

## Barriers Teachers Face in using Information and Communication Technology in EFL Classroom at Duhok University

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### ABSTRACT

The growth of information and communication technologies (ICT) has considerably altered teaching and learning processes in higher education. Although ICT has the potential to improve the educational system to a great extent, English departments in the university of Duhok seem to be incapable to achieve these benefits because of specific obstacles. This paper investigates the barriers faced by the teachers at English departments in the University of Duhok in integrating ICT tools in teaching the EFL in classrooms. This study aims at determining the reasons teachers do not use ICT in classrooms. A total of thirty-four English teachers from The College of Basic Education and The College of Languages were involved. A closed-ended questionnaire was distributed and interviews were conducted. The results revealed that the teachers are willing to use ICT in their lessons, but they face many barriers. The main barriers are lack of access to ICT resources, lack of access to the internet inside the classroom, lack of training, insufficient technical support. Moreover, lack of institutional encouragement is another discouraging factor for the teacher to use ICT. In addition, this paper also offers a number of recommendations to reduce these barriers and maximize the beneficial use of ICT in education.

**Keywords:** ICT, ICT integration into EFL classes, barriers, EFL teachers Duhok University.

## 1. Introduction

Within a very short time ICT has become one of the basic building blocks of modern society. Nowadays many countries consider understanding ICT and mastering the basic skills and concepts of ICT as part of the core of education, alongside reading, writing and numeracy (Daniels, 2002). Pelgrum and Law (2003) state that near the end of the 1980s, the term computer was replaced by IT (information technology) signifying a shift of focus from computing technology to the capacity to store and retrieve information. This was followed by the introduction of the term ICT (information and communication technology) around 1992, when e-mail started to become available to the general public (Pelgrum & Law, 2003).

The term ICT can have different definitions. In this study, the term ICT is used to describe computer-based and internet-related technologies. Davies and Hewer (2009) define ICT as computer based technologies such as desktops, laptops, tablets, smartphones, and software and internet-based technologies including email, websites, and social networking sites for the purpose of English teaching and learning. This is close to the definition provided by (Hew & Brush, 2007, p.225) who think that ICT refers to “computing devices such as desktop computers, laptops, handheld computers, software, or internet in schools for instructional purposes”.

Because of ICT's importance in many fields of life and specifically in education, identifying the challenges that teachers face to use ICT in their teaching would be an important step in improving the quality of teaching and learning. Many studies have been conducted to investigate barriers to the integration of ICT in education (e.g. Bingimals, 2009; Ertmer, 1999; Azmi, 2017; Chen, 2008; Mumtaz, 2000). To the best of our knowledge, so far no research has been carried out about the barriers to the use of ICT in teaching English at the University of Duhok. Thus, the purpose of this research study is to explore the barriers teachers face in the implementation of ICT in the language classroom, and to offer some suggestions to reduce these barriers for successful ICT implementation in the future. Accordingly, this research tries to answer the following research question: what are the barriers that prevent EFL teachers at the University of Duhok from using ICT in their classrooms?

## 2. Literature Review

The 21st century has been characterized to be the digital age for the widespread use of innovative means in all fields of our daily life. With the rapidly increasing popularity of ICT in today's era, its literacy has undoubtedly become a prior necessity. Hue and Ab Jalil (2013) agree that “since ICT is a crucial element in the advancement of society, every person should become technology-competent” (p. 53). It is therefore essential for English teachers to familiarize themselves with the effectiveness of ICT in EFL classrooms.

Anderson and Weert (2002) argue that most countries around the world are focusing on approaches to integrate ICT into learning and teaching to improve the quality of education by emphasizing such skills as critical thinking, decision-making and handling of dynamic situations, working in groups, and communicating effectively. This is also confirmed by UNESCO which asserts that educational systems around the world are becoming increasingly pressured to apply the new ICT tools to their curriculum to provide students with the knowledge and skills that they need in the 21st century (UNESCO, 2002).

