

TECHNOLOGY INTEGRATION IN ENGLISH LANGUAGE TEACHING AND LEARNING

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Abstract. *Technology has improved rapidly in recent years and this improvement is affecting the field of education as it is in every field. In this context, traditional education methods have become inadequate as the technology is also rapidly changing students' expectations and learning habits. The effective use of information and communication technologies in education is mainly based on increasing the learning speed of the students during the education process, reducing the cost and providing effective learning. The rapid progress of technology makes technology usage indispensable for foreign language teaching and learning as well. The purpose of this study is to address the importance of ICT tools in the teaching-learning process of basic English language skills and to introduce the technology integration process for English language teaching and learning. It is understood that the integration of technology in English teaching and learning is of great importance in the development of basic English language skills such as listening, reading, speaking and writing. The hardware and software technological tools used in English language teaching and learning can make many contributions both to teachers and students in terms of repeated use of materials, availability of materials everywhere and at all times, costless or low cost of materials, and effective learning in a short time. As a result of this study, it can be said that the process of technology integration needs to be carried out consciously and in a planned way in order to make significant contributions to the use of technology, which is an essential task for teachers. Consequently, it should not be forgotten that the technology is to be effectively integrated into English language teaching and learning, and if the integration is not effectively done, on the contrary, technology may have a negative impact on the students' learning process.*

Key words: *technology, ICT, integration, English, teaching, learning*

1. INTRODUCTION

The technology that has entered every area of our life day by day, has also affected the field of education. Thus traditional education methods have become unable to meet expectations. Especially when it is thought that digital native students prefer to learn in the technological environment, it is necessary to use technology in education environments (Kurt, Gunuc and Ersoy 2013). In addition, through the use of information and communication technologies (ICTs) such as interactive boards, tablet PCs, smartphones, the Internet and computers in education, it is possible that class engagement increases, the lessons become more productive and fun, learning becomes more effective and students become more

motivated (Gunuc 2016). Besides, the use of ICT in education can increase learning speed of students, reduce the cost of education and appeal to different learning styles. In addition to all these, it is necessary to integrate technology in order to be able to benefit from the use of ICT for teaching and learning purposes.

The concepts of technology integration and technology use in education are separated in some ways. However, although it is sometimes seen in literature that these concepts are used interchangeably, it cannot be said that this is a correct use. The use of ICT in teaching and learning is limited to some extent, along with being a general concept. In other words, the use of every ICT form for teaching and learning does not mean technology integration or does not make significant contributions to the teaching-learning process (Gunuc 2016). Technology integration is a process that requires a systematic approach. One of the main reasons why ICT use cannot always make significant contributions to education is that ICT use is unplanned and unintentional, but also not routinely done. ICT can provide great contributions to the learning and teaching process when it is planned and integrated into the course for a specific purpose. However, the use of ICT in the class is generally used as a teaching tool which is temporary, spontaneous, non-focused learning. For this reason, in particular, the process of integrating ICT has been considered in this study. Integration of ICT in education is used in foreign language discipline as well as in many areas and provides some contributions. Through the integration of technology in foreign language education, students can learn by practicing and being entertained without memorization. Students can develop their language skills (i.e. reading, listening, writing and speaking) via various software in the classroom as well as easily accessible tools and technology-based materials outside the classroom through the Internet.

Recently the use of ICT in English language teaching and learning has had a considerable impact. The strong link between technology and English language teaching and learning motivates many English teachers and students. In this context, the ICT for foreign language teaching and learning provides a very favorable environment and facilities. It is difficult to say this for each discipline of teaching and learning. In order to integrate ICT tools into the field of English Language Teaching (ELT), there is a need for all education stakeholders to support the integration process in order to make effective planning and cooperation. In this context, teachers and decision-makers have a great responsibility (Al-Mohammadi and Derbel 2014). Although all training stakeholders are responsible for the integration process, as the main actor, the teacher must be responsible for the entire process and the student should be in the center. Teachers have the most important task in this process. It is necessary for English teachers to be aware of the importance of effective technology integration when it is thought that the integration of ICT in ELT would increase the motivation and academic performance of English as a Second Language (ESL) students (Al-Mohammadi and Derbel 2014).

The purpose of this study is to address the importance of ICT tools in the teaching-learning process of basic English language skills (reading, writing, listening and speaking) and to introduce the technology integration process for English language teaching and learning.

