

Attitudes of Turkish EFL Student Teachers towards Technology Use

Esra Harmandaoğlu Baz

*English Language Teaching Department, Gazi University, Ankara, Turkey
esraharmandaoğlu@gmail.com*

ABSTRACT

The hot debate of integrating technology into instruction has captured the interest of the world in the context of 21st century education. A considerable amount of effort has been presented in order to incorporate technology into education. In this respect, attitudes have been considered as a good indicator of the tendency to implement technology into instruction. Therefore, the aim of this study is to investigate the attitudes of Turkish English as a foreign language (EFL) student teachers at a major state university in Turkey towards technology use in language learning and teaching. Using a mixed methods approach, 98 student teachers participated in the study. The attitude towards technology scale developed by Yavuz (2005) and focus group interview were used to collect data from the participants. The findings indicate that the student teachers have highly positive attitudes towards the use of technology in language learning and teaching. Some pedagogical implications and suggestions for student teachers, teacher trainers and schools were provided for future development.

Keywords: Attitude towards technology use, ICT, EFL, Student teachers

INTRODUCTION

It cannot be denied that development of technology has had an impact on nearly every field including education (Isman & Dabaj, 2004; Mishra, & Koehler, 2006; Özdamlı, Hürsen, & Özçinar, 2009; Yavuz, 2005; Woodrow, 1987). What is more, foreign language learning and teaching has become one of the areas in which hot debates towards technology can be felt. Therefore, language learning and teaching via technology is gaining more and more importance (Albirini, 2006; Almekhlafi & Almeqdadi, 2010; Dang, 2011; Dogoriti, 2010; Kopinska, 2013; Liu, 2009; Raman & Yamat, 2014; Tsou, Wang, & Tzeng, 2006; Warschauer, 1997). It has been found in the research that one of the important factors influencing the perspectives towards technology is the attitude (Ertmer, Paul, Molly, Eva, & Denise, 1999; Fabry & Higgs, 1997; Myers & Halpin, 2002; Tondeur, Valcke, & van Braak, 2008; van Braak, Tondeur, & Valcke, 2004; Yavuz, 2005) in so much as attitude is an important variable whether the teachers will make use of technology in their instruction.

Gardner (1985, pp. 91-93) defines attitude as “an evaluative reaction to some referent or object, inferred on the basis of the individual’s beliefs or opinions about the referent”. According to social psychologists, attitudes include three components: “a cognitive component, an affective component, and a behavioral component” (Nolen-Hoeksema, Fredrickson, Loftus, & Wagenaar, 2009, p. 662). It can be exemplified as:

“We often express our attitudes in statements of opinion: ‘I love grapefruit’ or ‘I can’t stand liberals.’ But even though attitudes express feelings, they are often linked to cognitions – specifically, to beliefs about the attitude objects (‘Grapefruit contain lots of vitamin C’ or ‘Liberals just want to tax and spend’). Moreover, attitudes are sometimes linked to the actions we take with respect to the attitude objects (‘I eat a grapefruit every morning’ or ‘I never vote for liberal candidates’)” (Nolen-Hoeksema et al., 2009, p. 662).

Regarding this, it was revealed in the studies that EFL learners and teachers have positive attitudes toward the use of technology (Başaran, 2013; Isman & Dabaj, 2004; Kitchakarn, 2015; Liton, 2015; Liu, 2009; Mollaei & Riasati, 2013; Uluuysal, Demiral, Kurt, & Şahin, 2014). Moreover, the findings indicate that EFL teachers had positive views towards the incorporation of technology into language learning and teaching (Aydin, 2013; Sağlam & Sert, 2012; Uluuysal et al., 2014). Besides, it was found in the studies that student teachers have positive attitudes towards technology (Alkan & Erdem, 2010; Hismanoglu & Hismanoglu, 2011; Kuo, 2008; Yüksel & Kavanoz, 2011). It has been revealed in the studies that teacher attitudes towards technology form the basis of their tendency to integrate technology into instruction (Abas, 1995; Beggs, 2000; Blankenship, 1998; Bullock, 2004; Davis, 1989; Francis, Katz, & Jones, 2000; Huang & Liaw, 2005; Isleem, 2003; Kersaint, Hornton, Stohl, & Garofalo, 2003; Mumtaz, 2000; Myers & Halpin, 2002; Tondeur et al., 2008; van Braak *et al.*,

