

Md. Mukibuzzaman Khan & Ms. Imrana Islam. 2020. “**Technology Enhanced Language Learning and Teaching for the Tertiary Level Students of Bangladesh: Possibilities and Challenges**”. *IUBAT Review* 3 (1): 67-79. iubat.edu/journal

Technology Enhanced Language Learning and Teaching for the Tertiary Level Students of Bangladesh: Possibilities and Challenges

Md. Mukibuzzaman Khan ^{1,*} Ms. Imrana Islam ²

¹ Department of English, Faculty of Arts, Eastern University, Bangladesh, Dhaka, Bangladesh

² Department of English, Faculty of Arts, Stamford University Bangladesh, Dhaka, Bangladesh

*Corresponding author: E-mail: mukibuzzaman@easternuni.edu.bd

ABSTRACT: *The use of technology has been increasing in higher education for decades and educational research has demonstrated different ways of integrating the use of technology into ESL teaching. The expansion of the information and communication technology has provided ESL teachers with the technological tools that can be implemented as pedagogical instruments in classrooms. The research, therefore, focuses on participants’ views regarding the integration of technology in language learning activities and the educators’ views on the possibilities and challenges of technology enhanced language teaching in ESL classrooms in Bangladesh. The study explores the participants’ views through a survey among sixty tertiary level students of three institutions and sixteen language teachers of the same institutions. The findings of the research are useful for ESL teachers to know about the possibilities and challenges of using technology in ESL teaching in Bangladesh.*

KEYWORDS: *TELL, tertiary level students, challenges, opportunities, effective use.*

1. Introduction

Technology enhanced language learning and teaching is becoming the trend in second language teaching in developing countries due to the impact and influence of information technology on society. Over the century, researchers have demonstrated different ways of integrating the use of technology into ESL teaching to observe the effect on learning. Along with the development of information and communication technology, the use of computers and internet has started to play an increasingly important role in education. In spite of this development of technology in education, teachers face many challenges.

Learning English is mainly an attempt to communicate with individuals. Because effective teaching is based on communication, the goal of English teaching is exactly to develop the ability of students to communicate with people in a new language in real world situations (Brown, 1987; Widdowson, 1978). However, in Bangladesh, English teaching does not completely provide learners a real and natural English environment. In most of the institutions the prevalent mode of instruction is conducted in large groups; classes are teacher-centered and learning styles are deductive and mostly exam oriented, text-based lectures are given. Therefore, there are very few prospects for the learners to practice what they have learned flexibly in daily life. Moreover, class sizes are too large; there are limited opportunities for individual students to have one-to-one communication with the teachers. With the advancement of technology, computers have become more accessible to both individuals

and institutions. Moreover, the awareness of the potentials of the computers has encouraged both the teachers and learners to use computers for enhancing teaching and learning. The use of internet enables English learners to access useful language resources and communicate directly with native English speakers. Students can learn listening, speaking, reading and writing skills interactively via real world situation.

The study examined the present situation of TELL in classrooms of Bangladesh. The insights gained through this study can help the ESL teachers to have an awareness of the scopes and challenges of using technology in teaching language to design better learning environment in terms of classroom management, assessment and curriculum design.

2. Objective of the Research

There has not been wide research on the impact of the application of technology in ESL learning in Bangladesh. The study intends to find out the present situation of the use of technology in ESL classrooms in Bangladesh and the problems teachers face while using technology in classrooms at tertiary level. Moreover, it highlights the scopes of technology use in Bangladesh. The research intends to find answers to the following research questions:

1. What are the possibilities of Technology Enhanced Language Learning in Bangladesh?
2. What are the challenges of Technology Enhanced Language Learning in Bangladesh?
3. How the emersion of technology can be used more effectively for ESL teaching?