2. TECHNOLOGY INTEGRATION AND ENGLISH LANGUAGE TEACHING

The integration of technology in education has been handled by some researchers as the use of technology in teaching environments while some researchers handled as technology use sufficiency. Pierson (1999) considered technology integration as an effective transfer of teachers' technological, pedagogical and content knowledge to their students. Woodbridge (2003) defined technology integration as a teaching strategy. Technology integration is more than just using a strategy, method or technology (Gunuc 2016). The concept of integration is the bringing together of two separate products, systems or tools developed for different purposes, to realize another purpose. However, the more appropriate and systematic this integration is, the more effective and successful the integration will be. The concept of technology integration is basically the effective use of technology in the education system and the benefit of technology in teaching and learning process.

In English teaching and learning, ICT tools are considered to be the most important components of teaching-learning environments due to their important contributions to structuring the teaching process in a way that appeals to many sensory organs, helps students meet their individual needs, draws attention to them, facilitates remembrance, saves time, embodies abstract concepts. Barron, Orwig, Ivers and Lilavois (2001) define the benefits of technology integration as following:

- Encourages students to learn actively, cooperatively based on learning and critical thinking
- Supports various learning styles of students
- Provides individual development and motivation
- Increases teacher-student interaction
- Improves communication skills
- Helps students build cultural bridges.

Many definitions of technology integration have been made in the literature. These definitions are quite different from each other. For this reason, the process of effective technology integration needs to be understood in order to understand exactly what technology integration is and what is not. Thus, this process and stages will enable us to better understand the concept of technology integration in English Language Teaching.

3. PROCESS AND STEPS OF EFFECTIVE TECHNOLOGY INTEGRATION

The technology integration process can be defined as 'learning the technology', 'using technology in the teaching process', and 'integrating the technology to enhance student learning' (Dockstader 1999). In this context, firstly, the teachers need to acquire their own technology competence and they are expected to integrate this achievement into the teaching process and deliver it to the students (Gorder 2008). Technology integration should be done by focusing on student learning and student component should be taken as basis in all integration processes (Gunuc 2016).

Gunuc (2016) stated that for the successful and effective technology integration process in English and other disciplines, the following suggestions should be taken into account, especially by teachers:

- The teacher should know the students' ownership, accessibility and readiness for ICT and should work on the technology considering the individual differences of the students.

- Student-centered approach should be focused while using technology.
- The technology use should be planned in such a way that it can provide flow of English learning of students.
- The achievements that students are required to reach in listening, reading, speaking and writing skills, should be identified and technology should be used based on these achievements.
- Technology should be used in such a way that students can use English language creatively and develop basic English skills.
- Students should be encouraged to use technology for learning purposes.
- Technology should provide an environment for using high-level thinking skills such as critical thinking and creative thinking.
- Technology should facilitate students' cooperative learning both inside and outside the classroom.
- Technology should facilitate the acquisition of English language skills.
- Technology is a must in the activities related to English language skills.
- Technological environment should be adapted to English teaching and learning and the technology infrastructure should be organized in this direction.
- The teacher should evaluate and improve himself/herself on his/her technological competence.
- The teacher should follow up-to-date technologies that can be used in the discipline of English, and should carry out the appropriate ones in the class/curriculum.
- Technology should be used regularly throughout the term in the English language curriculum and ICT tools should be selected for each subject or activity.
- Learning environments should be based on problem-solving, collaborative, active and constructive technology.
- Social interaction design should be developed in the digital environment for basic language skills such as listening, reading, speaking and writing.
- The teacher should integrate the technology in a planned and purposeful manner at the point of acquiring English language skills.

These steps and stages in the integration process are crucial to the success of technology integration in English language discipline. Apart from these steps and stages, the use of unplanned, haphazard technology is far from the integration process, and can damage rather than contribute to the benefit of technology in learning outcomes.

4. CONTRIBUTIONS OF TECHNOLOGY TO ENGLISH LANGUAGE SKILLS

For the above-mentioned effective technology integration process, it is necessary to use some common hardware and software tools. At this point, the teacher should know the socio-cultural structures of the students in the class, their qualifications, economic levels, technology ownership, which technology tools they prefer to use and their perceptions, attitudes and beliefs about technology. Thus, at the beginning of the teaching period, according to these data, it is possible to plan more effectively which teaching tools and concepts will be used. Effective learning is more likely to take place with students with an appropriate course and appropriate method and appropriate technology. In this context, technology integration should be done not only within the classroom but also out of class, especially using mobile technologies. In the classroom the use of tools such as interactive

boards, computers, projectors and tablet PCs, and the use of tools such as the internet, smart phones and PDAs outside the classroom, provide a constant engagement to learning with students. Technology tools such as interactive boards, tablet PCs and smartphones are important in terms of taking advantage of the learning effects of multimedia items (video, picture, sound, animation).