2004) because if the teachers do not feel themselves ready for using technology, they may not volunteer to implement it in their instruction. It can be said that in order for teachers to feel ready, it may be crucial for them to develop positive user attitudes towards the technology (Alkan & Erdem, 2010; Isman & Dabaj, 2004; Liton, 2015; Woodrow, 1987). Hence, studies show that the attitudes of the learners towards technology should be revealed (Akbaba, 2001; Becker & Maunsaiyat, 2002; Christensen & Knezek, 2000; Gunter, Gunter, & Wiens, 1998; Isman & Dabaj, 2004; McCoy, Heafner, Burdick, & Nagle, 2001; Mitra, 2001; Selwyn, 1997; Tanguma, Martin, & Crawford, 2002; Tsai, Lin, & Tsai, 2001; Vicario, Henniger, Austin & Chamblies, 2002; Yavuz, 2005). Therefore, student teachers should be given opportunities to incorporate technology into their teaching and learning style and to improve their positive attitudes towards using technology in education (Alkan & Erdem, 2010; Teo, 2008).

METHODOLOGY

Research Design

The purpose of this study is to reveal the attitudes of Turkish EFL student teachers towards technology use in language learning and teaching. Mixed-methods approach combining both quantitative and qualitative methods was used in order to “provide a more complete understanding of research problems than does the use of either approach alone and find out the relationships between variables in depth” (Fraenkel, Wallen, & Hyun, 2011, pp. 557-558). Therefore, the research question of the study can be viewed below:

1. What are the attitudes of Turkish EFL student teachers towards technology use in language learning and teaching?

Participants

The participants were selected from a major state university in the department of ELT in Turkey. Convenience sampling, a common non-random way of choosing sample, was used because “members of the target population are selected for the purpose of the study if they meet practical criteria, such as ... availability at a certain time, easy accessibility, or the willingness to volunteer” (Dörnyei, 2007, pp. 98-99). As can be seen in table 1, 82 female (85.4%) and 14 male (14.6%) Student teachers participated in the study. 2 student teachers did not clarify their gender. Therefore, 98 student teachers took part in the study.

Table 1. Participant profile

Gender	Frequency	Percentage
Female	82	85.4%
Male	14	14.6%
Missing	2	-
Total	98	100

Data Collection Instruments

Being voluntary was taken into consideration in filling the scale. The participants were requested to sign the approved consent form that expresses the aim of the study, open address and phone number of the researcher, and confidentiality of the data and the name of the participants. For the quantitative part, *the scale of attitude towards technology* by Yavuz (2005) was chosen (see Appendix A). *The scale of attitude towards technology* includes 19 items with 5 factors, namely not using technological tools in education, using technological tools in education, the effects of technology on educational life, teaching how to use the technological tools and evaluating technological tools. The Cronbach’s alpha of the instrument is 0.8668. For the qualitative part, a focus group interview, composed of 8 participants who were voluntary, was conducted with a semi-structured interview. The interview was carried out in Turkish in order to obtain more in-depth data. The participants were asked ‘What are your opinions and attitudes towards the use of technology in English language learning and teaching?’.

Data Analysis

The descriptive statistics, namely frequency and percentage, was used to analyze the attitude scale. The participants were asked whether it was okay for them to record the speech for the transcription of the data before starting the interview. Also, they were assured that they would be given pseudonyms in the analysis. The interview lasted for approximately 7 minutes. Interpretive approach was used to analyze the data obtained from the focus group interview. Content analysis was used in order to analyze the written transcriptions because “it is extremely valuable in analyzing interview data” (Fraenkel et al., 2011, p. 479). Themes were formed and the quotations were given under each category.

FINDINGS

Findings of the scale

This study investigates the attitudes of Turkish EFL student teachers towards technology use in language learning and teaching. The descriptive statistics of the attitude scale can be seen in the table 2.