3. Literature review

Over the past several decades, studies analyzing the relationship between technology and second language learning have tended to focus on several key issues, including motivation and mastering the basic skills. While computers have been popular among language teachers since 1960s, their usefulness has been amplified by the development of internet use in ICT. Warschauer (2000) stated that the existence of internet provides the potential powerful use of online communication in language and writing classes. Moreover, the advent and application of technologies have been immensely successful in allowing students to learn independently or collaboratively through the internet. Academics (such as Gallego, 1992; Gascoigne, 2006; Salaberry, 2001) have demonstrated the effect of TELL on increasing motivation among students to master basic English skills to become more engaged in the learning process.

The use of multimedia technology for foreign language instruction has expanded rapidly during the past two decades. Studies of the influence of technology-enhanced instruction on language learning have also appeared in growing numbers (Abrams, 2002; Al-Jarf, 2004; Osuna & Meskill, 1998; Salaberry, 2001; Weininger & Shield, 2003; Yang, 2001). Previous researches indicate that computer-mediated language learning can facilitate communication, reduce anxiety, encourage oral discussion, develop thinking abilities, nurture social or cooperative learning, enhance students' motivation, and improve writing skills. That means technology can play a major role in many of the major areas of language acquisition process.

A significant amount of literature has explored the potentials of computer technology with regard to teaching and learning languages more effectively. The possibilities of computer technology as a tool could include increasing language learners' self esteem, vocational preparedness, language proficiency and overall academic skills (Dunkel, 1990). Educators were particularly interested in technology's interactive capabilities, such as providing immediate feedback and increasing learner autonomy, in addition to the capability of simulating real-world situations via audio, video, and graphics (Chun & Brandl, 1992; Hoffman, 1995/1996; Jones, 1991, Legenhausen & Wolff, 1990).

Today, technology has become integrated into the classroom physically and pedagogically. Garrett (2009) defines CALL as the integration of technology into language learning with its various elements of theory and pedagogy. Early researches indicated that providing teachers with access to multimedia technology is not adequate; it is necessary to induce teachers of the benefits and advantages of using technology in instruction. Studies also suggested that professional development is needed to focus not simply on how to use technological tools but how to effectively integrate technology in a pedagogically sound way. Teachers' attitude towards using technology-enhanced multimedia in the classroom depends on their perceptions of its usefulness for instruction and its ease of use. Besides English language teaching and learning, technology has long been used in English for Specific Purpose. ESP teachers have always used accessible tools to develop materials and create situations pertinent considering

students' needs (Arno-Macia, 2012). However, some educators (such as Winnans & Sardo Brown, 1992; Zammit, 1992) also reported that there is a lack of professional development to prepare teachers for the integration of technology into the curriculum. Despite extensive research on the impact of the advancement of technology in language learning process, literature shows that the factors have always been examined in isolation, and therefore it is important to see their combined influence on how technology is used and integrated in the classrooms (Miranda & Russell, 2011).

According to Guikema and Menke (2014) technology is a game changer in education. That is why a particular challenge in this area is to make teachers techno-smart. To make the technology enhanced language teaching most effective teachers need to be well prepared and equipped on a regular basis. On the other hand, regarding technology being a game changer in education, Kessler (2018) mentioned about contextualization of culturally compelling technological trends that can be utilized to extend language learning both inside and outside of classroom. According to him, emerging technological trends will lead language teaching towards new dimensions and mediums in future.

Therefore, to have a clear perception of the benefits of TELL on language teaching and learning, this paper examines technology related choices made by language teachers and observe teachers and students while they are using technology to determine the strengths and weaknesses of its perceived effects

4. Research Design

Data for the research has been collected through a survey conducted among 60 students of tertiary level of three institutions and 16 teachers teaching at tertiary level. The research is both quantitative and qualitative in nature. The survey was done with different sets of questionnaire for teachers and learners to identify their perception of using technology in ESL learning. The purpose of the survey was to find out the scopes and difficulties of using technology in Bangladesh. Later on, these data were analyzed from personal evaluation of the researchers. Collected data have been qualitatively content analyzed. Sources of data used in this research will help present practitioners of ELT in Bangladesh to develop their teaching strategies and widely use technology in ESL teaching and learning in Bangladesh.

