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TURKISH EFL TEACHERS' ATTITUDES TOWARDS THE USE OF INTERACTIVE WHITEBOARDS AND THE CHALLENGES FACED¹

**İngilizceyi Yabancı Dil olarak Öğreten Türk Öğretmenlerin Etkileşimli Tahta
Kullanımına İlişkin Tutumları ve Karşılaşılan Güçlükler**

Turgay HAN

Yrd.Doç.Dr., Kafkas Üniversitesi,
Fen Edebiyat Fakültesi,
İngiliz Dili ve Edebiyatı Anabilim Dalı,
turgayhan@yahoo.com.tr

Semih OKATAN

Öğr.Gör. Kafkas Üniversitesi,
Yabancı Diller Yüksekokulu,
semih3636@hotmail.com

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Abstract

The purpose of this study is to investigate Turkish English-as-a-foreign-language (EFL) teachers' attitudes towards the use of interactive whiteboards (IWB) and the challenges they face while using this equipment in EFL classrooms. In this mixed methods study, the data were gathered in two steps: a) a questionnaire was administered to 42 English teachers to examine their profiles and their attitudes towards IWB, and b) interviews were conducted with 14 EFL teachers separately to examine the challenges in using the IWBs and their attitudes towards using IWBs in their classroom atmosphere. The quantitative results revealed that English teachers' had positive attitudes towards the use of IWBs. Further, there was no significant difference between female and male teachers in terms of attitudes towards the use of IWBs. The qualitative findings showed that the teachers experienced some problems regarding supplementary materials and their integration to IWBs, and seating arrangements in crowded classrooms. It was suggested that teachers should be trained to use the IWBs more effectively in different classroom contexts.

Keywords: Interactive Whiteboard, English as a foreign language, English teachers

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Öz

Bu çalışmanın amacı İngilizceyi yabancı dil olarak öğreten Türk öğretmenlerin etkileşimli tahta (IWB) kullanımına ilişkin tutumlarını ve derslerde bunları kullanmada çektikleri güçlükleri incelemektir. Bu karma desen çalışmasında veriler iki aşamada toplandı: a) 42 öğretmene IWB'ye ilişkin tutumlarını ve profillerini incelemek için verilen anket, b) IWB kullanımına ilişkin tutumlarını incelemek ve sınıf ortamında kullanmadaki güçlüklerini incelemek için 14 öğretmenle ayrı ayrı yapılan mülakatlar. Nicel sonuçlar bu öğretmenlerin IWB'ye ilişkin olumlu tutamlarının olduğunu göstermiştir. Ayrıca, erkek ve kadın öğretmenler arasında IWB kullanımına ilişkin tutumlar bakımından anlamlı farklılıklar bulunmamıştır. Nitel bulgular, öğretmenlerin destekleyici materyaller, onların IWB'ye entegrasyonu ve kalabalık sınıflardaki oturma düzenleri ile ilgili güçlükler yaşadığını göstermiştir. Öğretmenlerin farklı sınıf ortamlarında IWB'leri daha etkili kullanmaları için eğitim almaları önerilmiştir.

Anahtar Kelimeler: Etkileşimli tahta, Yabancı Dil olarak İngilizce, İngilizce öğretmenleri.

INTRODUCTION

With the help of technology, the knowledge we need can be transformed into a visual form to provide a better understanding of knowledge for learners because learners can understand explanations better when words and corresponding pictures are presented together.² In recent years, integrating technology to education has gained more and more importance since computer-assisted materials from the internet have taken place in foreign language learning.³ Multimodal learning has come to the fore with this development in education supported by technology and the internet. By administering activities based on multimedia in classrooms, students are led to take part in a social and collaborative environment, which helps the students support and supplement each other's knowledge, skills and points of view.⁴ Studies conducted in this field indicate that, in foreign language teaching, one of the ways to achieve success is to choose suitable materials, which can stimulate both the learners' audio and visual senses. Therefore, the activation of learners' auditory and visual abilities by bringing proper and authentic materials into the classroom can be supported by the use of technology such as Interactive Whiteboards. In the pedagogical field,

² MAYER, R. E. 1999: "Multimedia aids to problem-solving transfer", International Journal of Educational Research, 31(7), pp. 611-623.

³ AYDIN, S. 2007: "Attitudes of EFL Learners towards the Internet". The Turkish Online Journal of Educational Technology – TOJET, 6(3), 1-9. Retrieved from <http://eric.ed.gov>, on 15.02.2015

⁴ LEE, K. W. 2005. "English teachers' barriers to the use of computer assisted language learning". The Internet TESL Journal, 6(12). Retrieved from <http://iteslj.org/Articles/Lee-CALLbarriers.html>, on 18.10.2015

use of IWB not only supports teachers' existing pedagogy but also might be used to transform it into the classroom as IWB use offers distinctive and innovative opportunities and materials, which reinforce conceptual learning and interactivity in learning and teaching.⁵

While using IWBs in EFL classrooms, the theoretical framework and rationale lying behind teaching and learning through multimedia can be related to the following theories and models: Cognitive Theory is based on how the second language learning process works⁶. Dual Coding Theory is based on verbal and nonverbal systems in learning a language through multimedia.⁷ Interactive Model is based on teacher's actions and behaviors in terms of learning outcomes.⁸ Multi-dimensional Interactive Teaching Model Based on Interactive Whiteboard is based on the interaction of IWB with other components in learning.⁹ Interactionist Model is based on the interaction between person and computer.¹⁰ In sum, integration of technology depends on the teachers' roles in managing the learning context, because good planning and foresight are essential for good management.¹¹ In a learning process integrated with technology, the most crucial components are the students and the provision of the most suitable learning

⁵ MOSS, G.- JEWITT, C.- LEVAÏÇ, R.- ARMSTRONG, V.- CARDINI, A.- CASTLE, F. 2007: **"The interactive whiteboards, pedagogy and pupil performance evaluation"**: An Evaluation of the Schools Whiteboard Expansion (SWE) Project: London Challenge.