Table 2. Frequency and percentage of the items

Item No	n	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree	
		f	%	f	%	f	%	f	%	f	%
		Item 1	98	47	48	47	48	1	1	2	2
Item 2	96	31	31.6	55	56.1	8	8.2	1	1	1	1
Item 3	98	55	56.1	38	38.8	3	3.1	2	2	-	-
Item 4	97	48	49	42	42.9	6	6.1	1	1	-	-
Item 5	92	27	27.6	46	46.9	13	13.3	5	5.1	1	1
Item 6	97	-	-	8	8.2	9	9.2	56	57.1	24	24.5
Item 7	98	-	-	6	6.1	3	3.1	56	57.1	33	33.7
Item 8	98	1	1	4	4.1	3	3.1	59	60.2	31	31.6
Item 9	97	-	-	6	6.1	13	13.3	56	57.1	22	22.4
Item 10	97	1	1	3	3.1	4	4.1	66	67.3	23	23.5
Item 11	98	2	2	2	2	2	2	57	58.2	35	35.7
Item 12	98	-	-	2	2	5	5.1	60	61.2	31	31.6
Item 13	96	2	2	26	26.5	41	41.8	22	22.4	5	5.1
Item 14	98	-	-	4	4.1	22	22.4	64	65.3	8	8.2
Item 15	97	-	-	5	5.1	21	21.4	61	62.2	10	10.2
Item 16	97	-	-	3	3.1	7	7.1	71	72.4	16	16.3
Item 17	96	-	-	2	2	2	2	61	62.2	31	31.6
Item 18	98	11	11.2	39	39.8	35	35.7	12	12.2	1	1
Item 19	98	1	1	4	4.1	24	24.5	48	49	21	21.4

It can be understood from the findings that 96 % of the student teachers disagree with the idea that “e-mail is only for communication; it cannot be used in education”. In addition, 87.7 % of them do not agree that “OHP, slides and projection should not be preferred as they take too much time to be used”. Moreover, it can be deduced from the findings that 95.9 % of them are opposed to the notion “using the Internet in the learning process is a waste of time”. Furthermore, 91.9 % of them disagree with the statement that “using technological tools does not affect students’ motivation”. What is more, the findings show that 76.5% of them are opposed to the notion “technological tools do not need to be used in instruction”. Lastly, 51% of them disagree with the statement that “technological tools could only succeed when they address all the sense organs”.

It was revealed in the findings that 81.6% of the student teachers agree with the statement that “recording some parts of the lesson on videotapes could provide the students the opportunity to see their mistakes”. What is more, 90.6% of them approve that “because the videotapes could be watched again, students could get feedback”. Furthermore, 91.8% of them acknowledge the idea that “technological tools could be used for practice or revision”. Besides, 79.5% of them agree “students should receive basic education on computer literacy”. In addition, 90.8% of them stand for the statement “using current technologies would promote the improvement of new ones”. Moreover, 93.9% of them approve that “technological facilities have a positive effect on productive studying and learning”. What is more, 92.8% of them agree “using technology would facilitate the understanding of difficult subjects”. Furthermore, 73.5% of them acknowledge that “daily and yearly plans should be prepared by teachers using computers”. Besides, 72.2% of them agree “lessons should often include computer-assisted instruction”. In addition, 88.7% of them stand for the notion “students should get advance information on the usage of new technologies”. Moreover, 93.8% of them approve the statement “the usage of new technologies in teacher training should be increased”. Lastly, 70.4% of them agree “in order to be able to graduate from the university, the ability to “use the technological materials of the field” should be rated”. One last thing is that 41.8% of them feel undecided about the item “one does not have to use technological facilities in order to be successful in life”.

The findings of the table 3 indicate student teachers see themselves advanced (52%) and average (42.9%) in terms of their perceived technology level. It is just 2% of them assuming their perceived technology level as basic.

Table 3. Perceived technology level

Perceived Technology Level	n	Basic		Average		Advanced	
		f	%	f	%	f	%
	95	2	2	42	42.9	51	52

Findings of the interview

Learner Engagement:

It can be drawn from the interview that the student teachers think technology attracts the attention of the learners.

P3: Actually, the learners are so used to technology that nothing gets their attention. Immediately after you say mobile phone or computer, you can get the whole attention. But, you cannot attract the learners’ attention by other things.

P2: Pieces of paper do not get their attention but a paper projected attracts their attention more.

P1: I can directly bring USB and connect it to the smart board. We have to carry computers here to do that. We directly prepare our presentation there and it makes the lesson more effective.

P6: It is very important to use visual materials for speaking but not listening for my group. The children give importance to that and if there is no visual material, they certainly do not attend to the lesson and are not interested.

P7: Because their teachers are old-generation and they do not teach in an enjoyable way, they are listening to us more carefully.

