poised as the next generation of Educomp smartclass in schools is the revolutionary leap forward in enabling excellence in schools. 

Pearson Education Services Pvt. Ltd. provides end-to-end education solutions in the K-12 segment that employ technological innovations and leverage Pearson's global resources, expertise, content and reach. Since its inception in 2000, it has emerged as the brand of choice for students/parents, teachers, schools and colleges, globally, due to its range of innovative offerings, which include school management services, technology-enabled classroom solutions, self-study products, test prep and tuitions, and global online tutoring. It has been the recipient of many prestigious awards including the President Award for IT, Manthan Award for Best E-Content Development and the Marico Innovation Award.

IndiaCALL – Language Learning Technology

IndiaCALL (The India Association of Computer-Assisted Language Learning) is an affiliate of AsiaCALL, associate of International Association of Teachers of English as a Foreign Language (IATEFL) and regional group of International Association for Language Learning Technology (IALLT). 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. The objective of the organization is:
• Promotion of interaction and integration with educational, instructional and learning technology.

• Development and dissemination of technology-based educational innovation mainly in English language teaching and learning in India.

• Development of linkages of the resources provided by international and national CALL organizations, research bodies, universities and educational needs of India.

• Establishment of interactions between educators and government bodies, NGOs, and semi-government organizations and offering consultancy.

Vision

The IndiaCALL has the following vision:

• Raising awareness about Technology-Enhanced Language Learning (TELL) through state level and regional level seminars and workshops.

• Publishing three e-bulletins per year with focus on activity reports, articles, new web tools or, programmes, e-platforms and innovative practices.

• Sending peer-reviewed publications submissions of IndiaCALL members to AsiaCALL Online journal for publication.

• Developing state-level action groups, conducting educational programmes, networking with the educators and professionals and reporting to IndiaCALL executive.

• Maintaining constructive linkages between IndiaCALL and associations promoting technology-enabled education through frequent communications and publications.

ELTAI (English Language Teachers' Association of India)

It is the largest Network of Teachers of English in India affiliated to Associate of IATEFL, UK. It hosts annual conferences and regional conferences on specific areas relevant to the ELT and ICTS, especially.
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 and strive towards promoting professional excellence among its members in all possible ways.

Regional Institute of English as a Local ICT Support

Set amidst sylvan surroundings, the Regional Institute of English (RIE) was established in 1963 under a scheme of the Government of India to address the educational needs of Chandigarh, Jammu & Kashmir, Haryana, Himachal Pradesh and Punjab. Located in the midst of educational institutions, it offers conducive environment for learning and research. The functioning of the Institute is within the purview of the Chandigarh Administration. The Institute works in collaboration with the English and Foreign Language University (EFL-U), Hyderabad under a Government of India scheme and collaborates with state governments, CBSE, NCTE, NCERT, USEFI, British Council and RELO of American Centre, New Delhi in research projects and training programmes. Since its inception, it has been addressing teacher education needs from Primary to Undergraduate level by organizing In-service Programmes.

Vision

- To undertake research into English language teaching problems in the northern region.
- To build a cadre of trained teachers of English at primary, secondary/ senior secondary and tertiary level.
• To plan curriculum and design syllabi to meet varied requirements of learners.
• To prepare sets of print-based and electronic materials, teaching manuals, etc. to be used in the schools of the northern region.
• To provide consultancy to institutions in ICT/multimedia-based instruction in English.

2.5. Types of ICTs in ELT

As previously defined, the following picture illustrates some of the ICT tools used in ELT and accordingly we have covered some of the ICT tools for more elaboration.

![Figure 2.2: Types of ICTs in ELT](image)

- **CD ROMs**

CD ROMs are the most frequently used tools in the field of ELT and are easily available. These days even in rural areas CDs are the best option for different kinds of language skills such as listening, watching authentic movies, recording for practicing, keeping portfolio, and many other skill related things.

At present, many English teachers in many Indian schools use an English textbook that includes a CD for the pupils. Providing this type of listening material to foreign language learners to take home with them is a fairly new practice in the area of language learning and teaching. Therefore, it is important to examine the use of the CD more closely. The CD clearly has some kind of role in the process of foreign language learning and teaching as it has been added to learning materials. For instance, it increases the amount of input provided for learners. Researchers consider input to have a very important part in foreign language learning.
learning. It helps the pupils to adopt the language and it provides pupils with a model of pronunciation of the target language. The pupils have been exposed to the target language conventionally only in the classrooms. Thus the use of listening materials independently at home is a rather new subject. Indeed, previous studies have concentrated on the importance of input and importance of listening in the classroom context, but only a few studies briefly mention pupils listening to a foreign language independently at home. Therefore, it is important to examine what the role of the CD in connection with the English textbooks in foreign language learning.

- DVDs and videos

Using DVDs was similar to the use of CDs and the only difference is of the capacity by which they can store information and materials. Using videos in language classrooms is well-established. It is a natural extension of the use of projected images, such as slide projection and film strips used in some forms of the audio lingual approach. It is also a logical development of the now universal use of audio recordings, and compensates for many of the disadvantages of these, notably their lack of visual information. Classroom video use has kept pace with development in technology, notably the shift from video tape to DVDs (digital video disks). Video is also a standard component of most computer and Internet-mediated courses. And, in the form of video conferencing software, it allows learners and teachers to interact at a distance, and thus create virtual learning environment.

For classroom purposes, teachers can choose between using authentic video material, such as films, advertising material and programmes recorded off air, and using specially prepared video material for language teaching. Video recordings can be used in much the same way as audio recordings, including the use of previewing, while viewing and post viewing.

Video is also useful for focusing on the background and cultural information, which is often an aid to comprehension besides being interesting in its own right. It is also a perfect tool for recording the learners’ performance which is to be observed later. (Thornbury, 2006)
- **Microsoft Word**

Microsoft Word was initially used for the sake of mechanical writing in order to avoid writing manually. However, in the recent times, technology has developed other features like spell check, different genres for writing scientific and academic papers, as also excel and power point, etc.

- **Films**

Stempleski and Tomalin (2010) have given great attention to the techniques of using films for teaching different linguistic skills in English classes. The films and the procedures they follow are interesting enough to make learning enjoyable.

- **Computers**

Computers have been used systematically in Foreign Language Teaching and Foreign Language Learning (FLT/FLL) in universities since the 1960s, but it was the introduction of the personal computer (PC) in the late 1970s that made computers accessible to a wider audience. By the mid-1980s computers were in widespread use in American and European schools and the acronym CALL was coined. Today, experts in the field prefer to talk about ICT and FLT/FLL rather than CALL, emphasizing the important role that computers play in enabling teachers and students of languages to engage in world-wide exchanges and communication. The growing importance and globalization of ICT in FLT/FLL was reflected in the establishment in 1986 of EUROCALL and in 1998 of World CALL, European and global organizations of professional associations that aim to outreach to nations currently under-served in the area of ICT and FLT/FLL.

- **Internet**

Firstly, it is necessary to examine the pedagogical characteristics and TESOL-related features of the Internet technology. As for learners, the Internet with predesigned automated systems first offers immediate feedback (Healey, 2001). Students do not have to hunt for an answer key or wait for the teacher to return marked assignments to know if they understood the material. Secondly, student learning can be individualized with the help of the Internet. Management systems in software automate the process of letting students proceed at their own pace through material (Warschauer & Whittaker, 2002). Thirdly, multiple learning styles are more easily supported by the Internet. Often, similar material is available in text,
graphical, audio, and video format. All of these can be accessed in one place, on the computer, rather than having to bring in books, tapes, and VCRs. Another characteristic is that students are more motivated by using computers and talking live to others using state-of-the-art technology from email, chat, MUDs, MOOs, and WOOs to SMS, video conferencing (Kern, 2006), as well as of late wikis, blogs, and Web 2.0 as emerging technologies in language learning (Godwin-Jones, 2008). All of the positive aspects of technology create both intrinsic and extrinsic motivation for students. Besides, learning can be anytime and anywhere. The Internet does not close; people who have software and computers at home can work at their convenience. Last but not least, in the 21st-century, the learning style offered by the Internet prepares students for the 21st-century jobs. As more jobs require knowledge of computers and the Internet, it makes sense for schools to be using technology in teaching and learning so that students are familiar with technology when they enter the job market. As per Warschauer (2004), it was 15 years ago that the computer was considered just as a tool; it is not an end in itself but a means for learning English. English is nowadays not an end in itself; to some extent it is also regarded as a tool for being able to use computer and get information on the Internet.