5. Data Collection and Analyzing Procedure

The data was collected both in formal and informal setting by doing a survey. For this purpose, a questionnaire was distributed among 60 tertiary level students of two institutions; also another survey was conducted by distributing a questionnaire among 16 ESL teachers teaching in three institutions based in Dhaka to get a perception of the present practices of the use of technology in language learning and teaching. The research also tends to find out the challenges and benefits of using technology in teaching and learning ESL in Bangladesh.

6. Data Analysis

The two sets of questionnaires were prepared by blending both open-ended and close-ended questions to obtain both

qualitative and quantitative data from the participants

From the survey it was found that most of the teachers were teaching language for more than ten years. Ten teachers (62.5%)

classrooms. Therefore, it is seen that there are computers in every classrooms but there is lack of internet support for language teaching. The teachers were asked about having computers with internet connection

Table 1: Familiarity with the computer software/operation

Total number of teachers: 16					
Computer Operations	cannot use	can use it at a small extent	satisfactorily	properly	efficiently
↓ Word processing	nil	1(6.25%)	3(18.75%)	9(56.25%)	3(18.75%)
Excel	1(6.25%)	6(37.5%)	5(31.25%)	3(18.75%)	1(6.25%)
Power point	nil	1(6.25%)	5(31.25%)	7(43.75%)	3(18.75%)
Internet	nil	nil	1(6.25%)	9(56.25%)	6(37.5%)
Email	nil	nil	1(6.25%)	7(43.75%)	8(50%)

said that there are computer laboratories in the universities. Four of them (25%) said that they don't have any computer laboratory in the university. However, two teachers mentioned that there is computer laboratory in the department in which the computers are not functioning. In response to the question, regarding the number of computers in the teachers' office, seven (43.75%) teachers mentioned that there are separate computers for each of the teachers. Around thirty one percent (31.25%) of them asserted that one computer is assigned to three teachers; however, 25% said that there is only one computer in the teachers' room. Concerning computers with ICT facility in the classrooms, 62.5% teachers agreed that they have computers but no internet facility in classrooms. Thirty seven and half percent (37.5%) teachers mentioned that there are computers with internet facility in the

at home. 80% replied in affirmative but 20% said that as they do most of their work in office.

Questionnaire distributed among teachers

Table 1 shows that in response to the question, regarding competency in using computer, 56.25% teachers replied that they can properly use word process software and 18.75% can properly use Microsoft excel; 18.75% can use word process efficiently and only 6.25% can use excel efficiently. Another 18.75% and 31.25%

Table 1 shows that in response to the question, regarding competency in using computer 56.25% teachers replied that they can properly use word process software and 18.75% can properly use Microsoft excel; 18.75% can use word process efficiently and

only 6.25% can use excel efficiently. Another 18.75% and 31.25% can use word process and excel satisfactorily. Around forty four percent (43.75%) teachers said that they can use PowerPoint properly while 31.25% mentioned that they can use it satisfactorily. More than eighteen percent (18.75%) commented that they are efficient in using PowerPoint and only 6.25% said that they can use it to a small extent. Around fifty six percent (56.25%) teachers can use the internet properly and 43.75% can use emails properly. Thirty-seven and half percent (37.5%) can use internet efficiently. Fifty (50%) of the participants are efficient in using emails and 6.25% can use the internet and email satisfactorily.

presentations. More than eighteen percent (18.75%) teachers use computer once a week while only 6.25% use almost every day for making presentations. Fifty percent (50%) of the teachers use computers once or twice a week for word processing. Twelve and half percent (12.5%) of the participants use computer for word processing once or twice a month. Concerning their use of computers for writing and reading articles, 43.75% teachers stated that they use computers once or twice a semester; 25% use computer once or twice a month however, 18.75% commented that they have never used computer for writing or reading articles. Around fifty six percent (56.25%) of the teachers commented that they use excel