## 2.1 Barriers to ICT Use in Teaching

Several factors influencing the adoption and integration of ICT into teaching have been identified by various researchers. Much of the research related to ICT integration into teaching has focused on barriers to the use of ICT and classified these into different categories (Ertmer, 1999; Kumar et al., 2008; Becta, 2004; Pelgrum, 2001). Many factors influence the successful implementation of ICT. In reviewing the literature, the issues and barriers that teachers encounter while using technology are generally categorized into first and second order barriers identified by Cuban (1993). First-order barriers are external and institution related, whereas second-order barriers are internal and teacher related (Becta, 2004).

In the USA, Ertmer (1999) divided barriers into extrinsic (first order) and intrinsic (second order). Extrinsic barriers include lack of resources, ineffective training, insufficient technical support and lack of time. Intrinsic barriers include teachers' beliefs regarding the use of ICT in their teaching, and views about teaching, learning and knowledge. Moreover, factors influencing the use of the Internet in teaching have been classified by Piotrowski and Vodanovich (2000) as institutional, instructional, technical, and personal factors that have to be dealt with for effective technology integration into education. This is in line with the study by Tammelin (2004) who identified four problematic areas in a university setting that need to be considered when introducing technology-enhanced language learning into higher education; administrative, institutional, technical, and pedagogical issues.

However, many researchers believe that there exist two types of factors that affect the implementation of ICT in language teaching. They are external factors and internal ones. Previous studies have indicated that both external and internal factors influence the ICT use in education (Al-Ruz & Khasawneh, 2011; Lin, Wang & Lin, 2012; Sang, Valcke, Braak, Tondeur & Zhu, 2010). Among the external factors, the most common ones are access to computers and software, insufficient time for course planning, and inadequate technical and administrative support (Al-Ruz & Khasawneh, 2011). The internal factors include teachers' attitude, confidence, and belief in the ICT use are commonly cited in the existing literature (Chen, 2008; Al-Ruz & Khasawneh, 2011; Sang et al., 2010; Tezci, 2011; Lin et al., 2012).

Since Kurdistan of Iraq is still new regarding using technology, as a result students and teachers might experience some challenges too. In his study Kareem(2017) tries to demonstrate the importance of using ICTs, their benefits, challenges, and negative sides in Kurdistan of Iraq in the perspective of both teachers and students. The results of his study reveal that English language teachers in Kurdistan suffer from insufficient number of computers, unreliable technology and electricity. There is a challenge of space as some institutions do not have enough space for a language lab or ICT room. Little or poor experience of teachers with technology knowledge is another big barrier to incorporating ICTs. Kurdistan, as it is in one of the third world countries, began ICT integration lately and slowly but is gradually developing (Balisane, 2015). Another attempt is from Balisane (2015) who conducts a study to investigate teachers' attitudes towards computer use in primary education in Kurdistan. The findings in his study reveal that there still exists clear vagueness of understanding on the part of primary school teachers towards the use of computers in the classroom due to their lack of actual ICT experience and basic technological competence. The participated teachers report that class size needs to be improved in order not to only help develop primary school teachers' performance, but to maintain the quality of teaching in classrooms. It would seem that large class sizes are often perceived as one of the main barriers to achieving quality education as they may cause numerous problems of teaching and learning.

Several studies in the literature reveal a number of factors which affect teachers' decisions to use ICT in the classroom. According to Becta (2004) seven barriers affected the integration of ICT into lessons: lack of access to ICT resources, lack of teachers' confidence, lack of time, lack of effective training, lack of personal access during lesson preparation, age of the teachers, and teaching experiences. The study conducted by Salehi and Salehi (2012) reveals that insufficient technical supports at schools, shortage of class time and little access to internet and ICT prevent teachers in five main educational districts in Isfahan city in Iran to use ICT. Moreover, According to Andoh (2012) factors that inhibit teachers use of ICT include lack of teacher ICT skills; lack of teacher confidence; lack of differentiated training programs; limited access to ICT; the rigid structure of traditional education systems; traditional assessment; restrictive curricula etc. In Libya, Al Shaikhi (2015) finds out that barriers to integrating ICT in Libyan Higher education mainly are inadequate support from the education community, low internet connection, lack of technical training programs provided by the university.