Li and Hart (2002) proposed two major pedagogical promises conferred by the Internet technology on teachers. First, more authentic material is easily available for language teaching and learning provided by the computer network technology as resource retrieval. Foreign language teachers do not need to wait for two weeks or more for the latest foreign language newspapers or magazines - today's issue is online now. What learners are looking at online is the same as what native speakers are reading online. In other words, the availability of authentic material, with up-to-the-minute information (Walker, Hewer, & Davies, 2008), is seen as the most obvious pedagogical advantage of the Internet technology. The Internet is a living thing. This means that there are endless possibilities for using it. The Internet has vast resources for language teachers, which can be accessed through various, and constantly improving search tools (Felix, 2005; Healey, 2001).

- **Chats**

  Synchronous and asynchronous way of transmitting messages through the net has been the focus of language teachers since the advent of online interacting. By chatting online and engaging in Synchronous interaction the learners can easily access a live partner in order
to practice speaking, listening and to some extent reading and writing. In asynchronous interaction they will engage in reading and writing i.e. they will be engaged in written forms of the language.

- **Social networks**

  In the context of language learning, social networks like YouTube, Facebook, Skype and others are used to share, transfer and keep the information regarding language classes.

- **Mobiles**

  Millions of learners around the world use mobile for English language Learning and teaching. Though Mobile Learning (ML) has a brief history of no more than four decades, the medium is developing rapidly with the upgrading of different mobile devices. Among all the devices, cell phones have shown great potential in language teaching and learning. Mobiles help to boost your grammar skills even when you are on the move or at work. With hundreds of language software i.e., dictionary, e-books, online journals and English learning programmes, you can improve your English anywhere and everywhere (Srinivas, 2010).

  Mobile learning or m-Learning is commonly associated with the use of mobile technology especially the mobile phone (Cavus, Bicen & Akçıl, 2008; Naismith et al., 2004). Naismith et al. (2004) state that the term mobile generally refers to something that is portable and personal. Some scholars classify portable devices such as hand phones and handheld computers as suitable combinations for m-Learning. Ally (2009) regards m-Learning as wireless learning, a subset of e-Learning which focuses more on using personal computers such as desktop computers with Internet access to learn. M-learning relates more to access of the Internet via a portable device such as a mobile phone or a game console. Therefore, the integration of mobile learning for school students is seen as an alternative to increasing their interest and motivation.

- **Tablet**

  Tablets are among new ICT tools which are very user friendly these days and have the capability to store, keep, manipulate information. Apple announced the iPad tablet at the start of 2010 and released it in April. The first release features a 9.7-inch, 1024 × 768 displays with 16-, 32-, and 64-GB capacities. The 13.4mm thin 0.68kg iPad is available in either Wi-
Fi only, or in Wi-Fi+3G-capable models. The iPad tablet is designed to put the Internet into the hands of the public. It is designed for using fingers on a touch screen rather than with physical keyboard and mouse as with PCs, and this is one contributing factor to what will likely prove to be a revolution in education, namely English Language Teaching/Learning. The effects will likely become particularly evident in language education, because of the integrated multimedia and telecommunications features that have application to language learning.

Figure 2.3: Tablets in ELT

- **Blogs**

  The use of blogs is a supplemental aid to the teacher which extends the writing time available to the students. All of the teachers’ notes will be viewable together in chronological order. This is very convenient when preparing lessons that build upon previous material taught in the class. It is simple to edit class material if the text can be improved or if something new needs to be added. All student writing samples are kept in one place and can be read from any computer connected to the Internet at anytime.

  Teachers can give collective feedback to the class when a recurring mistake is found by adding entries to a “writing feedback” class blog. Additionally, individual attention can be given to individual student blogs. In order to save time when giving feedback, teachers can save a template; a copy of the messages at an additional ‘teacher only’ blog for cut and paste use.

  Ding (2008) describes the different uses of blogs in ELT as the following lines:
Online self-revision: Self-revision plays an important part in writing in ELT. The traditional way of revision on paper is both cumbersome and costly, which makes learners reluctant to revise their writings over and over again. Online writing and revision makes the writing process both convenient and efficient.

Online peer revision: Peer revision can greatly improve the learners' writing ability. First, the anonymously posted composition could be authentically revised, because peer revisers can focus on both the content and the form without knowing the exact author. Second, the indirectness of online revision makes learners avoid the embarrassment of fault-finding, reducing the psychological pressure of revisers and authors. In addition, online peer revisers can improve their writing through learning from the merits of peers and avoiding similar mistakes. Third, when revising writings learners show more initiatives in devising more complex sentence structures and tend to use more varied and longer forms of discourse when participating in online revision and discussion.

Online teacher's revision: Learners benefit greatly from revision by teachers, who play a vital role in online writing practice in ELT. But teachers' online revision has some demerits, for on the one hand learners' confidence and initiatives might be influenced by teachers' negative comments, on the other hand teachers cannot devote themselves fully to revision due to lack of time and energy. Therefore, it is of vital importance for teachers to motivate learners' initiatives in self-revision and peer revision. In addition, the mutual revision among learners can sometimes inspire teachers in an unexpected way.

Several studies have highlighted the advantages of integrating blogs in foreign language classrooms to develop writing skills (e.g., Armstrong & Retterer, 2008; Bloch, 2007; Campbell, 2003; Lee, 2010; Noytim, 2010; Sun, 2009), facilitate the development of a L2 writing community (Sollars, 2007), develop a sense of voice, and foster critical and synthesizing skills (Mynard, 2007). Additionally, the archiving feature available at many blog hosts can also facilitate the recording of learners' learning experiences (Noytim, 2010), and serves as voice blog portfolios to archive learning progress and provide alternative speaking assessment (Huang & Hung, 2009).

Wikis can also be used in writing instructions especially in a collaborative and process writing classroom. Its “transparency and openness allows for timely intervention by educators and peers to ensure that students receive useful feedback and guidance at early and intermediate stages of the process” (Carr et al 2007, p. 280).
Language Lab

Language labs became popular in the 20th century. They came into existence in the late 1940s and early 1950s when modern foreign language programmes were starting to develop as a discipline in secondary schools and universities. Prior to this, classical languages such as Latin and Greek were favored over modern languages. With the advent of modern language programmes, the concept of the language lab was born. Audio labs were constructed, students were collected into the lab together at an appointed time and they collectively followed a prescribed audio programme. This followed the behaviorist model of language teaching. The purpose of language labs was for students to gain auditory exposure to the language they were studying. This was considered a significant innovation in the mid-twentieth century, as it offered students the opportunity to hear the language they were studying, in the voice of a native speaker. At that time, students had far fewer opportunities to travel. There was no such thing as the Internet. There was no foreign television programming. And phone calls to family members who were living abroad were horrendously expensive.

2.6 Blended Learning

Another term that has gained currency is blended learning. This refers to learning models that combine traditional classroom practices with e-learning solutions. For example, students in a traditional class are typically assigned both print-based and online materials, have online mentoring sessions with the teacher through chat, and are subscribed to a class email list. A Web-based training course can also be enhanced by periodic face-to-face instruction. “Blending” was prompted by the recognition that not all learning is best achieved in an electronically-mediated environment, particularly one that dispenses with a live instructor altogether. Instead, consideration must be given to the subject matter, the learning objectives and outcomes, the characteristics of the learners, and the learning context in order to arrive at the optimum mix of instructional and delivery methods.
As Jonassen et al. (1999) states: **Blended language learning** uses multiple teaching and guiding methods by combining face-to-face sessions with online activities and utilizing a mix of technology-based materials. The growing use of ICT in blended language learning environments has changed the face of language teaching and learning in a beneficial way and will continue to do so along with future technological innovations.

2.7. Benefits of ICTs

A review of many studies on the use of technology in education consistently found that students in technology rich environments experienced positive effects on performance in all subject areas (Look, 2005).

In particular, Becta (2003) pointed out that ICT provides fast and accurate feedback to students, and speeds up computations and graphing, thus freeing students to focus on strategies and interpretation. Further, use of interactive multimedia software, for example, motivates students and leads to improved performance. In fact, studies show that more students finished high school and many more considered attending college where they routinely learned and studied with technology (Becta, 2003). Barak (2004) pointed out further that the use of ICTs in education promotes deep learning, and allows schools to respond better to the varying needs of the students.

Liaw (1997, as cited in Green, 2005) states that: computers can not only facilitate language rich environment but can also act as a tool to increase verbal exchanges. Lewis (1997, as cited in Green, 2005) indicates that using a computer for studying grammar increases student motivation.