Convenience of the technology:

Student teachers in this study think that technology gives them practicality.

P1: I am very positive towards the use of technology in language learning and teaching because we use smart board in ‘young learners’ courses or practicum. For example, we just click the play button for listening songs and they can listen to it 2 or 3 times. Besides, it is very convenient in such activities as watching video and playing games. Before, there were cassettes, but now it is better.

P2: I forgot to download the song last week in the practicum. Due to the fact that there are smart boards with Internet, we could listen to the song. It took just 1 or 2 minutes. Therefore, we did not lose so much time.

P1: The learners are very accustomed to the smart board. Therefore, it is such a convenience.

Time-saving:

Student teachers think that technology is a timesaving tool.

P1: Technology saves time and we even use the exam papers from there (smart board).

P2: I think that if we can use it appropriately, it is saving anyway.

Technical problems:

Student teachers explain that although they emphasize they really like using technology, they think there are some bad sides, too. One of them is the technical problems they encountered.

P4: I think that it is generally useful. But once, while my friends were going to practicum, there was power cut. It was like locked.

P1: When there was a power outage, most of our friends’ lessons were interrupted.

Making lazy & Addiction:

Student teachers assume that technology may make them and the learners lazy to some extent.

P4: If the teacher is unprepared, the lesson is completely blocked. And we cannot always go prepared. For example, it is not possible to bring a cassette in case the power is cut or I am preparing power point presentation and I used to use colorful cartons. Now, power point suits my book more. It is just not possible for me to prepare both colorful cartons and power point. Therefore, we are not always able to come prepared and when these kinds of malfunction occur, the whole lesson blows up in our face. In fact, our teacher said that we should have been prepared but too much preparation is not always possible. What is the point of preparing power point if we are to design colorful cartons?

P2: Technology is making us lazy. Besides, we started to live too much addicted.

P1: We are getting lazier because there are loaded books inside the smart board. For example, our topic is ‘must’. There is certainly a song related to ‘must’. However, before, we used to search for a song suitable for

'must', find a song from Google and investigate whether it is suitable or not. Now, we directly use the song thinking that we already have it. We are a bit taking the easy way out.

P1: The moment the learners see a small piece of paper, their attention is distracted. They have become so addicted to the smart boards that they even do not open the book. However, even if it makes us lazy, I cannot say that we do not like technology.

Abusement of the technology by the learners:

Student teachers claim that the learners sometimes abuse the technology.

P1: The learners look at the song lyrics in listening activities. Besides, I suppose it is okay to bring phones to the school because they all have phones in their hands. Technology has some difficulties for the teachers from this aspect.

P2-3: Once, I collected the phones.

Future School Anxiety:

Student teachers also seem to worry about their future schools in terms of its technical facilities.

P5: We are also worried about whether we falter if the school we are going to be assigned next year is so much technological like our practicum school.

P2: We experienced our practicum in a qualified school. We got accustomed to just inserting the flash storage and teaching the lesson. So next week, if we design cartons, we cannot use power point.

High Expectations of the Learners:

Student teachers think that the expectations of the learners are getting higher and higher with the technological developments.

P5: The expectations of the learners are increasing like what is the teacher going to do with all these facilities? Before, when they saw colorful cartos, their eyes used to sparkle. However, now, there is no such thing. Their expectations are very high and we are just trying to keep up with.

P1: When we teach the lesson straightly, they just feel sleepy.