A research in Vietnam by Dang et al. (2012) tries to explore the key barriers to ICT uptake in foreign language teaching. The findings show that barriers exist at both institutional and teacher levels. Lack of guidelines, training and support for ICT use in teaching, and limited resources are crucial barriers. In Saudi Arabia, Barri (2013) illustrates the factors that affect ICT implementation in the classroom as following: (a) insufficient in-service training, (b) large number of students in the computer lab and learning resources centre, (c) poor in-service training, (d)

insufficient pre-service training, (e) broken-down technology equipment, (f) lack of teacher time, (g) lack of technology equipment, and (h) old technology equipment. It can be seen that insufficient training and lack of technical support are the most popular among other barriers found in the previous studies. Hence, it is highly insisted that pre service teacher training programs should include compulsory computer training for teachers to acquire optimum levels of knowledge and skills (Gamlo, 2014; Tzotzou, 2018; Gee, 2013). In relation to this argument, Fullan (1992) suggests that “training should not be one-shot workshops, but rather ongoing experiences so that learners/teachers can be kept up to date with ever-changing technologies” (as cited in Khan, Hasan & Clement, 2012, p.74). Accordingly, it is suggested that when providing schools with hardware and internet connections, it is also crucial to provide the schools with technical support with regard to repair and maintenance for the continued use of ICT in schools (Yilmaz, 2011). However, the overcoming of all the previously mentioned challenges could turn them from obstacles into positive factors to aid in the success of ICT implementation. Consequently, the importance of this research paper is to suggest some recommendations to guide decision-makers, educators to promote the successful implementation of ICT in EFL classrooms.

### 3. Methodology

A mixed methods approach was adopted to gain information about barriers which hinder EFL teachers from using ICT. The instruments for data collection were questionnaire and interviews which were applied to a sample of 34 EFL teachers, 17 from the college of languages and 17 from the college of basic education. A number of 14 teachers were interviewed.

A survey with 54 questions was adapted from an instrument previously used by Gamlo (2014). The data from the questionnaire were analysed statistically with SPSS. The questionnaire consisted of four main parts. To achieve the aim of the research, the results obtained from parts two and three are reported in this paper. Part two consisted of items related to the teachers' access to ICT, and part three, included items which dealt with teachers' attitudes toward ICT use. The interviews were transcribed and analysed through thematic content analysis. A list of categories was generated from the data to form the frame for analysis.

### 4. Results

The results are presented in two separate sections. First, the analysis of the data obtained from the questionnaire is presented. In the second section, the themes sorted out from the interviews are described.

#### 4.1. Questionnaire

Teachers who are committed to the use of ICT in their teaching may consider the process demanding due to some barriers that exist. The data analysis revealed a number of key barriers to ICT use. The results obtained are summarized in table 1 and table 2. Table (1) includes responses from Yes/NO questions. Table (2) includes responses from Likert type questions. The tables show the most discouraging factors according to the mean scores. It can be seen that the access to computers and internet are recorded as the main barriers preventing teachers from using ICT which had the least mean scores ranged from (1.61) down to reach (1.00). It is revealed that all the participants disagreed that there is a set of computers in their teaching room with the lowest mean (1.00). In addition, the majority of the teachers (76%) claimed that there is a lack of access to the internet in their teaching rooms with the mean (1.23). More than half of the participants (64.7%) believed that lack of technical support is an obstacle which hindered them to use ICT. Another important barrier which some teachers complained about was lack of training which was declared in both tables. Moreover, a good portion of the surveyed teachers reported that ICT takes too much time and complained about the shortage of class time with the mean (2.97) which is considered low (as the question has a rating scale 1 to 5). In addition, teachers felt that there is lack of encouragement from the university to help them use ICT in their teaching.

**Table1: Barriers to the use of ICT**

items	variables	Frequency	Percentage	Mean
1. Do you have a computer(s) in the teaching room?	yes	9	26.5	1.26
	no	25	73.5	
2. In the teaching room there is a single computer attached to the Overhead projector	yes	13	38.2	1.38
	no	21	61.8	
3. In the teaching room there is a set of computers	yes	0	0	1.00
	no	34	100	
4. Do you have access to computer support when you need it?	yes	12	35.3	1.35
	no	22	64.7	
5. Do you have access to the internet in your teaching room?	yes	8	23.5	1.23
	no	26	76.5	
6. Have you ever attended any training courses on using ICT for teaching?	yes	23	67.6	1.67
	no	11	32.4	
7. Have you ever attended any	yes	22	64.7	

workshops on using ICT for teaching?	no	12	35.3	1.64
	yes	19	55.9	
8.Do You have a computer in your office	yes	19	55.9	1.55
	no	15	44.1	
9. Do you have access to internet in your office?	yes	21	61.8	1.61
	no	13	38.2	