From their literature review, Liu el al. (2003) concludes that findings from many studies suggest “the use of visual media supported vocabulary acquisition and reading comprehension and helped increase achievement scores.” (p. 262)

In the last decade, changing conceptions of learning and rapid technological advances have been accompanied by changes in language teaching and learning. Language classrooms are increasingly turning into blended learning environments that focus on active learning. It is commonly known that active learning advances the learning process and thus raises the quality of the language learning experience. Blended language learning uses multiple
teaching and guiding methods by combining face-to-face sessions with online activities and utilizing a mix of technology-based materials. The growing use of ICT in blended language learning environments has changed the face of language teaching and learning in a beneficial way and will continue to do so along with future technological innovations. The main benefits of ICT to language learning are presented below by drawing on the perspectives of Jonassen, Peck and Wilson (1999) who define technology-enhanced meaningful learning as active, authentic and cooperative. First and foremost, ICT—and the Internet in particular—provides language learners with the opportunity to use the language that they are learning in meaningful ways in authentic contexts. The Internet provides an easy and fast access to the use of current and authentic materials in the language being studied, which is motivating for the language learner. Such authentic materials include, for instance, online newspapers, webcasts, podcasts, newsroom video clips or even video sharing websites such as, say, YouTube. Where language teachers earlier searched and carried authentic materials like maps and train timetables to a classroom, they can now ask learners to access such information online, thus helping them learn with current and real-time materials. Another motivating language learning opportunity using ICT is provided by chat rooms and virtual environments such as Second Life where the language learner can practice not only the written use of the language, but also speaking and pronunciation, without the fear of making mistakes. A second important benefit derived from the use of ICT in a language classroom is based on the opportunities it affords for cooperation and collaboration with one’s peers. Language teachers all over the world are introducing myriads of ICT-enhanced language learning projects, including simulations, between their students and groups in other countries, thus widening the language learning perspective into that of learning about the cultural context of the language being used. Previously, students or classes would write letters or later even e-mails to each other. Today, using ICT they can ‘Skype’ or chat online, where they can not only write to each other in real-time, but also see each other and speak to each other online. Students are thus able to write, read, speak, listen, and react to a conversation using ICT as part of the language learning process. They are motivated to communicate and collaborate with peers to produce common products, for instance, wikis. These beneficial ICT-enhanced language learning activities call for the teacher to organize and monitor them, though in a blended language learning class the overall role of the teacher has changed from the traditional authoritative role to that of a facilitator.
A third major benefit of the use of ICT in blended language learning classrooms is the opportunity that ICT-based tools give to language teachers so that they can tutor their learners more effectively. With the help of ICT-based tools and the constantly growing number of available educational resources language teachers are able to give individual and personalized guidance to the learners. The use of several media—audio, video, authentic contexts and real-world experiences help language learners with different learning styles to assimilate the content according to their needs. In a blended learning environment that uses ICT tools, it is easier for the language teacher/tutor to use different approaches with students and accommodate different learning styles and different needs of fast, slow, or handicapped language learners.

Institutions in all educational sectors have a very important role in supporting their language teaching staff and their language learners in the meaningful use of ICT in language teaching and learning.

Again with the advantages of ICTs we should mention the famous slogan in the learning context which says: “Tell me, I will forget. Teach me, I will remember and involve me, I will learn.” One of the most important advantages of ICTs is the involvement of the learners which will foster the process of learning. It is believed that it has made language learning innovative, interesting, and effective. (Hiradhar, 2012)

**ICTs for learner Autonomy**

In a student-centered class, students don’t depend on their teacher all the time, waiting for instructions, words of approval, correction, advice, or praise. They don’t ignore each other, but look at each other and communicate with each other. They value each other’s contributions; they cooperate, learn from each other, and help each other. In difficulty or in doubt, they ask the teacher for help or advice but only after they have tried to solve the problem among themselves. The emphasis is on working together, in pairs, in groups, and as a whole class.

Actually, using technologies like new tablets or net books by the English learners is like a miracle. As soon as possible the learner can download a file and send it to Bluetooth printer for printing may be in a few seconds. Kaplan (2010) states that individualized/self-directed learning aided by various technological tools can go a long way in supporting self-directed
learning. Learner-centered environments are those that "pay careful attention to the knowledge, skills, attitudes, and beliefs that learners bring with them to the classroom."

- **Easy access to resources**

  It is a well-known fact that not a single teacher is capable of giving up to date and complete information in his own subject. The ICT can fill this gap because it can provide access to different sources of information. It will provide correct information as comprehensive as possible in different formats with different examples (Sanskwal, 2009). The world of ICT, and in particular the World Wide Web, has replaced the traditional trip to the library, although that is not to say that the school library is redundant – far from it – although its role may change. Access to this vast 'cyber-library' means that more information than could ever be stored in one school library is available onscreen, at home, in schools or in libraries themselves. A computer connected to the Internet can access information from all over the world. However, this vast amount of information, and the fact that there are no restrictions on who may post information on the Web, means the staff and students need to learn how to skim and scan texts, and select information according to relevance and reliability.

  According to Işman (2002), technologies contribute to education by fostering faster distribution of information, providing individual learning situations, promoting permanent learning, representing a ground for project works and giving opportunity for global education.

- **Easy testing and assessment**

  ICTs are also very easy and fast tools for assessing for both teachers and learners. Even the learners can self-assess themselves using the ICTs. As an example we can mention those tools used for preparation of IELTS, TOEFL or any other international tests in which the learners can communicate with the tools and even assess their progress.

- **Reduction of expenses**

  Teachers have to spend lots of expenses to prepare even a very simple hard copy of materials during their teaching. So, it is clear that by just connecting to the web or having a device like a tablet in hand they can avoid spending so much. Nowadays, teachers can carry lots of materials in a palm size device to use in the classroom.
- **Increase learners motivation**

  Students respond very positively to the self-directed learning opportunities afforded by emerging technology. Their education is enriched by working at their own pace. Active engagement with their work provides the concentration required for effective exercises that would otherwise be quickly abandoned because of their lack of appeal in printed text form. For example, the word processing of writing tasks is now commonplace but should be regarded as more than just prettyfying the text. With the right approach, the whole process of writing, from drafting, to editing and the preparation and printing of the finished piece can be performed to a much higher and more satisfying level using the facilities offered by the word processor.

  As Ahluwalia & Gupta (2011) state: “Computers are most popular among students either because they are associated with fun and games or because they are considered to be fashionable. Student motivation is therefore increased, especially whenever a variety of activities are offered, which make them feel more independent.” (p.19)

- **Decrease of the energy needed by the teachers to manage the class in traditional classrooms**

  The easier it becomes to access information outside the classroom, the more the role of the teacher as experts is diminished and the role of the teacher a learning facilitator is needed. (Vyas & Patel, 2009)

- **Time saving**

  Using easily accessible and cheap resources and materials for English classes has been a long time desire for a language teacher. Using downloaded and standardized ready-made materials is great to save the time for those teachers who are busy all the time to cover many things other than preparing for their classes.

- **Coping with the problems in mixed ability classes**

  In many ways, every class is a mixed-ability class. Even students who have studied together all the time will have varied mastery of the language or remember different things. Some will be better at different skills: reading, writing, listening, or speaking. They bring their own personalities, strengths, weaknesses, and learning styles to the class.
One of the most beneficial aspects of the ICTs is that the teachers can easily manage a multi-level mixed ability class. By providing different materials for different students they can escape from those old traditional nightmares. It is well known that every student has a different way of learning and learns and progresses at different speeds. Besides, learning also depends on what students have brought with them into class. Since each comes from a different family and a different environment, it may be an obstacle for the teachers in reaching out to the students, which eventually results in ineffective learning. The teacher has to find a balance between boring the faster, or higher level students and losing the rest.

- **Authentic Materials**

The other advantage which is worth mentioning in using ICT materials is that the learners can easily update real and authentic materials which previously was very difficult and energy demanding and time consuming for the teachers to provide.

- **Easy and immediate feedback**

Computer and the Internet are the best tools for the teacher to give immediate feedback online or offline to the students anytime and anywhere they feel necessary.

Thornbury (2006) states that feedback is the information, either immediate or delayed, that they get on their performance. By the use of ICT and new technologies, this end can be reached easily and immediately.

- **ICTs for interaction**

When should students work together in pairs? When should they be in groups or work together as a whole class? How many students should there be in a small group? Do pairs always have to be of two students working together?

In a pair, the atmosphere tends to be more protective and private than in a group. Students often feel less inhibited in a pair, and they can talk about more personal feelings or experiences than they would even in a small group.

Liaw (1997, as cited in Green, 2005) states that computers cannot only facilitate language rich environment but also act as a tool to increase verbal exchange.

- **ICTs as input**
Mitchell and Myles (2004:20) support the view that it is always important to have some kind of language input in language learning for the learner to operate with. They argue that it is necessary to expose the learner to language input for the learner to learn to interpret the language data, because they see that the ability to interpret the language that the learners hear is one of the main goals in language learning.