Table 2: Purpose of using computer

software once or twice a semester for

Table 2: Purpose of using computer				
Total number of participants: 16				
Never	Once or twice a semester	Once or twice a month	Once or twice a week	Almost every day
Prepare presentations				
2(12.50%)	5(31.25%)	5(31.25%)	3(18.75%)	1(6.25%)
Word process				
nil	1(6.25%)	2(12.5%)	8(50%)	5(31.25%)
Articles/journals				
3(18.75%)	7(43.75%)	4(25%)	1(6.25%)	1(6.25%)
Excel				
3(18.75%)	9(56.25%)	2(12.5%)	2(12.50%)	nil
Email				
nil	1(6.25%)	2(12.5%)	5(31.25%)	8(50%)

From the data of table 2 it can be seen that 12.5% teachers never use computer for presentations while 31.25% use once or twice a semester. The percentage rate is same with the users using computers once or twice a month for making

preparing grade sheets. Very few of them, around 12.5%, use excel once or twice a week but about 18.75% have never used excel software.

It is found that 50 % teachers use computers for emailing everyday although 31.25 % check emails once or twice a week Table 3 describes the perception of the participants about using technology in teaching language. It is found that 56.25% teachers agreed that they feel comfortable in using technology in language teaching and 37.5% completely agreed to it; however, 6.25% were neutral in their opinion. In response to the question whether the participants think the use of computer is a pressure on them, 31.25% teachers disagreed; however, only

6.25% teachers said that use of computer is a pressure on them. Among the participants 37.5% completely agreed and 31.25% said that they feel very excited to use computers as a tool to teach language. It can also be noted that 25% participants were neutral in their opinion while 6.25% showed disagreement with the statement. 43.75% participants think that they can solve any kind of computer related difficulties. 31.25% participants gave neutral opinion about this, but 18.75% teachers showed complete disagreement. While giving their view about

Table 3: Perception about using technology in teaching language				
Total number of participants: 16				
Completely disagree	Disagree	Neutral	Agree	Completely agree
Comfortable to use computer as a language teaching tool				
nil	nil	1(6.25%)	9(56.25%)	6(37.5%)
Using computer in teaching is a pressure				
4(25%)	5(31.25%)	nil	1(6.25%)	nil
Use of computer is exciting				
nil	1(6.25%)	4(25%)	5(31.25%)	6(37.5%)
Lack of knowledge about repairing computers				
3(18.75%)	7(43.75%)	5(31.25%)	1(6.25%)	nil
Valuable tool for teachers				
nil	nil	1(6.25%)	6(37.5%)	9(56.25%)
Changes the way of learning				
nil	1(6.25%)	2(12.5%)	5(31.25%)	8(50%)
Helps teachers to teach more effectively				
nil	1(6.25%)	2(12.5%)	4(25%)	9(56.25%)
Technology support in language teaching is good in Bangladesh				
1(6.25%)	5(31.25%)	5(31.25%)	4(25%)	1(6.25%)

computer as valuable tool for teaching language, 56.25% of the participants completely agreed and 6.25% gave neutral opinion. 37.5% of the participants also agreed with the majority that computer is a valuable tool for teaching language, but no one completely disagreed with the statement. 50% of the participants completely agreed that the use of computer in teaching language will change the way the students learn in class rooms. There will be innovations in the teaching and learning process. Around thirty one percent (31.25%) also agreed to this statement. While 6.25% teachers said that it will not change the students' learning process, and the rest, 12.5% teachers provided neutral opinion. Almost fifty six (56.25%) teachers strongly opined that computer is a helpful tool for teachers to teach effectively. Twenty five percent (25%) of the participants also agreed to the statement. Only 12.5% participants remained neutral in their perception and 6.25% disagreed. However, no one completely denied that computer is a helpful tool for teaching effectively. The teachers were asked to give the participants' view about the present situation of technology support in teaching and learning in Bangladesh. Among them, 31.25% participants disagreed and the percentage rate is same for the participants who were neutral, but 6.25% gave very strong negative perception about technology support in Bangladesh.

All the participants were asked to answer some open ended questions to provide their perception about technology enhanced language teaching. The findings from the data are discussed below.

The first open ended question was- How much time saving or time killing is it to use computer?