Values: 2= yes, 1= no

**Table 2: barriers to the ICT use**

Question	Answer	Frequency	Percent	Mean
I have access to the training I need to use ICT	Strongly agree	2	5.9	2.94
	agree	11	32.4	
	undecided	5	14.7	
	disagree	15	44.1	
	strongly disagree	1	2.9	
My institution encourages me to use ICT	Strongly agree	3	8.8	3.14
	agree	10	29.4	
	undecided	12	35.5	
	disagree	7	20.6	
	strongly disagree	2	5.9	
ICT takes up too much time	Strongly agree	4	11.8	2.97
	agree	10	29.4	
	undecided	5	14.7	
	disagree	11	32.4	

Note range is 1-5 where 1= strongly disagree, 2= disagree, 3=undecided, 4=agree, 5=strongly agree

## 4.2. Interviews

The questionnaire responses suggested that the lack of access to ICT resources and Internet are the utmost factors that inhibit them from using ICT in their classes. This is stated in interviews as below:

H/A, L/B, L/M, S/P, P/S, Sh/M, A/M, A/B

(1) *The problem is that we lack direct access to the internet inside the classroom; if there were access we would do much better and prepare better activities (P/S)*

(2) *Although all the classes contain a data show but only the data show of one hall works in the department, sometimes two teachers need that room at the same time.(A/B)*

(3) *If the classrooms are not equipped with ICT resources how can we use them, I bring my own laptop, speakers, and I am thinking to bring a data show from home.(A/M)*

(4) *We do not have ICT resources but we make them available, we take our on laptops, cables and speakers.(L/B)*

(5) *The lack of access to the internet is my challenge, there are too many things to show to my students and I cannot download everything in my pc it will take the memory but if there was access I could use it.(H/A)*

(6) *Access to the internet is the major problem for me because your laptop and your mobile phone is a kind of a dead body without internet. I am just thinking if I just had the internet inside the class how many video clips I would show, how many picture, I would also show them how to how to search for information.(L/M)*

(7) *I usually face technical problems inside the class, I take my own pc to the class sometimes it doesn't connect to the projector or there are videos and programs that I want to show but they do not work on my computer but I think if there is a desktop in the class already attached to the data show I wouldn't face such obstacles and wouldn't waste time.(S/P)*

(8) *The classes are not equipped with any ICT resources except the overhead projectors and sometimes they do not work.(Sh/M)*

(9) *Our office is a four teachers' office can you see any technology? I have a free hour if there is access to internet in my office I can take my students with me and work on their research papers.(L/M)*

Moreover, many teachers claimed that lack of training is one of the main barriers that restrict them to use ICT as confirmed by (A/A),(A/M),(A,I), (L/M) as below:

(10) The university did not provide any training courses. Whatever teachers use is basically his/her own effort. (A/A)

(11) I hope to use ICT but I do not have enough skills I need a professional training course. (A/M)

(12) I want to use ICT but I do not have even the basic skills of using IC, I am ready and I wish to attend a training course even if it is funded and it is during or after the college time. (A/I)

(13) I ask my students to help me prepare the ICT resources but if I have been well trained before I believe I wouldn't need their help. (L/M)

Shortage of class time was another discouraging factor to ICT use reported by the teachers and this is proved as below:

(14) The class time is limited when I want to do online exercises I need more time. (H/A)

(15) Using ICT inside the class needs time; it takes me time to connect the pc with the projector and the internet, so the shortage of class time is the barrier I face in my lessons. (S/P)

(16) When my lecture needs ICT use, I usually go to the class 10 minutes earlier than the actual time to prepare my laptop and make sure that the data show works. (A/M)

In respect to technical support, a number of teachers revealed that there is no or slow technical support or maintenance; this is expressed by the interviewees as below:

(17) There is no technical support; my students help me in fixing things when going wrong inside the classroom. (Sh/M)