Chandrika (2012) mentions the effective use of teaching aids as follows:

- Adds interest and involvement
- Makes learning permanent
- Reduces verbalism
- Develops greater understanding
- Stimulates self-activity
- Fosters continuity of thought
- Makes us teach efficiently
- Helps in overcoming language barriers
- Provides a great variety of methods
- Brings the world into the class room

Many other researches done so far show that the most important achievements of ICT are as follows:

- Increase the quality of learning and teach students
- Ease of access to a very high volume of information and knowledge available in the world
- Rapid and timely access to information in very little time
- Reduction of some educational expenses
- Improve quality, accuracy and scientific texts for academic disciplines
- Indirect creation of learning experiences
- Creation of an exact relationship
- Creation of interest in learning
- Increase in learning opportunities
- Educators evaluate students once they have collected the necessary information and appropriate feedback to give to the students.
2.8. Disadvantages

Liu (2009) noticed that some educators advocate that interaction between teacher and students in the English class is so important that no technologies can take its place. It means that the technologies will face failure in face-to-face interactions of the learners. Also, one more disadvantage is that when some problems occur during the process of using ICT-integrated teaching the teacher loses class organization. And, sometimes it is visible that the teachers haven’t received sufficient training for using the ICTs in ELT.

Computers can only do what they are programmed to do. Computers, after all, are machines. Complicated and powerful as they are, they still cannot take the place of teachers. They cannot communicate meaningfully with the users because they do not recognize natural language fully. They can only respond to certain commands that are already programmed in advance. Thus, many programmes fail to meet users’ individual demands. Second language learners’ learning situations are varied in nature, dynamic and ever changing. Due to the limitations of computers’ artificial intelligence, computer technology is unable to deal with learners’ unexpected learning problems and respond to learners’ questions immediately as the teachers do. So, it is clear that computers and ICTs are beneficial only when the teachers can adopt them in a proper and right way: otherwise, they are just a waste of time and even harmful to English classes.

Although ICT offers a whole lot of benefits there are some risks of using ICT in education which have to be mitigated through proper mechanisms. For instance, 1: It may create a digital divide within class as students who are more familiar with ICT will reap more benefits and learn faster than those who are not as technology savvy. 2: It may shift the attention from the primary goal of the learning process to developing ICT skills, which is the secondary goal. 3: It can affect the bonding process between the teacher and the student as ICT becomes a communication tool rather than face-to-face conversation and thus the transactional distance is increased. 4: Since not all teachers are experts with ICT they may be lax in updating the course content online which can slow down the learning among students. 5: The potential of plagiarism is high as students can copy information rather than learn and develop their own skills. 6: There is a need for training all stakeholders in ICT. 7: The cost of hardware and software can be very high.

The computer is a machine, not a method. The world of online communication is a vast new medium, comparable in some ways to books, print, or libraries. To our knowledge,
no one has ever attempted to conduct research on whether the book or the library is beneficial for language learning. Seeking similar sweeping conclusions on the effects of the computer or the Internet is equally futile. Secondly, and even more importantly, new communication technologies are part of the broader ecology of life at the turn of the century. Much of our reading, writing, and communicating is migrating from other environments (print, telephone, etc.) to the screen. In such a context, we can no longer think only about how we use technologies to teach language. We also must think about what types of language students need to learn in order to communicate effectively via computer. Whereas a generation ago, we taught foreign language students to write essays and read magazine articles, we now must (also) teach them to write e-mail messages and conduct research on the Web. This realization has sparked an approach which emphasizes the importance of new information technologies as a legitimate medium of communication in their own right rather than simply as teaching tools. In summary, then, the advantages of using new technologies in the language classroom can only be interpreted in light of the changing goals of language education and the changing conditions in postindustrial society. Language educators now seek not only (or even principally) to teach students the rules of grammar, but rather to help them gain apprenticeship into new discourse communities. This is accomplished through creating opportunities for authentic and meaningful interaction both within and outside the classroom, and providing students the tools for their own social, cultural, and linguistic exploration. The computer is a powerful tool for this process as it allows students access to online environments of international communication.

By using new technologies in the language classroom, we can better prepare students for the kinds of international cross-cultural interactions which are increasingly required for success in academic, vocational, or personal life.

Wang (2005) summarizes some of the main disadvantages concerning technology integration in language classrooms as follows:

1. A few common pitfalls of Internet use include objectionable materials, predators, copyright violations and plagiarism, viruses and hacking, netiquette behavior, and privacy issue.

2. Startup costs which include hardware, software, staffing and training are expensive.

3. Spending too much time on computers is considered harmful to a child’s development of relationships and social skills. (pp. 41-42)

To cover all the issues related to the pitfalls and advantages of technology and ICTs in
ELT Koksal (2004) has presented the following table.

<table>
<thead>
<tr>
<th>Examples of technology</th>
<th>Examples of use in teaching and learning</th>
<th>Potential benefits</th>
<th>Potential problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>Learning is programmed</td>
<td>Least time spent, issuing skills raised</td>
<td>Can’t rewind unless recorded, lack of visual aids</td>
</tr>
<tr>
<td>TV</td>
<td>Watching programmes</td>
<td>Variety of material, hearing to target language, visual aids</td>
<td>Can’t rewind unless typed, may be too hard for beginners</td>
</tr>
<tr>
<td>CD Rom</td>
<td>Language and grammar activities, topic-specific</td>
<td>Personalized, no face to face</td>
<td>Compares normal problems, need for self-assessment, cost, copyright issues, material can become out-of-date</td>
</tr>
<tr>
<td>Computers</td>
<td>Language games</td>
<td>Excessive fear of using computers, independent learning, lacking opportunities, immediate feedback</td>
<td>Cost, technical problems, need for training</td>
</tr>
<tr>
<td>CALL</td>
<td>Grammar and vocabulary aids</td>
<td>Reinforcement of skills, not much, designed specifically for language learning, immediate feedback</td>
<td>Can be being repetitive</td>
</tr>
<tr>
<td>Internet</td>
<td>Distance learning, use of web pages in class for discussion exploration, readers can create their own web pages</td>
<td>Reading target language, up-to-date material, less formal</td>
<td>Technical problems, need for under training, lack of teacher control, requires careful planning, file can be slow to load</td>
</tr>
<tr>
<td>Electronic Dictionary</td>
<td>Contour with dictionary phrases</td>
<td>Convenient, fast, portable</td>
<td>Cost, may not contain all vocabulary needed (eg. slang), problems with the machine</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>Presentation, language teaching</td>
<td>Easy to read and nicely presented, can be credited</td>
<td>Technical problems, lack of or overload of information</td>
</tr>
<tr>
<td>Audio Courses</td>
<td>Listening comprehension (offline, online, multiple)</td>
<td>Reading target language, ability to reveal</td>
<td>Level of target language, a little bit slow, technical problems</td>
</tr>
<tr>
<td>Videos</td>
<td>Watching feature film programmes</td>
<td>Moving target language, ability to rewind, variety of reports, self-study opportunities, exposure to foreign culture in some instances</td>
<td>Level of target language, lack of resources</td>
</tr>
<tr>
<td>Tandem learning via Internet</td>
<td>Collaborative team with partner in target language</td>
<td>Exposure to target language, increasing knowledge of foreign culture</td>
<td>Need for self-motivation</td>
</tr>
</tbody>
</table>

Table 2.2: Advantages and disadvantages of ICTs in ELT

2.9. Barriers to Use of ICTs in ELT

Computers and technology are still a source of fear and insecurity for many teachers in the world despite the latest advances applicable to language teaching such as specialized websites, blogs, wikis, language teaching methodology, journals, and so. Although many countries have made institutional efforts to modernize their equipment, spent large amounts in technology, proved the positive effects of integrating computers in language learning (Tsou, Wang & Tzeng, 2006), many teachers still lack the interest and strong will to learn
and do not possess the attitude of teaching with computers. Most of the times the reasons are lack of time for out-of school training in combination with the natural difficulty of incorporating new working schemata within their own classrooms. Besides, institutional organizations, district and national educational boards, and even publishers are making institutional effort to strengthen the presence and evolution of distance and online education. As a consequence, computers should no longer be considered as a little more than a way to typewrite (as they are sometimes today), send messages and, when lucky, to browse information on the net (Johnson & Eisenberg, 2006). Remarkably, one common major concern shown by both teachers and education boards is how to motivate and instruct teachers to integrate computers and ICT in their classes.

To investigate the factors hindering teachers’ readiness and confidence in using ICTs, Tella, et al. (2007) found that inadequate knowledge to evaluate the role of ICT in teaching and learning, lack of skills in the use of ICT equipment and software had resulted in a lack of confidence in utilizing ICT tools. This is consistent with Preston (2000) who concluded lack of technical support to be a key inhibitor in the use of ICT in classroom. As shown by Bradley and Russell (1997), recurring faults and the expectation of faults occurring during teaching sessions have reduced teachers’ confidence and caused teachers to avoid using technology.