⁶ MAYER, R. E. 1999; MAYER, R. E. 2003: **"The promise of multimedia: using the same instructional design methods across different media"**. Learning and Instruction, 13, 125-139. DOI: 10.1016/S0959-4752(02)00016-6; MAYER, R. E. 2009: **Multimedia Learning**. Cambridge University Press. DOI: 10.1017/cbo9780511811678.

⁷ PAIVIO, A. 1991: **Dual coding theory: Retrospect and current status**. Canadian Journal of Psychology, (453), 255-287. DOI: 10.1037/h0084295

⁸ MOSELEY, D.- STEVE, H. 1999: **Ways forward with ICT: Effective Pedagogy Using Information and Communications Technology for Literacy and Numeracy in Primary Schools**. Retrieved from <http://eric.ed.gov/> on 12.02.2015

⁹ ZENG, L.- LU, X.- ZUO, M. 2010: **Research into application of interactive whiteboard to interactive educational mode. Paper Presented At** Computational Intelligence and Software Engineering (CISE), International Conference. DOI: 10.1109/cise.2010.5676988

¹⁰ CHAPELLE, C. A. 1998: **Multimedia CALL: Lessons to be Learned from Research on Instructed SLA**. Language Learning and Technology, (2)1, 22-34.

¹¹ CLOKE, C., - SHARIF, S. 2001: **"Why Use Information and Communications Technology? Some Theoretical and Practical Issues"**. Journal of Information Technology for Teacher Education, (110), 7-18. DOI: 10.1080/14759390100200099

environment, which must be designed by teachers in an instructional design in which goals have been determined and the proper technological affordances for achieving goals chosen.¹²

With the help of the FATİH Project that aims to equip all classrooms in state schools with technology, teachers have been able to find opportunities to use Interactive Whiteboards in EFL classrooms. Thanks to IWB, learners can see, hear and form the presented information in their minds. Nonetheless, in the educational field, there might be some problems with regard to its implementation. These kinds of problems might be considered as drawbacks in foreign language teaching through IWBs. On the other hand, using technological tools in the sphere of education might render foreign language teaching more appealing and attractive. Hence, the main aim of this study is to reveal if IWB use is successful and meets the needs of the learners in EFL classrooms in an Anatolian city in the eastern part of Turkey from EFL teachers' perspectives.

LITERATURE REVIEW

In the digital age, it is inevitable that language instructors will use technological devices such as computers, IWBs, multimedia and internet in their own classrooms. Studies in the field of foreign language teaching and learning indicate that technology use in EFL classrooms brings a lot of opportunities in terms of using a foreign language in real life¹³. Technology and internet use in classrooms affect learners' learning styles and the ways in which they comprehend, because materials obtained from the internet increase students' in-class participation by attracting their attention and keeping them active. In addition, while learning a foreign language, learners

¹² MAREK, M. W. 2014: **"The integration of technology and language instruction to enhance EFL learning"**. Paper based on keynote address presented at the Spring 2014 Technology Enhanced Language Learning-Special Interest Group (TELL-SIG) conference, Taichung, Taiwan, June 5, 2014. Available from ERIC database: <http://eric.ed.gov/?id=ED545477>.

¹³ CHAPELLE, C. A. 2001: **Computer Application in Second Language Acquisition: Foundations for teaching, testing and research**. Cambridge University Press. DOI: 10.1017/CBO9781139524681; CLOKE, C., & SHARIF, S. 2001; GERARD, F.- WIDENER, J.- GREENE, M. 1999: **"Using Smart Board in Foreign Language Classes"**. Society for Information Technology & Teacher Education International Conference 10th, San Antonio, TX, (February 28- March 4); SCHMID, E. C. 2006: **"Investigating the Use of Interactive Whiteboard Technology in the English Language Classroom through the Lens of a Critical Theory of Technology"**. Computer Assisted Language Learning, (91), 47-62. DOI: 10.1080/09588220600804012

must use the target language in real life by putting what they have learnt into practice. In order to use a foreign language in real life, learners must acquire some skills such as reading, writing, listening and speaking. Computer and internet-based lessons enable the acquisition of these skills, for instance students who are exposed to internet-based video lessons are superior to those who are trained in traditional pronunciation lessons.¹⁴ All skills mentioned above should be presented to the learners because learners should gain linguistic competence as the knowledge presented to the learners construct a bridge between learner and linguistic competence.¹⁵

Linguistic competencies can be classified as input competencies (listening and reading) and output competencies (speaking and writing) and the aim of learning with technology in EFL classrooms is to develop these linguistic competencies. With the help of technological tools, learners more actively take a role in learning process and they can engage in many activities such as discussion, argumentation, criticism and interpretation of what they have read.¹⁶ Since the computer took part in the educational field, there have been many changes and new perspectives in terms of teaching and learning a foreign language. So all teachers should know how efficiently technological tools can be used in this process and how they can turn these technological tools into the most effective way to teach a foreign language in real sense and encourage the learners to be active participants in language learning.