All the participants responded to this question and fifteen out of sixteen teachers replied that technology helps them to save their time. Around six percent (6.25%) of the participants replied that it depends on how the teacher is using technology and the logistic support in classrooms. Therefore, they mentioned that it is important to give more effort and time in selecting and preparing materials for the class.

The second question was- How has the use of technology affected your students?

All the teachers explained elaborately in response to this question. The key points from their responses are:

- Technology and its tools have made the students more involved in studies as it helps them understand the lesson very clearly.
- Some of the students also try to misuse the support of technology in the examination hall by adopting unfair means.

The third question was asked to know the situations that cause the teachers to consider using technology in classrooms.

50% of the participants replied that they use technology as visual aids

The last open ended question was- What problems do you face while using technology in teaching language?

All the participants highlighted the problems while using technology to teach language. From their responses the following major problems were found:

- Lack of logistics support or minimal logistic support in the classroom.
- The internet speed is much reduced at the pick hour, so it is difficult to use computers during day classes.
- No scope for training computer basics to the users in the institutions. As a result, most of the users have to depend on others for solving problems related to computer software.

Analysis of the questionnaire distributed among students:

The survey was conducted among sixty students from three institutions. The findings of the data are explained in this section.

91.6% participants said that they always use internet for communication. 58.3% of them mentioned that they usually use internet for gathering knowledge and to get information about something. However, 70% students mentioned that they usually use internet for entertainment. 13.3% sometimes use for entertainment and 5% always use internet for entertainment. 25% usually use internet to get help for studies and 33.33% sometimes use internet for this purpose; however, 8.3% students asserted that they have never used internet to get help for their studies. Therefore, it is found that almost every student uses internet for communication and entertainment

Students’ attitude towards the use of

Table 4: Use of technology in Everyday life		
Statements	Yes	No
↓		
Have personal computers or laptops	50 (83.33%)	10 (16.66%)
Have internet access in their computers or laptops	40 (66.66%)	20 (33.33%)
Have smart phones with internet access	25 (41.66%)	35 (58.33%)

From the table 4, it can be observed that all the participants are using technology everyday. Around eighty three percent (83.33%) have either personal computers or laptops and 66.66% have access to the internet in their computers. Some of them, 41.66% said that they use smart phones with internet connection for learning. 16.66% students mentioned that they don’t have personal computer or laptop They always use the computer laboratory of their universities to fulfill their purposes.

From the reflection of table 5 students’ purpose of using internet can be explained.

technology by their teachers in classroom teaching

Table 6 shows that 66.6% participants admitted that their teachers sometimes use multimedia in classrooms; 16.6% said that their teachers usually use multimedia for teaching. Three percent (3%) of them asserted that multimedia is always used by their teachers in classrooms; however 11.6% gave a negative reply. Concerning getting web-based assignments from their teachers, 53.3% mentioned that they usually are given web-based assignments; 28.3% admitted

Table 5: Purpose of using internet			
Total number of participants: 60			
Always	Usually	sometimes	Never
For entertainment			
3(5%)	42(70%)	8(13.3%)	7(11.6%)
For general knowledge			
3(5%)	15(25%)	30(50%)	12(20%)
To get help for studies			
20(33.33%)	15(25%)	20(33.33%)	5(8.33%)
For communication			
35(58.3%)	20(33.3%)	5(8.3%)	nil
To get information about something			
5(8.3%)	20(33.3%)	25(41.6%)	10(16.6%)

Table 6: Purpose of using internet			
Total number of participants: 60			
Always	Usually	Sometimes	Never
How often do your teachers use multimedia in classrooms?			
3(5%)	10(16.6%)	40(66.6%)	7(11.6%)
Do your teachers give you web-based assignments?			
nil	32(53.3%)	17(28.3%)	11(18.33%)
Do your teachers use internet for giving feedback for your work?			
5(8.3%)	20(33.3%)	27(45%)	8(13.3%)

that they sometimes get web-based assignments. 18.3% mentioned that they

never get web-based assignments. In the next question the participants were asked whether their teachers use internet to give feedback for their work. Forty five percent (45%) participants replied that their teachers

sometimes use internet for giving feedback. 33.3% reported that they usually get feedback through internet while 8.3% always get feedback through emails.