In addition, obstacles such as access to equipment, time pressures, lack of mentor and opportunities for apprenticeship of observation also have an impact on teachers’ ability to use ICT (Slaouti & Barton, 2007). Further, teachers’ workload and time management was found to be inhibiting the implementation of instruction in classroom (Guha, 2000). While there is a great deal of studies about how ICT International Journal of Computing and ICT Research is being used in developed countries, there is not much information on how ICT is being integrated into schools in developing countries.

There are lots of researches done in order to find out the barriers in taking up the new technologies in English Language Teaching. We can mention some of them to have an overall overview. Poor facilities, lack of support, lack of teachers’ knowledge, limited time, lack of teachers’ interest and negative attitudes toward integrating ICTs in English classrooms are among most important barriers teacher face during their profession (Yunus, 2009).
Dawes and Selwyn (1999) found that a major deterrent to use the computer by teachers was computer phobia. Teachers' anxieties could be caused by certain factors. The first one is a psychological factor such as having little or no control over the students' activity. Teachers do not want to be seen as incompetent in the eyes of their students. They have the fear that the students possess more knowledge of computers than they do. The second factor is the fear of being replaced by the computer in the long term. According to Fullan and Hargreaves (1992), when experienced teachers are subjected to changes, they may experience three particular clusters of feelings as follows: (a) loss of firmly held beliefs and ideas, established patterns and behaviors, comfortable habits and confidence and self-esteem; (b) anxiety about required levels of understanding, new skills, future prospects, being able to cope and being seen as different and; (c) struggle to survive in fact, acquire new competence and gain respect and recognition. In a report on the barriers that exist in schools that prevent teachers from making full use of ICT in teaching, Jones (2004) has summarized some of the key findings as follows: very significant determinant of teachers' levels of engagement in ICT is their level of confidence in using the technology; here is a close relationship between levels of confidence and many other issues which themselves can be considered as barriers to ICT; levels of access to ICT are significant in determining levels of use of ICT by teachers; inappropriate training styles result in low levels of ICT use by teachers; teachers are sometimes unable to make full use of technology because they lack the time needed to fully prepare and research materials for lessons; technical faults with ICT equipment are likely to lead to lower levels of ICT use by teachers;

Also, power problem in the region contributes immensely to the reluctance of teachers for the use of ICT.

Additionally, resistance to change is a factor which prevents the full integration of ICT in the classroom; teachers who do not realize the advantages of using technology in their teaching are less likely to make use of ICT.
Table 2.3: Possible implications for integration of ICT proposed by Bingimals (2009)

2.10. Factors affecting the adoption of ICTs

Before a new idea or technology can be used, it must first be adopted, but when a new product, technique or technology becomes available in education this does not mean that educators, trainers or students will automatically flock to adopt and use it. Even if its developer can show through a wealth of evidence that this innovation will greatly improve the learning process, there is still no guarantee that it will be used, as many curriculum designers and educational technologists have discovered. To investigate the issues concerned with adoption of new technology or ideas it is useful to think of these as innovations and then to consider them through the lens of innovation theory.

Rogers (1995) believes that people’s attitudes toward a new technology are a key element in its diffusion. His Innovation Decision Process theory states that an innovation’s diffusion is a process that occurs over time through five stages: Knowledge, Persuasion, Decision, Implementation and Confirmation. Accordingly, the innovation-decision process is the process through which an individual (or other decision-making authorities) passes (1) from the knowledge of an innovation, (2) through forming an attitude toward it, (3) through a decision to adopt or reject it, (4) to the implementation of the new idea, and finally (5) to the confirmation of that decision (Rogers, 1995, p. 161).
Rogers (1995) further contends that one of the major factors affecting people’s attitudes toward a new technology is the attributes of the technology itself. He identified five main attributes of technology that affect its acceptance and subsequent adoption: relative advantage, compatibility, complexity, ‘observability’, and ‘trialability’. Thus, a new technology will be increasingly diffused if potential adopters perceive that the innovation: (1) has an advantage over previous innovations; (2) is compatible with existing practices, (3) is not complex to understand and use, (4) shows observable results, and (5) can be experimented with on a limited basis before adoption.

Personal characteristics such as educational level, age, gender, educational experience, experience with the computer for educational purpose and attitude towards computers can influence the adoption of a technology, observes Schiller (2003). To successfully initiate and implement educational technology in a school’s programme depends strongly on the teachers’ support and attitudes. It is believed that if teachers perceived technology programmes as neither fulfilling their needs nor their students’ needs, it is likely that they will not integrate the technology into their teaching and learning. According to Berner (2003), Na (1993) and Summers (1990) as cited in Bordbar (2010), teachers’ computer competence is a major predictor of integrating ICT in teaching. Evidence suggests that a majority of teachers who reported negative or neutral attitude towards the integration of ICT into teaching and learning processes lacked knowledge and skills that would allow them to make “informed decision”. If there is no technical support for teachers, they become frustrated resulting in their unwillingness to use ICT (Tong & Trinidad, 2005).

2.10.1. Perceptions and Attitudes towards ICTs in English Classes

2.10.1.1. Teachers as ICT users

It is believed that if teachers perceived technology programmes as neither fulfilling their own needs nor their students’ needs, it is likely that they will not integrate the technology into teaching and learning. Evidence suggests that teachers’ attitudes and beliefs influence successful integration of ICT into teaching (Hew & Brush, 2007; Keengwe & Onchwari, 2008). If teachers’ attitudes are positive toward the use of educational technology, then they can easily provide useful insight about the adoption and integration of ICT into teaching and learning processes.
Woodrow (1987) points out that integrating technologies into the educational curriculum has the potential to change the process of education drastically. He also suggests that any successful change in educational practice necessitates the development of positive user attitudes towards the new technologies: integrator, who manipulates the ILS sequence so that it better matches the classroom instruction.

In his model Woodrow sees the actual use of the technology depends on several things: attitude towards use, ease of use and usefulness.

- Teachers’ ICT Literacy

Teachers’ development of ICT literacy has been first revealed by educators and experts, such as Jung (2003) as well as Kirschner and Davis (2003) emphasized by government initiatives involving increasing investments in ICT facilities and professional training projects. ICT literacy is “using digital technology, communication tools, and/or networks to access, manage, integrate, evaluate and create in order to function in a knowledge society” (ETS, 2002). Most ICT training projects accent teachers’ development in technical capabilities in isolation and fail to link teachers’ technical capabilities to integrate ICT as a pedagogical tool across curriculum. Fewer training projects aim at developing their
cognitive ICT-related capabilities of problem solving and information processing. Constructivism believes that ICT literacy is built and developed when the use of concrete representations of ICT knowledge is made and best performance can be induced in a supportive environment. In order to balance teachers' confidence with ICT as a technological and that with ICT as a pedagogical tool for quality teaching and learning, teachers shall be placed in an ICT-demanding environment. When teachers as competent and confident ICT users and teachers as less competent and confident ICT users work out pedagogical content and method using ICT, they all can construct their individual ICT literacy upon their prior knowledge and knowledge structure and their everyday experience. In integration of ICT and English courses, teachers' professional and personal experience of use of ICT and knowledge of English content are two most important factors toward the construction of their pedagogical beliefs. These beliefs, in turn, will justify their decisions on the role of ICT in English teaching and learning and finally lead to changes of their instructional practices.

Teachers as less competent and confident ICT users are expected to improve their professional performance upon ICT-integrated problem-solving tasks and pedagogical reasoning on such tasks. Once their Knowledge of content Topics and ICT-related cognitive and technical capabilities increase, they need to blend their experience with the capabilities and apply appropriate ICT to their pedagogical approaches and hence are more likely to contribute constructively and efficiently to English Teaching.

2.10.1.2. Learners as ICT users

It is an agreed fact that lots of possibilities that the new technologies offer have all contributed to a paradigm shift in the realm of second language teaching and learning. There seems to be a shift towards the ESL pedagogical perception that students must accept responsibilities for their own effective and fruitful learning, and act accordingly to achieve their learning goals. Therefore, technology plays an important role in leading students towards experimentation of the sources in information and discovering things for maximum learning gains.

The use of ICT in language learning not only involves pedagogical changes for teachers but also involves environmental and pedagogical changes for learners who are traditionally used to face-to-face teaching in classrooms. Although an increasing number of
learners have access to online technologies and use ICT for personal interactions, they find it challenging to use ICT in an educational context. Many learners hesitate to take an online language course because they can only conceive of learning a language in the presence of a teacher and peers and cannot imagine learning to speak at a distance. Although many online language courses include spoken elements and oral interactions with the teacher, learners are often unsure how such elements would work and whether they could actually learn using ICT resources in the physical absence of the teacher. Often students are more willing to listen to audio materials, watch video materials, and take self-tests online as a supplement to face-to-face interaction and communication in a language course.