(18) I feel very nervous when I prepare my material in the computer, make my presentation on PowerPoint, provide activities and then come to see that the data show is not working and there is no one who can maintain. (Q/B)

(19) There are technical issues in the class for example the data show does not work, sometimes the cable is not there and you do not know where it is taken. The power cut, the switches are broken. The cable is inoperative sometimes students play with and damage the, Therefore I believe it is necessary to have a technician. (A/B)

(20) Teachers cannot maintain broken things we need a technician inside the building in each department. (A/M)

(21) When ICT tools do not work or are broken we tell the coordinator but it takes weeks to get fixed. (P/S)

In addition, some of the participated teachers in the questionnaire reported that they are not provided with any encouragement from the university as can be seen in the following statements:

(22) *I haven't seen any encouragement from the university to use IC. It is my personal belief and skills that I use ICT.(A/B)*

(23) *No one encourages teachers to use ICT. There is a big gap between the university and the teachers (L/B)*

(24) *The university encourages by words when it comes to reality there are no enough resources and the department do not have that enough capability to afford them.(H/A)*

(25) *The university does not encourage teachers, unfortunately, they just say it they do not apply it.(Sh/M)*

## 5. Discussion

The analysis of both quantitative (questionnaire) and qualitative (interviews) data in this study identified some main barriers to ICT use in teaching EFL. The most discouraging factors reported by the participants of this study were: lack of access to ICT resources and internet, insufficient technical support, lack of effective training, shortage of class time and lack of encouragement. The barriers stated by teachers in this study are in line with those mentioned in the wider literature. For example; the results from the teachers' responses in this research are compatible with the findings of Gamlo (2014).

In her study, Gamlo (2014) found that lack of access (unavailability of computers and data projectors) in some classrooms, the unreliability of computers and Internet access, and problems related to technical support were the main barriers which hindered teachers to use ICT. Lack of relevant training and shortage of class time were also considered as hindering barriers.

The factor of lack of access is well covered in the literature. As stated in Vi (2005), the most challengeable factor is the issue of access. Students need to have computer and Internet access; otherwise they will meet with difficulties when technology is not always as reliable as it should be and internet access is not always available. Moreover, in Sweden, Nilsson (2018) stated that malfunctioning devices (computers and tablet devices) and the bad internet connections were identified as the main reason for teachers choosing not to use ICT regularly when teaching.

The collected data showed that another obstacle which leads to hindering the use of ICT is insufficient technical support in the colleges. This is also shown by Becta (2004) who stated that when there is a lack of technical support in a school, it is likely to have an increased number of technical breakdowns. Many of the participants in

Becta's survey indicated that technical problems might inhibit them from using ICT, and the experience of technical breakdown would inhibit teachers from using ICT.

In addition, the participated teachers in this study claimed that the lack of their ICT skills is due to the lack of training courses. This is confirmed by Livingstone (2011) who claims that there are teachers who struggle with ICT because of their low level of ICT knowledge. As a result, they need to be trained and prepared for using ICTs.

Some teachers were reluctant to use ICT due to the shortage of class time. This issue is also present in the literature. Coogan (2005) reports that teachers in the US, New Zealand and the UK frequently reported time to be a major barrier to ICT use in teaching. According to Sicilia (2005), in Canada the most common challenge reported by the teachers was the lack of time they had to plan technology lessons, explore the different Internet sites, or look at various aspects of educational software.

A lack of encouragement from university was another factor which many teachers were unsatisfied about. In line with this, Lim and Khine (2006) suggested that it is necessary to encourage teachers to attend workshops and seminars on the effective use of ICT in the classroom. Furthermore, it was found in Gamlo (2014) that lack of encouragement from coordinators acts against the integration of ICT into teaching.

## 6. Conclusion

The aim of this study was to provide information about the barriers that the EFL teachers encountered to use ICT in their teaching. Data analysis for this study showed that the most reported barriers were lack of ICT equipment and resources in classrooms, lack of access to the internet. The participated teachers claimed that the lack of ICT facilities and unreliable internet connection are important determiners of using ICT. In addition the results indicate that the insufficient technical support discourages the teachers to use ICT. Another important cause of ineffective use of ICT was lack of training. It was found that due to the shortage of class time the teachers could not prepare different ICT related activities in their teaching. Moreover the findings of this paper revealed that the encouragement to teachers by the university of Duhok is very limited.