Nevertheless, 13.3% asserted that their teachers never use internet for giving feedback for their work.

Analysis of Qualitative data

Support of technology in improving Basic English skills

The key points from the responses are discussed. Majority of the participants said that using the digital dictionary, browsing internet for information, for learning language and for communication have helped them a lot to improve their English. Some of them said that some software for online collaborations and communications such as Skype is very effective for learning language. The participants also mentioned that use of technology has helped them to improve their writing skills as they get enough scope for practicing language skills in the internet. The key points from the responses are discussed. Majority of the participants said that using the digital dictionary, browsing internet for information, for learning language and for communication have helped them a lot to improve their English. Some of them said that some software for online collaborations and communications such as Skype is very effective for learning language. The participants also mentioned that use of technology has helped them to improve their writing skills as they get enough scope for practicing language skills in the internet.

Problems faced by the participants while using technology in language learning

Although the participants agreed that the class lectures have become interesting and sustaining because of the use of technology, there are some crucial problems that the participants face while using technology. The major problems are

- Very poor server connection and sometimes no server connection at all during the pick hours.
- Consumes time in browsing the internet for specific information from a bunch of related information.

- Lack of knowledge about basic computer mechanism resulting in incapability of repairing the computer during emergencies.
- Very less importance is given in studying textbooks.
- Some of the social networking sites adversely affect the students' language learning as the language of these sites is informal and non-academic.
- Causes despair in students about using internet as they don't have free access to all the online libraries and online articles.

6. Discussions

The analytical results of the study indicate that most of the students viewed the use of technology as an effective tool in language learning but many differed in their opinions regarding the logistic support in using technology in Bangladesh. Students enjoy innovative teaching enhanced by technology, rather than a traditional spoon-fed, lectured-based style of learning. The teachers can motivate their students to make them engaged in taking care of the bundles of information available online as a technique of inclusive learning. This study also focuses on some challenges of using technology in ESL classrooms. The technological hazards and the non-availability of computer labs are significant aspects of the implementation and integration of computer assisted learning in ESL class rooms in Bangladesh. Moreover, having individual computers in the universities is a serious challenge for both the teachers and students in Bangladesh. Moreover, generating awareness is a vital factor to the existence and acceptance of technology based language learning.

7. Recommendations

The crisis of English language teaching and learning and the lack of training in communicative language teaching require urgent responses from the educators, learners and institutions. Therefore, some probable suggestions were drawn from the research for implementing TELL effectively and successfully in Bangladesh:

- Ensuring equal access of the students to computers with ICT support in the educational institutions.
- Providing basic training on technical difficulties of computers and e-learning for teachers and students.
- Providing logistic support for using uninterrupted technology.
- Creating scopes for Teachers' training.
- A blended approach should be adopted which comprises online communication as well as face-to-face learning.
- Creating awareness among the users about the advantages and disadvantages of using technology in ESL learning

8. Conclusion

Based on the findings, the use of technology as a tool to meet the needs of L2 learners has a great potential in the development of the second language skills. The latest advance in computer technology has been providing L2 learners with innovative opportunities to learn each one of the four language skills beyond the classroom's walls. Technology promotes students' autonomous learning. In second language learning, the role of the teachers as an educator should be far beyond the classroom practices based on printed materials and text books. However, the

teachers need to be well trained before implementing technology in their courses.

Moreover, the prospects of technology are believed to be great enough to encourage the government of Bangladesh to meet up the growing needs of the educational institutions. Further research is needed to explain how technology can be used to support language learning i.e. what kind of technology based tasks and activities should be used in specified infrastructure. Such contextual factors can significantly influence the process of L2 learning in a technology supported environment. Therefore, L2 teachers must be ready to adapt TELL to the preset curriculum to meet the students' needs. The findings of the research will benefit L2 teachers by providing a better understanding of the importance of TELL and the benefits of technology as a tool to learn second language.