IWB use contributes to the learning process in three ways: a) the presentation of new linguistic and cultural elements, b) constructing a positive interaction between teacher and students, and c) enabling the teacher to promote his organizational skills in the process of teaching foreign language.¹⁷ In addition, IWBs are more useful than traditional whiteboards (TWBs) as they provide communicative practices to make the learners more

¹⁴ HISMANOĞLU, M. 2012: “**Teaching Word Stress to Turkish EFL (English as a Foreign Language) Learners through Internet-Based Video Lessons**”. US-China Education Review, 26-40. Retrieved from <http://eric.ed.gov>. on 15. 02. 2015

¹⁵ MATTHEWS, R. J. 2006: “**Knowledge of Language and Linguistic Competence**”. Philosophical Issues, 16: 200–220. DOI: 10.1111/j.1533-6077.2006.00110.x

¹⁶ PLASS, J.- LINDA. J. 2009. **Multimedia Learning in Second Language Acquisition**. The Cambridge Handbook of Multimedia Learning. New York: Cambridge University Press.

¹⁷ GERARD, F.-WIDENER, J.- GREENE, M. 1999.

sociable.¹⁸ Nonetheless, in lessons taught with IWB in EFL classrooms, English teachers should have some skills if they are to use it well and to integrate current materials with the content of the topic. Therefore, English teachers must have IWB training in advance, so that they can gain competencies about designing IWB-based materials, and acquire IWB technical knowledge or skills and learn teaching methods for IWB.¹⁹

The previous studies conducted on IWB use in EFL classrooms have indicated that IWB use can be regarded as an effective technological tool. Johnson, Ramanair, and Brine (2010)²⁰ conducted one of these studies. The study was carried out on students' and teachers' perceptions of IWB. In the study, the data were gathered from interviews, focus-group discussions and classroom observations. The study revealed that most of the students and teachers were positive towards IWB use as it provided interaction and a variety of materials.

Likewise, in the study carried out by Schmid²¹, cognitive learning theory and qualitative data analyses were used to examine the pedagogical benefits of multimedia use in EFL classrooms, which were equipped with IWB. The study revealed that multimedia use in EFL classrooms equipped with IWB had a positive effect on motivation, attention, concentration and vocabulary. In addition, the study proved that as well as attention and participation, IWB use in classrooms may help learners to understand the content of the lesson better and may make the lesson more active.

¹⁸ CARDENASA, J. M. F.- DE LA GARZAB, L. S. 2010: **"Disciplinary Knowledge and Gesturing in Communicative Events: A Comparative Study between Lessons Using Interactive Whiteboards and Traditional Whiteboards in Mexican Schools"**. Technology, Pedagogy and Education, (219), 173–193. DOI: 10.1080/1475939X.2010.491219

¹⁹ TÜREL, Y. K.- JOHNSON, T. E. 2012: **"Teachers' Belief and Use of Interactive Whiteboards for Teaching and Learning"**. Educational Technology & Society, 15 1), 381–394.

²⁰ JOHNSON, M. E.- RAMANAIR, J.- BRINE, J. 2010: **"It's not necessary to have this board to learn English, but it's helpful': student and teacher perceptions of interactive whiteboard use"**. Innovation in Language Learning and Teaching, 43), 199-212. DOI: 10.1080/17501229.2010.51344

²¹ SCHMID, E. C. 2008: **"Potential pedagogical benefits and drawbacks of multimedia use in the English language classroom equipped with interactive whiteboard technology"**. Computers and Education 51, 1553-1586. DOI: 10.1016/j.compedu.2008.02.005

Recently, Al-Faki and Khamis²² carried out a study focusing on Saudi EFL context. The data were gathered from a questionnaire with 25 items, classroom observation and the researchers' own experiences. The study revealed that the challenges related to IWB use in EFL classrooms were based on four factors: teachers who lack a pedagogical framework and competency, an administration that does not provide pedagogical support, a lack of technical support, and students who have low motivation.

The following studies conducted in Turkish context have supported the results of the studies carried out abroad and have proved that IWB use in EFL classrooms and other classrooms (e.g. math, science, and others) is more efficient and effective than the use of TWBs. However, very few studies investigated the EFL teachers' attitudes²³ and both the perceptions of EFL teachers and students in Turkish context²⁴. First, Türel and Johnson²⁵ conducted a descriptive study on IWB use and examined teachers' perceptions and the impact of IWB use in EFL classrooms. 174 Turkish teachers, ranging from grades six to twelve, who had at least six month of experience in using IWB participated in the study. The results indicated that collaboration among teachers, enough training on IWB and the frequency of using IWB improved teachers' competency in using technology and made the classrooms more effective and practical. However, in the study, it was reported that teachers had some barriers in using IWB. They reported that they did not have enough time to let their students use IWB during the lessons.