DISCUSSION

1. What are the attitudes of Turkish EFL student teachers towards technology use in language learning and teaching?

It can be deduced from the findings that Turkish EFL student teachers in this study have positive attitudes towards the use of technology in language learning and teaching process. The findings of this study ally with the previous studies indicating positive attitudes (Alkan & Erdem, 2010; Başöz & Çubukçu, 2014; Chung, 2014; Cutrim Schmid & Hegelheimer, 2014; Hismanoglu, 2012; Hismanoglu & Hismanoglu, 2011; Savaş, 2012; Kuo, 2008; Özdamlı et al., 2009; Savas, 2014; Yüksel & Kavanoz, 2011). The student teachers prefer technology in language learning and teaching due to such features as its convenience (Isman & Dabaj, 20004), timesaving, and developing learner engagement (Caruso & Kvavik, 2005; Günüç & Kuzu, 2014). They express that although there are some negative sides of the technology like technical problems, making lazy, addiction (Isman & Dabaj, 20004), abusement by the learners, future school anxiety, and high expectations of the learners, they still like technology. Therefore, the student teachers in this study believe in the importance of technology in language learning and teaching and find it beneficial and seem to see technology inevitable for 21st century learning and teaching contexts (Isman & Dabaj, 2004). Besides, it supports the notion that feeling ready and competent in technology promotes the development of positive attitudes (Alkan & Erdem, 2010; Isman & Dabaj, 2004; Liton, 2015; Warschauer, 1998; Woodrow, 1987). Furthermore, it seems important to give learners opportunities to experience technology in real-life contexts (Albion, 1999; Teo, 2008; Wang, Ertmer, & Newby, 2004). Also, it can be said that they seem to use technology for their future career due to the fact that they have both positive attitudes towards the technology (Abas, 1995; Beggs, 2000; Blankenship, 1998; Bullock, 2004; Davis, 1989; Francis et al., 2000; Huang & Liaw, 2005; Isleem, 2003; Kersaint et al., 2003; Kuo, 2008; Mumtaz, 2000; Myers & Halpin, 2002; Tondeur et al., 2008; van Braak et al., 2004) and feel anxious what to do if they do not have access to the technology in their future assigned schools. However, they also feel anxious about failing to keep up with the technological innovations because of the rapid development and high learner expectations. *For now, technology is an advantage for us. But, we do not know what will happen tomorrow. It is enough, no more advancement.* Therefore, it seems crucial for these student teachers to have the knowledge of not only how to use technology especially with the new developments but also become aware of how to bring technology into their classrooms with the necessary equipment. Besides, there should be some precautions against the technology-related problems in the schools.

CONCLUSION

The aim of the study is to find out the attitudes of Turkish EFL student teachers towards technology use in language learning and teaching process. The findings show the student teachers have highly positive attitudes towards technology use in language learning and teaching. Also, it was revealed from the results that the student teachers seem positive towards the use of technology in language learning and teaching because of its convenience, time-saving feature, and improving learner engagement. They really find technology very effective in language learning and teaching. However, they also point out that there are such drawbacks as high learner expectations, future school anxiety, making lazy, addiction, abuse by the learners, and technical problems. No matter what the drawbacks are, the student teachers in this study seem to really favor the use of technology in language learning and teaching and seem to implement it in their future career.

PEDAGOGICAL IMPLICATIONS AND SUGGESTIONS

The findings of this study have some pedagogical implications and suggestions for student teachers, teacher trainers, and practicum schools. It was illustrated that student teachers in this study have positive attitudes towards technology use in language learning and teaching. It can be said that student teachers seem to keep with 21st century teacher profile promoting the use of technology and seeing it as time-saving and facilitating the learning. Their practicum experience seems to give them an opportunity to experience technology in real life context and this seems to have contributed to their development of positive attitudes. Besides, the learners' good reactions to the technology seem to promote their use of technology in the class. Therefore, there are some implications for the education from this study. Firstly, it seems important to make student teachers have real-life experience in terms of trying out technology implementation. The teacher education programs and teacher trainers should think about how to make it happen. Secondly, it may be a good idea to arrange a practicum school with technological facilities for student teachers. However, it seems that practicum schools may not have equipment dealing with the technical problems like power cut. Maybe, the schools should take steps to deal with these kinds of flaws taking into consideration that one day all schools will be equipped with technological tools. Thirdly, there seems a need for an in-service training program in terms of making knowledgeable those teachers about the technological innovations as can be seen in the anxiety of the student teachers, there is a possibility for those student teachers to let technology go in their classes due to failure to keep up with technological developments and lack of technological facilities. Therefore, they may need training both pedagogically as how to integrate new technological applications into their teaching and how to reach technological tools technically.