The major barriers were considered as extrinsic. Ertmer (1999) divided barriers into extrinsic (first order) and intrinsic (second order). Extrinsic barriers include lack of resources, ineffective training, insufficient technical support and lack of time. Understanding the extent to which these barriers have an impact on teachers and institutions may help in deciding how they are to be tackled (Becta, 2004). The findings of this study will help guide the University of Duhok as it seeks to ensure the successful adoption of ICT in education by teachers.

## 7. Recommendations

Considering the findings of this study, the researcher offers the following recommendations which might help teachers at the University of Duhok to remove or to reduce the occurrence of the above mentioned barriers in order to successfully use ICT in EFL classrooms.

1. There should be cooperation between universities and training centres to assist teachers fully to integrate ICT into their teaching.
2. University of Duhok should encourage everyone at the universities (faculty members, students, staffs, and administrators) to improve their technological skills by providing free technology training courses.
3. All teaching rooms in the colleges should be equipped with the newest technological tools, and high-speed Internet.
4. Short term and long-term programs such as seminars, conferences, and workshops and educational training on how to use ICT should be organized.
5. Syllabus should be reformed time to time with the advent of the ICT education and trends accordingly.
6. Every college should be provided with adequate technical support to assist the members in using different technology.

## References

1. Al-Ruz, J. A., & Khasawneh, S. (2011). Jordanian pre-service teachers' and technology integration: A human resource development approach. *Journal of Educational Technology & Society*, 14(4), 77-87.
2. Azmi, N. (2017). The benefits of using ICT in the EFL classroom: From perceived utility to potential challenges. *Journal of Educational and Social Research*, 7(1), 111-118.
3. Barri, M. A. (2013). *The integration of technology into school curriculum in Saudi Arabia: Factors affecting technology implementation in the classroom*. (Doctoral dissertation, University of Kansas).
4. Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5 (3), 235- 245.
5. British Educational Communications and Technology Agency (Becta) (2004). A Review of the Research Literature on Barriers to The Uptake of ICT by Teachers. Retrived from <http://www.becta.org.uk>
6. Buabeng-Andoh, C. (2012). Factors influencing teachers adoption and integration of information and communication technology into teaching: A review of

- the literature. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 8 (1).
7. Chen, Y. L. (2008). A mixed-method study of EFL teachers' Internet use in language instruction. *Teaching and Teacher Education*, 24(4), 1015-1028.
  8. Coogan, P. (2005). *When worlds collide: ICTs, English teachers and high stakes assessment*. (Doctoral dissertation, University of Auckland).
  9. Cuban, L. (1993). Computers meet classroom: Classroom wins. *Teachers College Record*, 95, 185-210.
  10. Dang, X. T., Nicholas, H., & Lewis, R. (2012). Key barriers to ICT uptake in foreign language teaching in Vietnam: A case study. *INTED2012 Proceedings*, 4266-4274.
  11. Daniels J.S. (2002). "Foreword" in *Information and Communication Technology in Education—A Curriculum for Schools and Programme for Teacher Development*. Paris: UNESCO
  12. Davies, G., & Hewer, S. (2009). Introduction to new technologies and how they can contribute to language learning and teaching. Module 1.1. In G. Davies (Ed.), *Information and Communications Technology for Language Teachers (ICT4LT)*, Slough, Thames Valley University.
  13. Elshaikhi, F. S. (2015). *Integrating information technology in Libyan higher education*. (Doctoral dissertation, University of Kansas).
  14. Ertmer, P. A. (1999). Addressing first- and second-order barriers to change: strategies for technology integration. *Educational Technology Research and Development*, 47(4), pp. 47-61.
  15. Gamlo, N. H. (2014). *EFL Teachers Use/non-use of ICT at a University in Saudi Arabia*. (Doctoral dissertation. University of Warwick).
  16. Gee, J.P. (2011). *Language and learning in the digital age*. New York: Routledge.
  17. Gomes, C. (2005). Integration of ICT in science teaching: A study performed in Azores, Portugal. *Recent research developments in learning technologies*, 13(3), 63-71.
  18. Hew, K. F., & Brush, T. (2007). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational technology research and development*, 55(3), 223-252.
  19. Hewa Balisane, H. (2015). *Journal of Education and Practice*. Investigation of Teacher' Attitudes towards Computer Use in Primary Education in Kurdistan, Vol 6, 36-50.
  20. Hue, L. T., & Ab Jalil, H. (2013). Attitudes towards ICT Integration into Curriculum and Usage among University Lecturers in Vietnam. *International Journal of Instruction*, 6(2), 53-66.
  21. Kareem, N. N. (2017). *The Importance of using Information Communication Technology for learning and Teaching the English Language in Kurdistan Iraq*. Valparaiso: valparaiso University.
  22. Khan, M., Hossain, S., Hasan, M., & Clement, C.K. (2012). Barriers to the introduction of ICT into education in developing countries: the example of Bangladesh. *International Journal of instruction*, 5(2), 66-80.