The use of interactive board can be said to enhance students' ability to memorize materials, to provide effective and active learning, and to encourage students at the point of reinforcing previously learned material. It is seen that the attitudes of the teachers and the students towards the interactive board are positive. Language teachers indicated that interactive board use had a positive and sometimes dramatic effect on language teaching and changed their role within the class. An important point to note in the integration of this tool is that it is important that the interactive board is certainly used by the students in the course of teaching activities. Another ICT tool is tablet PC and PDA. Yet there are not enough comprehensive studies on the effectiveness of tablet PCs on foreign language teaching-learning. Nevertheless, some studies have shown the contribution of tablet PCs and PDAs to the educational environment (Chen and Hsu 2008; Golonka et al. 2014; Lan, Sung and Chang 2007). At the point of use of these tools in foreign language education, there are some problems with pedagogical approaches and integration. In this context, methods and approaches should be developed in which technology can be used more effectively. Because technology integration requires updating teaching method and classroom management. Like tablet PCs, smartphones are also important. Experimental studies on the effectiveness of smartphones in foreign language learning have focused on short messaging or instant messaging (Stockwell 2009). However, the number of smart phones is growing more and more every day, and they include many facilities, especially internet. At this point, it has become easier for students to continue learning outside the classroom and active participation in teaching-learning activities. Students may be more inclined to learn using mobile technology (Gunuc and Kuzu 2014; Thornton and Houser 2003, 2005). For this reason, these technologies should be integrated into the classes as much as possible. It is especially important for the teacher to integrate these technologies in order to achieve the following language skills.

4.1. Listening skill

One of the basic skills in English language is listening skill. According to Brett (1997), listening skill plays a vital role in language acquisition. Listening involves understanding the accent, pronunciations, intonation, meaning of words and meaning of speaking (Saricoban 1999). The audience should be able to understand all these factors at the same time. In this context, listening skills are very important in ESL (Nomass 2013). As for listening skills of students, it is important that multimedia technology is integrated into English teaching and learning. Multimedia technologies such as audio, video and animation are becoming commonplace and becoming a potential tool for listening. Media tools, such as radio and TV programs (Nomass 2013), increase students' listening skills and increase self-confidence in terms of listening and also increase using media when it is not always possible to reach native speakers or teachers. The use of computers in listening activities provides visual and auditory inputs that enhance listening skills and contributes to listening skills (Hoven 1999). With the use of tools such as radio, audio-tapes, podcasts, tap recorders, IPODs and videos in English teaching and learning,

students can comprehend intonation and learn the pronunciation of words and experience different accents (Nomass 2013).

4.2. Reading skill

There are many technological tools that can be used to develop reading skills in English teaching and learning. Levine and colleagues (2000) described text reading as one of the important problems in learning English language. At the time of reading, the student can acquire new knowledge and ideas which can improve the knowledge of English vocabulary. According to Case and Truscott (1999), students can interact with texts and develop their sense of independence by reading texts with computer-based reading activities. Current findings indicate that students benefit from technology-integrated text reading instruction. Students can improve their reading skills with tools such as browsing the Internet, using multimedia software, using electronic dictionaries and gloss, reading newspapers/books on the internet, and using reading-based computer programs (Nomass 2013). Reading-based computer programs, electronic glossaries and electronic dictionaries increase students' vocabulary while the use of multimedia software provides motivation. On the other hand, reading magazines, newspapers, encyclopedias (Kenworthy 2004), which can be reached through the internet, make a great contribution to the development of reading skills of students (Nomass 2013). Websites that teach English make reading activities as enjoyable as much as possible and offer the opportunity to interact with vocabulary learning. Students have become able to understand concepts and relate concepts with the help of English reading materials, containing storytelling or animation.

4.3. Speaking skill

Speaking skill, which can be said to be the last achieved language skill, can be seen as an important problem when learning English language. This skill can be improved with technology support more easily. According to a study by Bachate (2016), language laboratories are influencing students' communication skills and speaking skills positively. On the other hand, with the help of software such as Internet voice chat and speech synthesis program, ESL students can work on speaking. Internet voice chat (eg, Jepson, 2005) programs are very useful in speaking skills and this program is a useful tool for students to have a chance to talk to native speaker anytime and anywhere. On the other hand, artificial intelligence computer programs can improve speaking skills and such programs contribute to vocabulary as well as pronunciation (Nomass 2013). In addition, it has been observed that the use of automatic voice recognition in mobile applications has improved pronunciation skills and increased motivation (Ahn and Lee 2016). A study by Sun and colleagues (2017) found that social networking systems have improved the speaking skills of ESL learners. A study by Hwang and colleagues (2016) found that web-based storytelling enhances student motivation, promotes creativity and imagination, and provides students with more opportunities to practice speaking.