Learners' prior experiences with language learning and with learning with ICT, their technical skills, and their personal learning preferences can play a role in their perceptions of teaching and learning in general and with ICT in particular. It is common for learners to feel isolated from their instructor and peers while using ICT. Whereas in other cases, learners who hesitate to speak in front of peers are more comfortable writing their opinions online (Kumar, 2007). In order to help language learners deal with the challenge of using ICT to study, institutions can provide regular contact with tutors and/or teachers, telephone numbers and/or face-to-face access to peers and the teacher, as well as administrative and study support systems. Study support systems include guidance about self-study and discipline when using ICT to learn a language from a distance, access to library resources, and activities for collaboration and communication with peers.

2.10.2. Supporting English teachers to use ICT

One way in which schools can move to student-centered use of ICT is through links with the wider community. Such links enable the development of a more authentic and contextualized approach to learning supported by ICT tools (Demetriadis et al., 2003). Thus, human responsibilities, roles and priorities within the community must be rearranged. For example, assessment methodologies should be redesigned to allow all interested community members to play an appropriate role.

In this respect, Granger and his colleagues (2002) studied four schools to identify factors contributing in successful implementation of ICT by teachers.
Based on their findings, they concluded that successful implementation required not only computers but commitment and community, with the last two being closely interlinked. Also, they added that the schools worked continually with questions of equity, privilege, language, and community support. Each aimed to develop a philosophy of pedagogy informed by the unique characteristics of their specific communities.

In addition, Kington et al. (2002) carried out a study on innovative practice using ICT in schools. They showed how a school used the introduction of laptops to build up a 'connected learning community' in an area lacking in social and economic context. Kington and her colleagues categorized the main elements of the model developed by the school. They are as follows:

• The creation of an “open access” school where dialogue about learning between parents, teachers and children was encouraged;

• The provision of laptops at school and home: for pedagogical and personal purposes; to develop pupils’ ICT skill and competence; and to support the adoption of new teaching approaches which motivate students and parents and which give students a sense of success;

• The arranging of e-Mentors in industry for students with little family history of formal employment;

• Access to skill development in ICT for parents through adult education courses on site;

• A network of support for students and parents learning about ICT together;

• The provision of a crèche to support parental access to learning;

• The celebration of the learning of adults and children through assemblies.

Therefore, instead of taking innovative ICT-based learning to the students, the students are taken to the innovative learning. Teachers should be aware of the influence of home on school success. When parents are encouraged to participate in and contribute to change management activities within a school’s ICT master plan, change occurs more quickly (Bangkok, 2004). Morale was generally high in these schools, while teachers, students, and parents were excited about the level of innovation in the school and quite anxious to share their experiences with others. Hence, parent and community support can influence the implementation of ICT in education. Thus, school leader must explore business partnerships to support technology initiatives. To involve parents in the decision-making process, school leader must host ICT information or education events for community. Therefore, ICT facilitates linkages among schools, homes and communities, enabling teachers, peers, parents
and members of the community to play a greater role in the students’ learning experiences. These experiences include engaging in authentic problem solving, working with researchers and honing their entrepreneurial skills. The bonds between schools and homes and communities are also strengthened through increased interaction and communication.

2.10.3. English Teachers Ability and Competency in ICT

Computer competence is defined as being able to handle a wide range of varying computer applications for various purposes. According to Berner (2003), Na (1993) and Summers (1990) as cited in Bordbar (2010), teachers’ computer competence is a major predictor of integrating ICT in teaching. Evidence suggests that majority of teachers who reported negative or neutral attitude towards the integration of ICT into teaching and learning processes lacked knowledge and skills that would allow them to make “informed decision” (Al-Oteawi, 2002, p.253, as cited in Bordbar, 2010). In a qualitative multiple case-study research on primary school competence and confidence level regarding the use of ICT in teaching practice conducted in five European countries, Peralta & Costa (2007) found that technical competence influenced Italian teacher’s use of ICT in teaching. However, the teachers cited pedagogical and didactic competences as significant factors if effective and efficient educational interventions are likely to be implemented. In Portugal, teachers reported different views regarding the most important competences for teaching with ICT. The experienced and new teachers stressed the need for technical skills and attitude, the innovative teachers emphasized curricula and didactic competences and the student-teachers cited technical competence and pedagogical efficiency as significant to integrate ICT in teaching and learning processes. According to Peralta & Costa (2007), teachers with more experience with computers have greater confidence in their ability to use them effectively. To conclude, Jones (2004) reported that teachers competence relate directly to confidence. Teachers’ confidence also relate to their perceptions of their ability to use computers in the classroom, particularly in relation to their children’s perceived competence.

2.11. Empirical Researches Done in the Field

The relationship between teachers’ attitude, the factors affecting it and ICT integration has been examined in a number of studies (Leu & Sim, 2008; Tondeur, Hermans, Van Braak & Valcke, 2008; Sugar, Crawley & Fine, 2004; Jimoyiannis & Komis, 2007).
Denson (2005) conducted a research on teachers’ attitudes towards technologies and revealed that the level of integration of technologies in to lessons depends on the skill levels of teachers in the use of technologies. Teachers with higher skill levels integrated technologies in their classes more frequently. Another study conducted by Meskill, Mossop, DiAngelo, & Pasquale (2002) compared and contrasted eight novice and expert teachers. The results demonstrated that "Indeed, those novice teachers who had received "state of the art" training in classroom technologies use were less comfortable in their implementations than the more experienced who had no formal training with computers but had a great deal of classroom experience.” (Meskilletal.,p.54). Arkm’s (2005) study on teachers’ attitudes towards technologies use in vocabulary instruction revealed statistically significant differences between teachers who had undergone computer technologies training and those who had not. His study suggested that simply providing appropriate technological means to the teachers does not assure the utilization of them. Findings highlighted the need for providing guidance, support and training for teachers in integrating technologies in to language instruction.

Dudene and Hockly (2007) mentioned the term “technophobe” (p.8) referring to teachers who have hesitations towards utilizing new technologies. In their view, “a large part of the negative attitudes teachers have towards technologies is usually the result of a lack of confidence, a lack of facilities or a lack of training, resulting in an inability to see the benefit of using technologies in the classroom” (p.9). As stated by Garett (1991), “conservative teachers fear that the technologies will weaken or interfere with their control of the class are willing to consider only those technologies-based materials which perform electronically the most traditional teaching tasks” (p.92). On the other hand, skillful, knowledgeable, confident and enthusiastic teachers may face some external restrictions concerning technologies integration such as lack of technical support, curriculum restrictions or lack of the suitable technological means in their schools (Usluel, Mumcu, & Demiraslan, 2007).

A study carried out with 150 English teachers on their attitudes to educational technologies showed that in spite of teachers ‘awareness of the importance of using educational technologies, they are not willing to use it in their classes (Gömeleksiz, 2004). A recent study in Cyprus with 100 science teachers indicated that only a small number of teachers have integrated educational technologies resources in their lessons (Isman,Yaratan & Caner, 2007).
Venkatesh and Morris (2000) investigated about age and gender differences in the overlooked context of individual adoption and sustained usage of technology in the workplace using the Theory of Planned Behavior (TPB). They studied on user reactions and technology usage behavior over a 5-month period among 355 workers being introduced to a new software technology application. The results showed that the decisions of men and younger workers were more strongly influenced by their attitude toward using the new technology. In contrast, women and older workers were more strongly influenced by subjective norm and perceived behavioral control. Those groups of people adopted very different decision processes in evaluating new technologies. On the other hand, Albirini (2006) found that age was not a significant factor in relation to teachers’ attitudes towards ICT.

In a study done by Gomleksiz (2004) 150 English teachers were surveyed in order to determine their views on the use of education technology in their classes. The scale consists of 36 items measuring positive and negative attitudes of English teachers toward use of technology. There are 24 positive, 12 negative items in the scale. The teachers were also asked which technological aids and techniques they use. It was determined that teachers have positive attitudes toward use of technology but they do not obtain or use technology at desired level.