In the same year, Sözcü and İpek²⁶ conducted a descriptive study on the framework of IWB, which included 1013 students from elementary to secondary schools and 65 teachers from different schools in Turkey. Specifically, the study investigated the participants' points of view towards

²² AL-FAKI, I. M.- KHAMIS, A. H. A. 2014: **"Difficulties Facing Teachers in Using Interactive Whiteboards in Their Classes"**, American International Journal of Social Science, 23). 136-158.

²³ AYDINLI, J. M.- ELAZIZ, F. 2010: **"Turkish students' and teachers' toward the use of interactive whiteboards in EFL classrooms"**. Computer Assisted Language Learning, (233), 235-252. DOI: 10.1080/09588221003776781

²⁴ ÖZ, H. 2014: **"Teachers' and Students' Perceptions of Interactive White Boards in the English as a Foreign Language Classroom"**. The Turkish Online Educational Technology, (133). 156-177.

²⁵ TÜREL, Y. K.- JOHNSON, T. E. 2012.

²⁶ SÖZCÜ, Ö. F. - İPEK, İ. 2012: **"Instructional, Technological and Psychological Approaches of Using IWBs: A Framework"**. Procedia Social and Behavioral Sciences 55, 990 – 999. DOI: [10.1016/j.sbspro.2012.09.589](https://doi.org/10.1016/j.sbspro.2012.09.589)

IWB use in the light of contextual factors, instructional-pedagogical, psychological and technical approaches. The study defined some steps in terms of these approaches and revealed that applying, designing and developing materials were necessary for teaching and learning outcomes.

Similarly, Korkmaz and Çakıl²⁷ conducted a descriptive study on the difficulties that teachers face while using smart boards. The study included 17 teachers with different fields who were interviewed and it revealed that teachers had positive attitudes towards this technology and believed that smart board use in classrooms was beneficial but that they did not know how to use it effectively. This indicated that teachers did not have enough competencies in using smart boards.

The following two studies examined the issue from Turkish EFL perspectives. First, Aydınli and Elaziz²⁸ conducted a study involving 458 students and 82 EFL teachers from different institutions across Turkey, ranging from primary schools to universities. The results revealed that participants had positive attitudes towards IWB use and IWB use in EFL classrooms was found to be beneficial as it provided motivation and in-class participation.

Similarly, Öz²⁹ conducted a descriptive and inferential study on EFL teachers' and students' perceptions of IWB and investigated variables such as proficiency, gender, weekly IWB use and teaching experience. The study revealed that while there was no significant difference in teachers' and students' perceptions in terms of gender, students' proficiency level and weekly IWB use indicated a significant difference. Teaching experience could affect the way in which IWB is used in EFL classrooms. Training for effective IWB use came to the fore in the study and also, the participants showed positive perceptions and attitudes towards IWB use in EFL classrooms and they claimed that it was a powerful technological tool in foreign language teaching and learning.

As above literature has indicated that there are very few studies conducted in Turkish EFL context, in this sense, this study aimed at bridging the research gap. The main aim of this study is to reveal if IWB use is successful and meets the needs of the learners in EFL classrooms in an

²⁷ KORKMAZ, O.- ÇAKIL, I. 2013: **“Teachers’ difficulties about using smart boards”**, 2nd World Conference on Educational Technology Researches. Procedia-Social and Behavioral Sciences 83. 595-599. DOI: 10.1016/j.sbspro.2013.06.113

²⁸ AYDINLI, J. M.- ELAZIZ, F. 2010.

²⁹ ÖZ, H. 2014.

Anatolian city in the eastern part of Turkey from EFL teachers' perspectives. Another aim of the study is to examine the challenges experienced in using these equipments. In this sense, this study might be helpful in overcoming the drawbacks occurring in the use of IWB.

Specifically, the following research questions were addressed in the study:

Quantitatively the following question were asked;

Research Question 1: What are the teachers' attitudes towards using Interactive Whiteboards at high school EFL classrooms?

Qualitatively the following questions were asked:

Research question 2: What are the teacher perceptions of using IWB in classrooms?

Research Question 3: What are the teacher competencies in using IWB?

Research Question 4: What are the challenges faced by the teachers in using IWB?

METHOD

This study consists of both quantitative and qualitative data and it was carried out at high schools in Kars. The participants were selected from English teachers, who are currently teaching at high schools. The study aimed to examine the participants' attitudes towards IWB use in classrooms.

Participants

Forty-two Turkish English teachers who teach English in 9th grade EFL classrooms participated in the study. All the volunteer participants were selected by purposeful convenience sampling approach. When the instrument was administered, the background information of the teachers, such as their in-service or pre-service training about IWB use, was taken into consideration as a dominant factor regarding their attitudes. In addition, participants' abilities and competencies in using IWB were not ignored, as these are the components, which affect their points of view towards the technology.

Most of the teachers had bachelor's degree and two of the participants had MA degree. Most of the participants' teaching experiences were not above 16 years. This might be a challenge for IWB use in a theoretical framework. The participants are young teachers, who have computer and whose number of weekly hours is less than 30 hours. This might be a positive affect for IWB use as they might have enough time to follow technological development. The number of female participants is

higher than that of male participants because the study was carried out according to convenience sampling and the volunteer participants were selected randomly.