REFERENCES

- Abas, Z. W. (1995). Implementation of computers in Malaysian schools: problems and successes. In D. Watson, & D. Tinsley (Eds.), *Integrating information technology into education* (pp. 151–158). London: Chapman & Hall.
- Akbaba Altun, S. (2001). Elementary school principals' attitude towards technology and their computer experience. Retrieved April 12, 2015 from ERIC.
- Albion, P. (1999). Self-efficacy beliefs as an indicator of teachers' preparedness for teaching with technology. *Proceedings of the 10th International Conference of the Society for Information Technology & Teacher Education*. Retrieved from http://eprints.usq.edu.au/6973/1/Albion_SITE_1999_AV.pdf.
- Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. *Computers & Education*, 47(4), 373-398.
- Alkan, F., & Erdem, E. (2010). The attitudes of student teachers towards educational technologies according to their status of receiving teaching application lessons. *Procedia-Social and Behavioral Sciences*, 2(2), 2523-2527.
- Almekhlafi, A. G., & Almeqdadi, F. A. (2010). Teachers' perceptions of technology integration in the United Arab Emirates school classrooms. *Educational Technology & Society*, 13(1), 165-175.
- Aydin, S. (2013). Teachers' perceptions about the use of computers in EFL teaching and learning: the case of Turkey. *Computer Assisted Language Learning*, 26(3), 214-233.
- Basaran, B. C. (2013). Attitudes of EFL teachers and learners towards CALL in Turkey. *Proceedings of the International Conference ICT for Language Learning*. Retrieved from <http://conference.pixel-online.net/ICT4LL2013/conferenceproceedings.php>
- Başöz, T., & Çubukçu, F. (2014). Pre-service EFL teacher's attitudes towards computer assisted language learning (CALL). *Procedia-Social and Behavioral Sciences*, 116, 531-535.
- Becker, K. H., & Maunsaiyat, S. (2002). Thai students' attitudes and conceptions of technology. *Journal of Technology Education*, 13(2), 6-19.
- Beggs, T. A. (2000). Influences and barriers to the adoption of instructional technology. Retrieved May 9, 2015 from ERIC.

- Blankenship, S. E. (1998). *Factors related to computer use by teachers in classroom instruction*. Unpublished doctoral dissertation. Department of Educational Administration, Virginia Polytechnic Institute and State University, Virginia.
- Bullock, D. (2004). Moving from theory to practice: An examination of the factors that preservice teachers encounter as the attempt to gain experience teaching with technology during field placement experiences. *Journal of Technology and Teacher Education*, 12(2), 211-237.
- Caruso, J. B., & Kvakik, R. (2005). ECAR study of students and information technology 2005: Convenience, connection, control, and learning. EDUCAUSE. Retrieved from <https://net.educause.edu/ir/library/pdf/ERS0506/ecm0506.pdf>.
- Christensen, R., & Knezek, G. (2000). Internal consistency reliabilities for 14 computer attitude scales. *Journal of Technology and Teacher Education*, 8(4), 327-336.
- Chung, S. (2014). *Pre-service and in-service ESL teachers' beliefs about the use of digital technology in the classroom* (Unpublished master thesis). Carleton University, Ottawa, Ontario.
- Cutrim Schmid, E., & Hegelheimer, V. (2014). Collaborative research projects in the technology-enhanced language classroom: Pre-service and in-service teachers exchange knowledge about technology. *ReCALL*, 26(3), 315-332.
- Dang, X. T. (2011). Factors influencing teachers' use of ICT in language teaching: A case study of Hanoi University, Vietnam. *International Conference "ICT for Language Learning" 4th edition, Simonelli Editore, 20th-21st October*. Retrieved from http://scholar.googleusercontent.com/scholar?q=cache:H8LC7ZUvOA0J:scholar.google.com/+Factors+Influencing+Teachers'+Use+of+ICT+in+Language+Teaching:+A+Case+Study+of+Hanoi+University,+Vietnam&hl=en&as_sdt=0,5
- Davis, L. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly* 13(3), 319-340.
- Dogoriti, E. (2010). Perceptions and attitudes towards web-based ELT among English teachers in Greece. *International Conference ICT for Language Learning*. Retrieved from http://scholar.googleusercontent.com/scholar?q=cache:yQeoulce8SUI:scholar.google.com/+Perceptions+and+Attitudes+towards+Webbased+ELT+among+English+teachers+in+Greece&hl=en&as_sdt=0,5
- Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford: Oxford University Press.
- Ertmer, P. A., Paul, A., Molly, L., Eva, R., & Denise, W. (1999). Examining teachers' beliefs about the role of technology in the elementary classroom. *Journal of Research on Computing in Education*, 32(1), 54-72.
- Fabry, D. L., & Higgs, J. R. (1997). Barriers to the effective use of technology in education: Current status. *Journal of Educational Computing Research*, 17(4), 385-395.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2011). *How to design and evaluate research in education*. New York: McGraw-Hill.
- Francis, L., Katz, Y. & Jones, S. (2000). The reliability and validity of the Hebrew version of the Computer Attitude Scale. *Computers and Education*. 35(2), 149-159.
- Gardner, R. C. (1985). *Social psychology and second language learning: the role of attitudes and motivation*. London: Edward Arnold.
- Gunter, G. A., Gunter, R. E., & Wiens, G. A. (1998). Teaching pre-service teachers technology: an innovative approach. Retrieved from ERIC.
- Günüç, S., & Kuzu, A. (2014). Factors influencing student engagement and the role of technology in student engagement in higher education: campus-class-technology theory. *Turkish Online Journal of Qualitative Inquiry*, 5(4).
- Hismanoglu, M. (2012). The impact of a curricular innovation on prospective EFL teachers' attitudes towards ICT integration into language instruction. *International Journal of Instruction*, 5(1), 183-202.
- Hismanoglu, M., & Hismanoglu, S. (2011). Attitudes of English teacher candidates toward ICT. *E-International Journal of Educational Research*, 2(2), 17-29.
- Huang, H. M., & Liaw, S. S. (2005). Exploring users' attitudes and intentions toward the web as a survey tool. *Computers in Human Behavior*, 21(5), 729-743.
- Isleem, M. (2003). *Relationships of selected factors and the level of computer use for instructional purposes by technology education teachers in Ohio public schools: a statewide survey*. Unpublished doctoral dissertation. Department of Education, The Ohio State University, Ohio.
- Isman, A., & Dabaj, F. (2004). Attitudes of students towards Internet. Retrieved from ERIC.
- Kersaint, G., Horton, B., Stohl, H., & Garofalo, J. (2003). Technology beliefs and practices of mathematics education faculty. *Journal of Technology and Teacher Education*, 11(4), 549-577.
- Kitchakarn, O. (2015). EFL learners' attitudes towards using computers as a learning tool in language learning. *Turkish Online Journal of Educational Technology*, 14(2), 52.