9. References

- Abrams, Z. I. (2002). Surfing to cross-cultural awareness: Using internet-mediated projects to explore cultural stereotypes. *Foreign Language Annals*, 35(2), 141-160.
- Al-Jarf, R. (2004). The effects of web-based learning on struggling EFL college writers. *Foreign Language Annals*, 37(1), 49-57
- Arno-Macia, E (2012) The Role of Technology in Teaching Languages for Specific Purposes Courses. *The Modern Language Journal* 96/Focus issue: 89-104.
- Brown, H. D. (1987). *Principles of language learning and teaching*. Englewood Cliffs, N.J: Prentice-Hall.
- Chun, D., & Brandl, K.K. (1992). Beyond form-based drill and practice: Meaning-enhancing CALL on the Macintosh. *Foreign Language Annals*, 25(3), 255-265.

- Dunkel, P. (1990). Implications of the CAI effectiveness research for limited English proficient learners. *Computers in the Schools*, 7(1/2), 31-52.
- Gallego, J. C. (1992). Learning languages via satellite: A report on a tele-class language exchange. *Foreign Language Annals*, 25(1), 51-58.
- Garrett, N (2009) Computer-Assisted Language Learning Trends and Issues Revisited: Integrating Innovation. *The Modern Language Journal* 93/Supplements 1: 719- 740.
- Gascoigne, C. (2006). Explicit input enhancement: Effects on target and non-target aspects of second language acquisition. *Foreign Language Annals*, 39(4), 551-564.
- Guikema, J. P., & Menke, M. R. (2014). Preparing future foreign language teachers: The role of digital literacies. In J. P. Guikema & L. Williams (Eds.), *Digital literacies in foreign and second language education* (CALICO monograph series, Vol. 2, pp. 265–285). San Marcos, TX: CALICO.
- Hoffman, S. (1995/1996). Computers and instructional design in foreign language/ESL instruction. *TESOL Journal*, 5(2), 24-29.
- Jones, F. (1991). Mickey Mouse and the state of the art: Program sophistication and classroom methodology in communicative CALL. *System*, 19(1-2), 1-13.
- Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals*, 51(1), 205-218.
- Legenhausen, L., & Wolff, D. (1990). In use-use of CALL: Evaluating CALL software. *System*, 18(1), 1-14.
- Miranda, H. & Russell, M. (2011). Predictions of teacher-directed student use of technology in elementary classrooms: A multilevel SEM approach using data from the USAIT study. *Journal of Research on Technology in Education*, 43(4), 301-324.
- Osuna, M. M., & Meskill, C. (1998). Using the World Wide Web to integrate Spanish language and culture: A pilot study. *Language Learning & Technology*, 1(2), 71-92.
- Salaberry, M. (2001). The Use of Technology for Second Language Learning and Teaching: A Retrospective. *The Modern Language Journal*, 85(1) 41-56.
- Warschauer, M and Kern, R (eds) (2000) *Network-based language teaching: Concepts and practice*. New York: Cambridge University Press.
- Warschauer, M., & Meskill, C. (2000). *Technology and second language learning*. Retrieved from http://www.gse.uci.edu/person/warschauer_m/tslt.html on 22nd May, 2011.
- Widdowson, H.G. (1978). *Teaching Language as communication*. London: Oxford University Press.
- Winnans, C. & Sardo Brown, D. (1992). Some factors affecting elementary teachers' use of computers. *Computers and Education*, 18(4), 301-309.
- Winninger, M. J. , & Shield, L. (2003). Promoting Oral Production in a Written Channel: An Investigation of Learner Language in MOO. *Computer Assisted Language Learning*, 16(4), 329-349
- Yang, S. C.(2001a). Integrating Computer-mediated tools into the language curriculum. *Journal of Computer Assisted Learning*, 17(1), 85-93.
- Zammit, S. (1992). Factors facilitating or hindering the use of computers in schools. *Educational Research*, 34(1), 57-66