Data Collection Procedure

The study was applied in three steps to get the data. The first step involved related permissions got from Ministry of Education of the city of Kars. The second step was the application of teacher questionnaires consisting of background information and Likert-scale items, and the third step involved an interview, which consisted of eight open-ended questions, was administered to the teachers. In the process of collecting and compiling data, the research design was formed according to Creswell and Miller³⁰; Creswell³¹; Gay, Mills and Airasian³².

Data Collection Tools Questionnaire

In order to collect the quantitative data, a teacher questionnaire³³, of which Cronbach Alpha was .78³⁴, was used. The questionnaire that consisted of background information and Likert-scale items was administered to 42 EFL teachers from 15 high schools.

Interview

To provide qualitative data, a teacher interview, which consists of 8 open-ended questions, was conducted face to face with 14 English teachers who were selected randomly among volunteers. With the interview, it was aimed to determine the basic discrepancies and challenges that English teachers encounter during their lessons. Another aim of the interview was to reveal whether or not IWB use in EFL classrooms is beneficial for the students. During the interview, voice recording was used and the responses given by the participants were analyzed according to the recurring theme.³⁵

³⁰ CRESWELL, J.W.- MILLER, D. L. 2000: **Determining Validity in Qualitative Inquiry, Theory into Practice**, 39:3, 124-130. DOI: 10.1207/s15430421tip3903_2

³¹ CRESWELL, J. W. 2012: **Qualitative Inquiry and Research Design: Choosing Among Five Approaches**. Sage Publications.

³² GAY, L. R.- MILLS, G. E.- AIRASIAN, P. 2009: **Educational research. Competencies for analysis and applications** (9th Ed.). UpperSaddle River, NJ: Pearson Education.

³³ AYDINLI, J. M.- ELAZIZ, F. 2010.

³⁴ AYDINLI, J. M.- ELAZIZ, F. 2010.

³⁵ RYAN, G. W.- BERNARD, H. R. 2003. "Techniques to identify themes". *Field methods*, 151, 85-109. DOI: 10.1177/1525822X02239569

RESULTS

Quantitative Data Analysis

The following Table 1, Table 2, Table 3 and Table 4 show the detailed descriptive statistical results regarding the teachers' attitudes towards using IWB. The Table 5 shows a summary of the alignment of the research question 1 with the quantitative data analyses.

Research Question 1: What are the teachers' attitudes towards using Interactive Whiteboards at high school EFL classrooms?

Table 1: Descriptive statistical results regarding the EFL teachers' attitudes towards teaching through IWB

Items		SA	A	NI	D	SD	M	Sd	General mean	General Sd.
1. Using IWB-based resources reduces the time I spend in writing	F %	18 42.9	21 50	2 4.8	1 2.1	- -	4,40	0,63		
2. When using IWBs in the classroom, I spend more time for the preparation of the lesson.	F %	6 14.3	22 52.4	- -	8 19	6 14.3	3,33	1,34	4.12	.80
3. I think using IWBs makes it easier to reach different sources and display them to the whole class immediately	F %	19 45.2	19 45.2	- -	2 4.8	6 14.3	4,38	0,74		
4. IWBs are beneficial to be able to save and print the materials generated during the lesson.	F %	11 26.2	25 59.5	- -	6 14.3	- -	3,98	0,92		
5. I can give more effective explanations with the use of IWBs.	F %	16 38.1	21 50	3 7.1	2 4.8	- -	4,31	0,73		
6. With the help of using an IWB I can	F %	7 16.7	21 50	6 14.3	8 19	- -	3,75	1,02		

easily control the whole class.								
7. I think IWBs can be a good supplement to support teaching.	F	23	17	2	-	-		
	%	54.8	40.4	4.8	-	-	4,58	0,50
8. Using IWBs makes me a more efficient teacher.	F	9	27	1	5			
	%	21.4	64.3	2.4	11.9	-	3,98	0,85
9. Using IWBs makes it easier for a teacher to review, reexplain, and summarize the subject.	F	16	23	3	-	-		
	%	38.1	54.8	7.1	-	-	4,41	0,50

Notes: SD: Strongly Disagree, D; Disagree, NI: No idea, A: Agree, SA: Strongly Agree, Sd: Standard Deviation

Table 1 indicates English teachers' attitudes towards teaching through IWB. The mean score is above four score, which means that all teachers think that teaching through IWB makes the teaching process effective, efficient and enjoyable. Standard deviations are below one, indicating that English teachers advocate that teaching through IWB is an influential tool for foreign language teaching and helps English teachers to perform their pedagogical performance better to be an efficient teacher.

Items 1 and 2 indicate English teachers' attitudes towards IWB use in terms of time saving. The mean score is near a score of five, which means that a great number of English teachers think that IWB use reduces the time they allot for the preparation. As well as other facilities that IWBs provide, it helps teachers to spend less time in writing and as compared with TWBs, IWBs reduce the time that teachers need to write in class activities. A high percentage of the teachers reported that they spent too much time for the preparation of the lesson. But the preparations which teachers do in advance would probably impact the time spent in classrooms and prevent a waste of time here. Item 6 indicates the descriptive statistics about teachers' attitudes towards classroom management. The mean score is near to four, indicating that they think that there is a strong relationship between IWB and classroom management. It might be concluded that while using IWB in classrooms,

teachers could control their students easily by either motivating them, especially indifferent students or by keeping them awake and active.