- Kopinska, M. (2013). New technologies in foreign language classroom: the role of attitudes. *The 6th edition of the ICT for Language Learning Conference*. Retrieved from http://conference.pixel-online.net/ICT4LL2013/common/download/Paper_pdf/090-ITL29-FP-Kopinska-ICT2013.pdf.
- Kuo, M. M. (2008). Learner to teacher: EFL student teachers' perceptions on internet-assisted language learning and teaching. Retrieved from ERIC.
- Liton, H. A. (2015). Examining students' perception & efficacy of using technology in teaching English. *Technology*, 1(1), 11-19.
- Liu, J. (2009). A survey of EFL learners' attitudes toward information and communication technologies. *English Language Teaching*, 2(4), 101-106.
- McCoy, L. P., Heafner, T. L., Burdick, M. G., & Nagle, L. M. (2001). Gender differences in computer use and attitudes on a ubiquitous computing campus. Retrieved April 12, 2015 from ERIC.
- Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record*, 108(6), 1017-1054.
- Mitra, A. (2001). Developing a questionnaire to measure the effectiveness of computers in teaching. Retrieved from ERIC.
- Mollaei, F., & Riasati, M. J. (2013). Teachers' perceptions of using technology in teaching EFL. *International Journal of Applied Linguistics & English Literature*, 2(1), 13-22.
- 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), 319-342.
- Myers, J. M., & Halpin, R. (2002). Teachers' attitudes and use of multimedia technology in the classroom: Constructivist-based professional development training for school districts. *Journal of Computing in Teacher Education*, 18(4), 133-140.
- Nolen-Hoeksema, S., Fredrickson, B. L., Loftus, G. R., & Wagenaar, W. A. (2009). *Atkinson & Hilgard's introduction to psychology*. UK: Cengage Learning EMEA.
- Özdamlı, F., Hürsen, Ç., & Özçınar, Z. (2009). Teacher candidates' attitudes towards the instructional technologies. *Procedia-Social and Behavioral Sciences*, 1(1), 455-463.
- Raman, K., & Yamat, H. (2014). Barriers teachers face in integrating ICT during English lessons: a case study. *The Malaysian Online Journal of Educational Technology*, 2(11), 11-19.
- Sağlam, A., & Sert, S. (2012). Perceptions of in-service teachers regarding technology integrated English language teaching. *Turkish Online Journal of Qualitative Inquiry*, 3(3), 1-14.
- Savaş, P. (2012). Use of digital video recording in the preparation stage of pre-service foreign language teachers' micro-teachings. *International Journal on New Trends in Education and Their Implications*, 3(3), 107-116.
- Savas, P. (2014). Tablet PCs as instructional tools in English as a Foreign Language education. *TOJET*, 13(1), 217-222.
- Selwyn, N. (1997). Students' attitudes toward computers: Validation of a computer attitude scale for 16-19 education. *Computers & Education*, 28(1), 35-41.
- Tanguma, J., Martin, S. S., & Crawford, C. M. (2002). Higher education and technology integration into the learning environment: results of a survey of teacher preparation faculty. Retrieved April 12, 2015 from ERIC.
- Teo, T. (2008). Pre-service teachers' attitudes towards computer use: A Singapore survey. *Australian Journal of Educational Technology*, 24(4), 413-424.
- Tondeur, J., Valcke, M., & Van Braak, J. (2008). A multidimensional approach to determinants of computer use in primary education: Teacher and school characteristics. *Journal of Computer Assisted Learning*, 24(6), 494-506.
- Tsai, C. C., Lin, S. S., & Tsai, M. J. (2001). Developing an Internet attitude scale for high school students. *Computers & Education*, 37(1), 41-51.
- Tsou, W., Wang, W., & Tzeng, Y. (2006). Applying a multimedia storytelling website in foreign language learning. *Computers & Education*, 47(1), 17-28.
- Uluysal, B., Demiral, S., Kurt, A. A., & Şahin, Y. L. (2014). A technology integration journey of a teacher. *TOJQI*, 5(4), 12-22.
- van Braak, J., Tondeur, J., & Valcke, M. (2004). Explaining different types of computer use among primary school teachers. *European Journal of Psychology of Education*, 19(4), 407-422.
- Vicario, T., Henninger, E., Austin, M., & Chambliss, C. (2002). College students' responses to new communication technologies. Retrieved April 12, 2015 from ERIC.
- Wang, L., Ertmer, P. A., & Newby, T. J. (2004). Increasing preservice teachers' self-efficacy beliefs for technology integration. *Journal of Research on Technology in Education*, 36(3), 231-250.
- Warschauer, M. (1997). Computer mediated collaborative learning: Theory and practice. *The Modern Language Journal*, 81(4), 470-481.