4.4. Writing skill

According to researches on the use of technology in the teaching of English writing, technology has encouraged and supported students' writing skills in terms of quality, and encouraged students to write (Lam and Pennington 1995; Bialo and Sivin-Kachala 1996;

Fidaoui, Bahous, and Bacha 2010). In addition, according to Blachowicz and colleagues (2009), the use of ICT tools in teaching writing skills allows students to discover themselves and supports their independence. On the other hand, it can be easier and more fun to do writing work on computer programs as errors can be easily determined by software. Through Wiki, for example, ESL students can do italics, make underline, change colors, change font size, and even control spelling and grammar with the help of the program (Nomass 2013). In this context, the use of technology in writing skills can be motivating and fun for ESL students.

One of the popular tools that are widely adopted in the teaching of writing skills is blogs (Yunus, Nordin, Salehi, Redzuan and Embi 2013). According to Kelly and Safford (2009), blog writer provides a real-digital environment for communication. It is not only a tool for writing text, it is also a tool that offers multiple viewers and access points. According to Lenhart and colleagues (2008), blogs have become common platforms for young people to express their thoughts and there is evidence to support that the majority of students with personal blogs tend to be writers. On the other hand, in addition to blogs, writing via e-mail, social networks and internet text chatting students can interact with someone else. Thus, students can improve their writing skills with the help of real-like activities. The e-portfolio is an electronic archive that shows students' experiences, progresses and achievements and also includes writing studies written by them in the process. The e-portfolio, which supports students' self-evaluation and autonomy, emphasizes the process of products. On the other hand, e-portfolios help students to reflect their language skills and knowledge. In this context, it is a tool that can be used in terms of the development of writing skills. According to West (2008), when teachers move from traditional written answers to online forums, students can create their own style and personality in their work. The reason for this is that students realize that there is an online social context for their work and so they try to influence their peers. However, especially when social networking activities such as Facebook, Twitter, etc., are being organized, it is necessary to pay attention to the writing style of social networks. Abbreviations or emojis can sometimes be an obstacle to the development of writing skills. On the other hand, social networks with character limitations like Twitter can encourage students to use language effectively.

5. DISCUSSION AND CONCLUSION

It is understood that the integration of technology in English teaching and learning is of great importance in the development of basic English language skills such as listening, reading, speaking and writing. The hardware and software technological tools used in English language teaching and learning can make many contributions both to teachers and students in terms of repeated use of materials, availability of materials everywhere and at all times, costless or low cost of materials, and effective learning in a short time.

As a result of this study, it can be said that the process of technology integration needs to be carried out consciously and in a planned way in order to make significant contributions to the use of technology, which is an essential task for teachers. The fact that teachers have positive perceptions, beliefs and attitudes about technology, like students, affects technology integration (Chen 2008; Lim and Chai 2008; Mama and Hennessy 2010; Teo 2009; Vannatta and Fordham 2004; Valezquez 2008), as well as being one of the preconditions for effective and successful technology integration (Gunuc

2016). Although teachers and management generally have a positive look at technology in general in literature, the existence of serious problems in the use and integration of technology strengthens the judgment that the use of technology does not go beyond perception and attitude in terms of teacher and management. In addition, teachers' use of technology, knowledge and skills seem inadequate (Hew and Brush 2007). However, it can be said that teachers with high technology usage knowledge have higher technology integration competencies (Hsu 2010). A significant number of teachers do not know how to integrate technology and how to use it in their own disciplines (Gorder 2008; Inan and Lowther 2010; Valezquez 2008). In this regard, in the undergraduate education, the skills gained for teaching practice should be reviewed.

Teachers' another problem with technology integration is time. Teachers need time to prepare English multimedia materials as well as integrate technology in lessons. Some teachers fail to find extra time, while others fail to manage time effectively. Another issue for teachers is how to make 'classroom management' in the classrooms where technology is used. Because knowledge and experience of classroom management is a necessity that needs to be updated in classrooms where technology is used.

Technology can lead to motivation and attention as well as loss of time, classroom control, disruption of communication and distraction, especially when effective technology integration is not done by the teacher (Wilson and Whitlock 1998; Yunus et al. 2013).

Consequently, it should not be forgotten that the technology is to be effectively integrated into English language teaching and learning, and if the integration is not effectively done, on the contrary, technology may have a negative impact on the students' learning process.

A limitation of this study is that it is focused in particular to the contribution of technology to English teaching and learning. In the literature, it is also known that technology causes some drawbacks in the teaching and learning process. Although these are not serious negatives, at least in some experimental studies, there were no significant differences in student achievement between technology and traditional methods. However, the scientific methods and results of these studies have not been discussed in this study. A suggestion for future works is that effective technology integration environments should be provided first, and then experimental work should be done to reveal the effects of technology.

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