Table 2: Descriptive statistical results regarding the EFL teachers' general attitudes towards IWB.

Items		SA	A	NI	D	SD	Mean	Sd	General mean	General Sd.
10. I like using IWB technology in my lessons.	F	19	21	-	2					
	%	45.2	50	-	4.8	-	4,36	0,73		
11. I feel uncomfortable in front of my students while using IWB.	F	-	6	2	7	27	1,63	1,08		
	%	-	4.3	4.8	16.7	64.3				
12. I have positive attitudes towards the use of IWBs in language instruction.	F	10	32	-	-	-	4,24	0,43	2.44	.80
	%	23.8	6.2	-	-	-				
13. I have negative attitudes towards the use of IWBs in language classes.	F	-	-	1	17	24	1,41	0,50		
	%	-	-	2.4	40.5	57.1				
14. I do not think my students are ready for this technology.	F	4	2	6	19	11	2,14	1,25		
	%	9.5	4.8	14.3	45.2	26.2				
15. What I do in class with traditional methods is sufficient in teaching English.	F	-	7	4	12	19	1,87	1,12		
	%	-	6.7	9.5	28.6	45.2				
16. I am not the type to do well with IWB-based applications.	F	-	-	8	16	18	1,47	0,51		
	%	-	-	19	38.1	42.9				

Notes: SD: Strongly Disagree, D: Disagree, NI: No idea, A: Agree, SA: Strongly Agree, Sd: Standard Deviation

Table 2 gives descriptive statistics about the English teachers' general attitudes towards IWB use. Items 10 and 12 indicate the English teachers' general positive attitudes towards IWB use in EFL classrooms. The mean scores are above four, indicating that a high percentage of the teachers, who took part in the study, have a positive attitude towards IWB use in EFL classrooms. The score of standard deviation is below a score of one, which indicates that all teachers think that IWB use in EFL classrooms is beneficial.

Items 11, 13, 14 and 16 indicate the English teachers' general negative attitudes towards IWB use in EFL classrooms. The mean scores are above one, which means that most English teachers do not have any negative attitudes towards IWB use in EFL classrooms. However, a low percentage of the teachers have negative attitudes towards IWB use. These teachers might feel anxious while using IWB in their classrooms. Item 15 indicates the

descriptive statistics about teachers' attitudes towards traditional methods, traditional boards and IWB. The mean score is less than two, indicating that traditional methods are not sufficient for language acquisition

In the light of the scores given in Table 5, it might be concluded that a high percentage of the teachers have positive attitudes towards IWB use in their own EFL classrooms. Although a small number of English teachers do not feel comfortable while using IWB in teaching foreign language because of the incompetence of some of their students, a great number of teachers think that they can use IWB easily and it is beneficial in teaching a foreign language.

Table 3: Descriptive statistical results regarding the EFL teachers' attitudes towards motivation

Questions		SA	A	NI	D	SD	Mean	Sd	General mean	General Sd.
17. I think IWBs make learning more enjoyable and more interesting.	F	16	25	1	-	-				
	%	38.1	59.5	2.4	-	-	4,39	0,49		
18. I can keep my students' attention longer with the help of IWB technology.	F	6	28	4	4	-				
	%	14.3	66.7	9.5	9.5	-	3,95	0,77		
19. I think IWBs increase the interaction and participation of the students.	F	10	25	3	4	-			4.13	.69
	%	23.8	59.5	7.1	9.5	-	4,05	0,83		
20. I think my students are more motivated when I use an IWB in my lessons.	F	9	26	5	2	-				
	%	21.4	61.9	11.9	4.8	-	4,14	0,67		

Notes: SD: Strongly Disagree, D: Disagree, NI: No idea, A: Agree, SA: Strongly Agree, Sd: Standard Deviation

Table 3 shows English teachers' attitudes about attention, motivation and interaction. The mean scores are four, indicating that a high percentage of the total number of teachers think that they can keep their students active and motivated with the help of IWB.

The standard deviations are somewhat near to the one score point, which indicates that students' in-class participation can be provided with the help of IWB, and also, that interaction between student and teacher and between teacher and student might occur.

Table 4: Descriptive statistical results EFL teachers' attitudes towards training of IWB.

Items		SA	A	NI	D	SD	Mean	Sd	General mean	General Sd.
21. I believe that training is required to teach with IWB technology	F	14	18	5	5	-				
	%	33.3	42.9	11.9	11.9	-	4,11	0,97		
22. If I do not get sufficient training, I do not feel comfortable with using IWBs in classrooms.	F	8	16	4	10	4			3,74	1,16
	%	19	38.1	9.5	23.8	9.5	3,36	1.36		

Notes: SD: Strongly Disagree, D: Disagree, NI: No idea, A: Agree, SA: Strongly Agree, Sd: Standard Deviation

Table 4 shows the descriptive statistics about teachers' attitudes towards training in IWB. The mean score of item 21 is over four, indicating that English teachers think that training to use IWB efficiently is necessary. The mean score of item 22 is somewhat over three, indicating that some of the teachers are neutral and that others think that insufficient training related to IWB use might make the users feel uncomfortable in teaching process. So, the lack of training related to IWB use in classrooms might cause anxiety and so English teachers might have difficulties in using such a technological tool in their own classrooms.