- Warschauer, M. (1998). *Electronic Literacies: Language, culture, and power in online education*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Woodrow, J. E. (1987). Educators' attitudes and predispositions towards computers. *Journal of Computers in Mathematics and Science Teaching*, 6(3), 27-37.
- Yavuz, S. (2005). Developing a technology attitude scale for pre-service chemistry teachers. *The Turkish Online Journal of Educational Technology*, 4(1), 17-25.
- Yüksel, G., & Kavanoz, S. (2011). In search of pre-service EFL certificate teachers' attitudes towards technology. *Procedia Computer Science*, 3, 666-671.

APPENDIX A

THE SCALE OF ATTITUDE TOWARDS TECHNOLOGY	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. E-mail is only for communication; it cannot be used in education.					
2. OHP, slides and projection should not be preferred as they take too much time to be used.					
3. Using the Internet in the learning process is a waste of time.					
4. Using technological tools does not affect students' motivation.					
5. Technological tools do not need to be used in instruction.					
6. Recording some parts of the lesson on videotapes could provide the students the opportunity to see their mistakes.					
7. Because the videotapes could be watched again, students could get feedback.					
8. Technological tools could be used for practice or revision.					
9. Students should receive basic education on computer literacy.					
10. Using current technologies would promote the improvement of new ones.					
11. Technological facilities have a positive effect on productive studying and learning.					
12. Using technology would facilitate the understanding of difficult subjects.					
13. One does not have to use technological facilities in order to be successful in life.					
14. Daily and yearly plans should be prepared by teachers using computers.					
15. Lessons should often include computer-assisted instruction.					
16. Students should get advance information on the usage of new technologies.					
17. The usage of new technologies in teacher training should be increased.					
18. Technological tools could only succeed when they address all the sense organs.					
19. In order to be able to graduate from the university, the ability to “use the technological materials of the field” should be rated.					