Baubeng (2012) conducted a study to explore teachers’ skills, perceptions, and practices about ICT in second-cycle institutions in Ghana. Questionnaires were distributed to 273 teachers in different departments, 241 were returned, and 231 were valid for data analysis, representing a response rate of 85%. The validity of the questionnaire was approved by a panel of experts in the field. The Cronbach’s alpha reliability coefficient was 0.91. Descriptive statistics and correlation were used to analyze data. Of the 231 teachers, 66% were males and 34% were females. Majority of the respondents were between the ages 30-39. The correlation analysis revealed positive correlation between ICT use and teachers’ competences. Further, teachers’ perceptions in terms of using ICT were found to be positive but not statistically significant. Finally, the study revealed inverse correlations among ICT use, age, and teaching experience. The descriptive results indicated that teachers’ knowledge in basic ICT applications as well as integrating ICT into teaching and learning processes was
These results provide evidence that the introduction of ICT in teaching and learning has not brought any change in the delivery of education in second-cycle schools in Ghana. This also implies that teachers have not shifted from teacher-centered instruction to student-centered learning. From the findings of the study, it is recommended that courses such as computer supported learning, ICTs and designing instructional materials should be introduced in initial teacher training programmes to improve teachers’ level of confidence and perceptions towards the use of ICT.

Sugar and Crawley (2004) in their study examined teachers’ beliefs about technology adoption as a reasoned, deliberate, intentional decision-making process, as reflected in Ajzen’s (1985) Theory of Planned Behavior. Qualitative and quantitative data were collected from teachers in four schools located in the southeastern region of the United States. Overall results indicated that technology adoption decisions were influenced by teachers’ individual attitudes towards technology adoption, which were formed from specific underlying personal beliefs about the consequences of adoption. External support from key persons and contextual resources (e.g., funding) were insignificant factors affecting teachers’ technology adoption decisions. From these results, we recommend that school administrators work closely with teachers to address their beliefs and concerns about technology adoption and provide an influential level of personal support and resources. They offered recommendations for educational software designers for developing future technology resources for teachers.

Drent and Meelissen (2008) conducted a study about factors which influence the innovative use of ICT by teacher educators in the Netherlands. A sample of 210 teachers was used for the study. Their study revealed that student-oriented pedagogical approach, positive attitude towards computers, computer experience, and personal entrepreneurship of the teacher educator have a direct positive influence on the innovative use of ICT by the teacher.

Cox et al (1999) carried out a study examining the factors relating to the uptake of ICT in teaching. A questionnaire was designed to collect evidence from teachers and other educators about their ICT experiences, expertise and use in teaching, their attitudes to the value of ICT for teaching and learning, the training they had received and, when relevant, their reasons for being a member of an association like MirandaNet, The National Association of Coordinators and IT Teachers and Teacernet UK. The sample consisted of 44 male and 28 female computer-using teachers with a mean age of 42 years. The results showed that the teachers
who are already regular users of ICT have confidence in using ICT, perceive it to be useful for their personal work and for their teaching and plan to extend their use further in the future. The factors that were found to be the most important to these teachers in their teaching were: making the lessons more interesting, easier, more fun for them and their pupils, more diverse, more motivating for the pupils and more enjoyable. Additional more personal factors were: improving presentation of materials, allowing greater access to computers for personal use, giving more power to the teacher in the school, giving the teacher more prestige, making the teachers’ administration more efficient and providing professional support through the Internet.

Veen (1993) carried out a study 8 years earlier to describe the day-to-day practice of four teachers from a Dutch secondary school who were implementing ICT in their classrooms. The teachers were provided with a computer at home, and a computer and a liquid crystal display in their classrooms. School factors played an important role in how the teachers made use of their computers including the essential technical support of 20 hours per week and the positive attitude of the principal. However, teacher factors outweighed the school factors in explaining the teachers’ use of computers. These teacher-level factors were grouped into two subcategories: beliefs and skills. The most important of these were teachers’ beliefs regarding what should be in the curricula (content) and the way in which their subjects should be taught (pedagogy). The skills that most influenced their uses of computers were those related to the teachers’ competence in managing classroom activities; to their pedagogical skills; and, less importantly, to their computer-handling technical skills. The most important finding from Veen’s work is that if the software matched the teacher’s pedagogy they used it.

Several studies (e.g. Becker, 1994; Hadley & Sheingold, 1993; Sheingold & Hadley, 1990) used survey data to identify factors likely to be in evidence in teachers who to some extent have integrated computers into their teaching practices. Sheingold & Hadley (1990) conducted a nationwide survey of fourth to twelfth grade teachers in the USA. The three major factors involved in these ‘accomplished’ teachers’ success were: teacher motivation and commitment to their students’ learning and to their own development as teachers; the support they experienced in their schools; access to sufficient quantities of technology. In addition, these teachers worked in schools where hardware and access were twice the average, were comfortable with technology and used computers for many purposes. They
perceived that their teaching practices became more student centered with the integration of technology in their curriculum and they held higher expectations of their students.

Sheingold & Hadley’s (1990) study also identified that the source of motivation for teachers to use technology included gains in learning and using computers for their own development as teachers. They foresaw wider interest among teachers if ‘ample technology, support, and time for teachers to learn the technology are provided, and if an academic and cultural structure exists to encourage teachers to take an experimental approach to their work’ (p. 30). These are all areas that created barriers to using technology identified in the earlier section. In Hadley & Sheingold’s (1993) report, segmentation analysis was used to assess if there were common responses that identified subgroups in the sample. This analysis indicated that there were five main segments or types of teachers and circumstances in this sample, including ‘enthusiastic beginners’, ‘supported integrated’, ‘high school naturals’, ‘unsupported achievers’ and ‘struggling aspirers’. These subgroups diverged on the following factors: (a) experience and comfort with technology; (b) grade level taught; (c) applications and practices they use, and (d) extent of support/colleagues at school. This analysis indicates that not all ‘accomplished’ technology-using teachers possess similar qualities, but that a diverse and complex combination of factors has had an impact on their path to success.

Becker & Riel (2000) is a recent study on constructivist classrooms that examined the relationships between professional engagement and teaching practice, including instruction involving computer use. Professional engagement was measured by the frequency that a teacher had informal substantive communications with other teachers at their school, the frequency and breadth of professional interactions with teachers at other schools and the breadth of involvement in specific peer leadership activities, mentoring, workshop and conference presentations. The study found that teachers who regularly participate in professional interactions and activities beyond their classroom teach in different ways than teachers who have minimal contact with their peers or profession. The more extensively involved teachers were in professional activities, the more likely they were to have teaching philosophies compatible with constructivist learning theory, teach in ways consistent with a constructivist philosophy and use computers more and in exemplary ways. Their use of computers with students was not limited to gaining computer competence, but extended to involvement in cognitively challenging tasks where computers are tools to promote communicating, thinking, producing, and presenting ideas. Data on software use and
objectives for computer use suggest that these teachers recognize the features of technology that grant students access to a broader community and knowledge base beyond the walls of the classroom. They are able to incorporate the use of computers into student activity more effectively than teachers who fail to participate in their professional community. Such teachers are more likely to focus on traditional methods of delivery of information, on direct instruction. They do not place a high value on collaborative knowledge building in the classroom or for themselves in the educational community. The role of the student is to listen, learn and repeat. Becker & Riel concluded that those teachers extensively involved in professional activities are in a position, with sufficient authority and time, to help other teachers move towards being more accomplished users of computer technology.

Carney (1998) examined a teacher development programme, STDC (Shortline Teacher Development Centre), aimed at integrating technology into the constructivist classroom. Carney further explored whether several factors common to exemplary computer-using teachers are addressed in the setting. Analysis is focused on the four elements deemed crucial for effective teacher learning: Challenges to frames of reference. To generate new responses, professionals must be placed in situations of uncertainty. Three forces seem to be creating these conditions of uncertainty: technology, new teaching contexts and converging reforms. The need to integrate technology is the most powerful of the three in challenging familiar practice and knowledge. Situated learning. The notion of situated cognition (Brown et al, 1989) is a basic cognitive principle of constructivist theory. In the STDC, teachers are able to see operational illustrations of constructivism supported by technology in classrooms. They are able to have direct experience with new practice of technology integration.

Collaborative reflection; this is where teachers should work in collaborative with colleagues as ‘... collaborative reflection groups can provide both the direction for individual change efforts …’ (Hasseler & Collins, 1993, p. 11). The STDC recognizes the importance of teacher reflection in its basic objectives and provides collaborative contexts through regular structured discussion as well as informal sharing.