Table 5. Summary of Quantitative Data Analysis

Research Questions	Data	Analysis	Levels	Mean	Sd.	Result
What are the teachers' attitudes towards using Interactive Whiteboards at high school EFL classrooms?	English teachers' Questionnaires	Descriptive	Attitudes towards teaching	4.1228	.80439	A high percentage of the teachers have positive attitudes towards IWB use in EFL classrooms.
			General attitudes	2.4446	.80092	
			Attitudes towards motivation	4.1310	.69046	
			Attitudes towards training	3.7382	1.16483*	

Table 5 shows a summary of the descriptive statistics of quantitative data. The questionnaire includes 4 sublevels such as a) attitudes towards teaching, b) general attitudes, c) attitudes towards motivation, and d) attitudes towards training. The mean scores of attitudes towards teaching through IWB and motivation provided by IWB are over four, indicating that a high percentage of the participants had positive attitudes towards IWB use in EFL classrooms. The mean score of general attitudes is below three,

indicating that English teachers do not have negative attitudes towards IWB use. The mean score of attitudes towards training is near to four, indicating that they think that they have enough competencies in using IWB but the standard deviation is over one, indicating that English teachers should be trained about how to use IWB effectively in EFL classrooms.

Table 6: Mann-Whitney U-test results about male and female teachers' attitudes towards IWB use.

Gender	N	U	Z	p
Male	9	113.909	-.701	.528
Female	33			

Table 6 shows Mann-Whitney U-test result ($p > .05$), which indicates that there is no statistically significant difference in the attitudes of the male and female teachers towards using Interactive Whiteboards.

Qualitative Data Results

Interview with English Teachers

An interview was administered to fourteen English teachers, who were selected randomly. The interview was recorded and it was analyzed according to recurring theme.³⁶ Interview questions were about the integration of the current course books with IWB, IWB vs. TWB, competency in using IWB, skills that are gained through IWB, the challenges in using IWB, and teachers' in-service and pre-service training of IWB. The main qualitative research question is: how do the EFL teachers feel about IWB?

Research question 2: What are the teachers' perceptions of using IWB in classrooms?

a) IWBs vs. Traditional materials and tools.

A high percentage of the participants (72%) thought that IWB use in EFL classrooms was more influential than the use of traditional materials and tools as it was useful in presenting knowledge and colorful materials in a visual and audio environment. With the help of IWBs, students can gain language skills, especially listening and speaking skills. Also, teachers can use time more efficiently. Motivation and concentration can easily be provided with IWBs because these kinds of tools might make the learning process permanent and they render the EFL classrooms more enjoyable. A

³⁶ RYAN, G. W.- BERNARD, H. R. 2003.

low percentage of teachers (28%) thought that both IWBs and traditional materials and tools were of equal in efficiency. While IWBs are useful in motivating students, traditional methods might be used in teaching grammatical structures.

“IWB, because it can be integrated with course books and gives easy access to extra sources if needed.” (Interviewee 2)

b) IWBs vs. TWBs.

A high percentage of all participants (86%) claimed that IWB was more beneficial than TWBs as it made the lessons more creative and provided a better learning environment because it motivated students in the lessons and helped the students to focus on the lesson. Moreover, it was claimed that IWB brought the virtual and audio materials into the classroom and combined all teaching methods in one board and made the internet accessible during the lessons.

“IWB offers much more scope for extra material, holds students’ attention and also, integration of IWB with a course book makes lessons more streamlined.” (Interviewee 7)

It was reported that thanks to IWBs, classroom management was easy for the teachers as it drew the students’ attention to the lesson. While most of the participants thought that IWB was quite beneficial in teaching a foreign language, a small percentage of them (7%) thought that both IWBs and TWBs were of equal benefit in teaching English. Some of the participants (7%) had no idea about using these kinds of technological tools in education.

“IWBs are more influential since it involves a lot of comprehensible and useful materials to dominate the whole teaching session.” (Interviewee 13).

a) Language and communicative skills in the teaching and learning process through IWB.

While half of the participants (50%) thought that IWB was more effective for communicative skills, a small number of the teachers (14%) advocated that IWB was of significance in gaining language skills. One third of the teachers (36%) claimed that both language and communicative skills could be acquired with IWB.

“It is effective in aspects of both skills, language and listening because visual materials stimulates conversation.” (Interviewee 9)

Research Question 3: What are the teacher competencies in using IWB?

Competency in using IWB.

Although a small number of the teachers (14%) thought that they were not competent in using IWB, a high percentage of them (77%) agreed that they were competent enough to use IWB during the lessons. It was found that a small percentage of teachers (7%) had no idea about competency in using IWB.

Research Question 4: What are the challenges faced by the teachers in using IWB?

a) The impact of seating arrangement and overpopulated classrooms on using IWB.