23. Kumar, N., Rose, R.C. and D'Silva, J.L. (2008). Teachers' Readiness to Use Technology in the Classroom: An Empirical Study. *European Journal of Scientific Research*. 21(4), pp. 603-616.
24. Lim, C. P. & Khine, M. S. (2006). Managing teachers' barriers to ICT integration in Singapore schools. *Journal of Technology and Teaching Education*, 14 (1), pp. 97-125.
25. Lin, J. M.C., Wang, P.Y., & Lin, I.C., (2012). Pedagogy technology: A two-dimensional model for teachers' ICT integration. *British Journal of Educational Technology*, vol. 43, pp.97-108.
26. Mumtaz, S. (2000). Factors affecting teachers' use of information and communications technology: A review of the literature. *Journal of Information Technology for Teacher Education*, 9(3), 319- 341.
27. Nilsson, S. (2018). ICT in the EFL classroom: cherished challenges: A qualitative interview study with six Junior High School English teachers in Sweden.
28. Pelgrum, W. J. (2001). Obstacles to the integration of ICT in education: results from a worldwide educational assessment. *Computers & education*, 37(2), 163-178.
29. Pelgrum, W. J., & Law, N. W. Y. (2003). *ICT in education around the world: Trends, problems and prospects*. UNESCO: International Institute for Educational Planning.
30. Piotrowski, C., & Vodanovich, S. J. (2000). Are the reported barriers to Internet-based instruction warranted: a synthesis of recent research. *Education*, 121(1), 48-48.
31. Salehi, H., & Salehi, Z. (2012). Integration of ICT in language teaching: Challenges and barriers. In *Proceedings of the 3rd International Conference on e-Education, e-Business, e-Management and e-Learning (IC4E, 2012)*, IPEDR (Vol. 27, pp. 215-219).
32. Sang, G., Valcke, M., Broak, J. V., & Tondeun, J. (2010). Student teachers' thinking processes and ICT integration: predictors of prospective teaching behaviours with educational technology. *Computers & Education*, 54, 103-112.
33. Sicilia, C. (2005). *The challenges and benefits to teachers' practices in constructivist learning environments supported by technology* (pp. 1-104). McGill University.
34. Tammelin, M. (2004). Introducing a collaborative network-based learning environment into foreign language and business communication teaching: Action research in Finnish higher education. *Teaching and Teacher Education*, 24(4), pp.1015-1028.
35. Tzotzou, M. (2018). Integrating Web 2.0 technologies into EFL learning in the Greek state-school context: A mixed-method study. *Research Papers in Language Teaching and Learning*, 9(1), 32-55.
36. UNESCO. (2002). *Information Communication Technology in education: A curriculum for schools and programme for teacher development*. Paris, France: UNESCO.

37. Vi, V. T. (2005). Advantages and disadvantages of using computer network technology in language teaching. *JOURNAL OF SCIENCE, Foreign Languages*, 61-66.
38. Yilmaz, N.P. (2011). Evaluation of the Technology Integration Process in the Turkish Education System. *Contemporary Educational Technology*, vol.2, no.1.
39. Yunus, M. M. (2007). Malaysian ESL teachers' use of ICT in their classrooms: expectations and realities. *ReCALL*, 19(1), 79-95.