Long-term collegial interaction; the learning gained by individual teachers is not likely to be translated into reformed practice without long term collegial interaction. Collaborative support greatly increases the likelihood that changes in practice will be sustained. The STDC provides a basis for collegial support by encouraging teachers to continue their interactions beyond the programme through personal contact and email, Downloaded by also by offering
the 3-day seminar as an opportunity to return for additional sharing and support. Carney concludes that the STDC helped teachers integrate technology into a context of standards-based curriculum, constructivist pedagogy and authentic assessment. Further research (Hruskocy et al, 2000) suggests that training school students to serve as technology experts may aid integration of computers into the classroom setting. Ten teachers of grades one through five were required to send their pupils to the training sessions. Evaluation data to determine the strengths and limitations of the programmes were collected through reflection papers prepared by each member of the university team. The strengths of the programme showed that teachers were observed becoming more frequent users of technology, expressing a greater desire to learn along with their students. Teachers became more curious about their students’ expanding computer skills and enthusiasm and lost their reluctance to ask questions. In the end, teachers began to use their students’ expertise to increase their own computer skills. Teachers also observed changes in students’ ease of use with technology. Students’ skills were transferred to the classroom, and teachers become more motivated to learn to use technology and to incorporate technology in classroom activities. The limitations of the training session mainly centered on the limited time in sessions to practice. Hruskocy et al concluded that teachers’ expertise and dedication are necessary for technology integration to occur and students’ enthusiasm and talent prompt the process to unfold.

Other studies further revealed positive factors which encourage teachers to use technology: collegiality among computer-using teachers at their school, school support for consequential computer activities, resources for staff development, smaller class sizes and more formal computer training (Becker, 1994). Hadley & Sheingold’s (1993) work reinforces that there are many different factors involved in different teachers’ road to success. However, these qualitative findings do not yield insight into the individual teacher’s learning process, including both the cognitive understanding of technology and teaching and the sociocultural factors that have an impact on such success.

McFarlane (1999), in a study of the introduction of integrated learning systems (ILS) into schools, also found improved teacher attitudes and use of computers. Clariana (1992) suggests five stages of teacher participation in the implementation of ILS, which built on the model proposed by Schnitz & Azbell in 1990. These are:

- novice non-participatory, where a teacher drops off a class at the ILS laboratory;
- novice participatory, where the teacher attends the classes but does not know the ILS;
- practitioner, where the teacher uses the ILS progress reports to help pupils by remediation or re-teaching;

- extender, who has fully integrated the ILS into classroom curricula.

This model may be helpful in looking at the integration of other forms of educational software into the curriculum. Goodwyn et al (1997) found that the majority of student teachers and about half of serving teachers of English in the UK now welcome ICT in English and see it as central to the literacy of all pupils. Willis (1996) argued that this integration of computers into the classrooms is a complex process that involves personal, group, organisational, institutional and even cultural change. The study by Goodwyn et al involved following and interviewing a group of 20 English student teachers and qualified English teachers. It was found that the teachers could be grouped into three distinct categories: ‘the fearful’ represent those usually older teachers for whom ICT is generally a threat and the cause of much anxiety. As a percentage they might represent approximately 16% of all English teachers. The second group, ‘the unresolved’ represent 32% of English teachers: those who are changing and redefining their concept of literacy but who have strong mixed feelings. In the third group are ‘the optimists’ who can be categorized as pro ICT. They would represent 50% of English teachers, and believe that ICT can significantly enhance English teaching. Pedretti et al (1999) conducted a qualitative case study of the professional development of two teachers involved in a collaborative effort to advance technology implementation in high school science classrooms.

The TESSI (Technology Enhanced Secondary Science Instruction) project involved researchers observing classroom teaching and learning episodes, conducting student questionnaires and interviewing the teachers about technology adoption and integration, instructional strategies and pedagogical beliefs. The TESSI project originated with two classroom science and physics teachers from different schools in the same district.

Researchers joined the project to contribute to and extend the exploration of the evolving technological classrooms. Central to the process of change was the group’s belief that technology should not be regarded as a substitute for teachers, but rather as a means of enhancing and transforming instructional practice. The teachers integrated technologies incrementally into their programmes, courses and curricula. Time previously spent on teacher
talk was gradually replaced with practices that promoted student use of a range of multimedia technologies including: (a) software-generated simulations to develop and extend understanding of science concepts; (b) laserdiscs and videos; (c) computer-interfaced probes/sensors in laboratory situations to collect data; (d) computer applications to process and analyze lab data; (e) presentation software to present information; (f) interactive testing programmes to assess learning; and (g) software for recording marks. Each new addition of multimedia technology required negotiation, collaborative decision making and curriculum adaptation. Pedretti et al (1997) concluded that the case study of TESSI confirms that the integration of technology in classrooms can significantly transform teaching and learning. The evolution and continuation of TESSI illustrate that long-term personal and professional commitment and collaboration among teachers and researchers are integral parts of this transformation.

Sugar, et.al, (2004) examined teachers’ beliefs about technology adoption as a reasoned, deliberate, intentional decision-making process, as reflected in Ajzen’s (1985) Theory of Planned Behavior. Qualitative and quantitative data were collected from teachers in four schools located in the southeastern region of the United States. Overall results indicated that technology adoption decisions were influenced by teachers’ individual attitudes towards technology adoption, which were formed from specific underlying personal beliefs about the consequences of adoption. External support from key persons and contextual resources (e.g., funding) were insignificant factors affecting teachers’ technology adoption decisions. From these results, we recommend that school administrators work closely with teachers to address their beliefs and concerns about technology adoption and provide an influential level of personal support and resources. We also offer recommendations for educational software designers for developing future technology resources for teachers.

In his study fakeye (2010) assessed Senior Secondary School English Language teachers’ knowledge and use of ICT in English Language classrooms. Attempt was made to provide answers to four Research Questions using survey research design. The participants were 94 English Language teachers from 30 randomly selected senior secondary schools in Ibadan Southwest Local Government of Oyo State. A self-designed questionnaire was used to collect pertinent data which were analyzed using frequency counts, simple percentage and t-test. Findings revealed that the level of knowledge of ICT possessed by English Language teachers was poor and as such, they rarely use ICT in English Language instruction. It was
also found that there was significant difference in the male and female teachers’ knowledge of ICT with the males demonstrating a higher level of knowledge than their female counterparts. Based on these findings, it is recommended, among others, that English Language teachers must attend periodic seminars, workshops and in-service trainings to equip them with knowledge of ICT and its utilization in classroom instruction while teacher education programmes in tertiary institutions must be reviewed to incorporate ICT-assisted instruction.

Another research done by Salehi and Salehi (2011) was twofold: first, to examine whether high-stakes Entrance Exam of the Universities (EEU) in Iran influences the use of ICT in English classes and second, to identify the teachers’ perceptions of the factors encouraging and discouraging teachers to integrate ICT into the curriculum. To achieve the purpose of the study, a validated questionnaire was administered to 30 English teachers who were teaching in the high schools in Isfahan, Iran. Stratified random sampling was used to select equal number of teachers from all educational districts in the city of Isfahan. The descriptive analysis of the data showed that the content and format of the EEU prevent teachers to use ICT in English classes. The majority of the respondents also believed that the parents’ and principals’ expectations of the students to perform well on the EEU discourage them to use ICT applications in their teaching processes. Moreover, various ways to integrate ICT into the curriculum, ability to use ICT for sharing information and ideas with others, and evidence of the positive impact of ICT on teaching and learning are important factors motivating teachers to integrate ICT into the curriculum. On the other hand, insufficient technical supports at schools and little access to Internet and ICT prevent teachers to use ICT in the classroom. The study has pedagogical implications that can benefit teachers who teach in high-stakes test contexts.

Depending on the fact that teachers’ attitude is a major predictor in the process of ICT integration, Kizil (2011) investigated the ICT usage and the attitudes of high school EFL teachers in Turkey towards ICT. Additionally, this study focused on the relationship between computer attitudes and extension of ICT usage, computer attributes and personal characteristics. The data gathered through a questionnaire from in-service EFL teachers (n=76) working at state schools were analysed by using descriptive statistics and Pearson Correlations. The findings suggest that the most widely used ICT tools are gradebook, Internet, software for repetitive practice, processing texts, interactive exercises and PowerPoint presentations. It was also found that EFL teachers hold positive attitudes towards
the use of ICT for educational purposes: they regard computers as advantageous over traditional methods of instruction and suitable for their curriculum goals. However, the responses indicate that insufficient class time and inadequate training opportunities are the major obstacles in the process of ICT integration.

The study conducted by Hismanoglu (2012) investigated the perceptions of prospective EFL teachers in the distance higher education system toward ICT implementation in teaching English as a foreign language. The majority of respondents who expressed negative attitudes to ICT integration found the nature, level and delivery of the training inadequate and accordingly affirmed that they do not feel sufficiently competent to use ICT in their future subject teaching without having sufficient prior knowledge of ICT dissemination. The results of the study imply that training that will enable teachers to become competent in and receptive to ICT is quite critical in distance education realms.

2.12. Conclusion

This chapter was dedicated to the concept and theories of ICT in ELT at the first glance and then all the related issues were discussed and compared with works done. Those issues which were interdisciplinary were also brought in detail to be taken up in the next chapter. The study has come to the stage where the researcher can use the tool to analyze the goals.