All of the participants agreed that seating arrangement and overpopulated classrooms had a negative impact on the learning process with IWBs. In classrooms equipped with IWBs, teachers are obliged to motivate students and this is so difficult in overpopulated classrooms that teachers might face some barriers in classroom management. Hence, teachers might have difficulty in motivating students in overpopulated classrooms. The students in these kinds of classrooms can have some problems; the first and most common problem mentioned during the interviews and regarded as one of the dominant negative factors is noise made by indifferent students during the lessons. Teachers reported that noise might distract or demotivate the students. Another problem mentioned was that most of the students could not see the board well because of either distance from the IWB or sunlight and because the curtains in the classrooms were sometimes insufficient to block sunlight which prevents students from seeing clearly.

“Sure, seating arrangement or crowded classrooms impact learning in IWB classrooms, because all students should have an opportunity to see the screen of IWB completely. Otherwise, they will not be able to see the same parts of the text or whatever is on the screen.” (Interviewee 6)

b) The challenges of using IWBs in EFL classroom atmosphere.

During the lessons taught through IWBs, teachers might encounter some difficulties. These problems can be classified in two groups. The first one is technical problems. Teachers reported that during the lessons, the electricity sometimes went off and that the internet connection was cut off. This is a great barrier for both students and teachers because the activities

might remain uncompleted. It was also stated that sometimes, some problems with the screen or software of IWBs could appear during the teaching process and that the software could not support the files. Moreover, it was claimed that IWBs broke down often.

“IWBs break down very often.” (Interviewee 5)

“Sometimes, I have problems with IWB, especially when electricity is cut off.” (Interviewee 8)

The second problem concerns the users. Some students are regarded as not being competent in using IWB efficiently because they are not active users during the lessons and the lack of in-class participation of the students causes incompetency.

“They are not active users, rather recipients.” (Interviewee 8)

In overpopulated classrooms, students could be distracted and lose their concentration easily because of noise or seating arrangement so, they need to be motivated again and this is time-consuming.

“I have some problems because of the noise made in the classroom and this makes the students distracted and indifferent.” (Interviewee 6)

c) The integration of course books with IWB.

A high percentage of the participants (79%) thought that English course books were not integrative enough and did not include enough supplementary materials. Nearly one quarter of the participants (21%) thought that the course books in their classrooms were integrative enough with IWB and provided enough supplementary materials for their students.

“It is not integrative enough with IWB and it does not include enough supplementary materials.” (Interviewee 5)

d) English Teachers’ in-service or pre-service training in using IWB.

Nearly half of the participants (43%) said that they had had in-service training and one quarter of them (21%) had had pre-service training. The rest of the participants (36%) did not have any training in IWB use. One of the teachers said that he had learned how to use IWB by his own efforts but that it was not sufficient.

“No, I have not, I am experienced with my own efforts.”
(Interviewee 14)

Table 3. shows the alignment of the second research question with the interview analysis.

Table 3. Summary of Qualitative Data

Research Question	Data	Analysis	Findings
How do the EFL teachers feel about IWB?	Interview with 14 EFL teachers.	Recurring Themes: a) perceptions, b) competencies, c) challenges.	1. English course books provided by MEB are not integrative with IWB and do not include supplementary materials. 2. Seating arrangement and overpopulated classrooms are negative factors in IWB equipped classrooms. 3. Some challenges such as technical problems might occur in using IWB. 4. Material discrepancy is a drawback when IWB is used.

DISCUSSION AND CONCLUSIONS

This study examined English teachers' attitudes towards the use of IWBs in teaching and learning a foreign language. A high percentage of the participants think that IWB use in EFL classrooms provide permanent success in terms of gaining receptive and productive skills. Additionally, the results of Mann Whitney U test support this positive attitude by indicating that there is no significant difference between male and female participants in terms of using IWB in EFL classrooms. All the participants in the study have a similar attitude towards IWB use in language teaching and learning. The results and findings in this study are consistent with those found in the studies carried out by Aydınli and Elaziz³⁷, Türel and Johnson³⁸, and Öz³⁹.

Further, this study revealed that IWB provided some positive factors such as time saving, source variety, and increased attention, motivation and interaction. With the help of IWB in EFL classrooms, learners have a high motivation level as it makes audio-visual materials available and easily attracts their attention because low motivation in using technology can be regarded as a drawback in foreign language learning.⁴⁰ Compared to traditional methods and traditional boards, IWB is believed to be more effective because it provides extra supplementary materials and interaction. The interaction is not one-way in IWB-equipped classrooms. The direction of interaction might be from teacher to student, from student to students or from IWB to the learners. Further, teachers also think that they can easily

³⁷ AYDINLI, J. M. - ELAZIZ, F. 2010.

³⁸ TÜREL, Y. K.- JOHNSON, T. E. 2012.

³⁹ ÖZ, H. 2014.

⁴⁰ AL-FAKI- I. M.- KHAMIS, A. H. A. 2014.

control the whole class in IWB equipped classrooms. Therefore, IWB use can be effective in classroom management because it easily attracts the students' attention in a well-planned lesson. This result was supported in a study, which indicated that good management could be based on good planning.⁴¹ Hence, learning through IWB is more permanent and effective than learning through TWB. Such a learning style can be based on multimedia learning, which claims that combining pictures with words can provide a deeper comprehension for students.⁴² In this sense, most of the teachers think that IWB provides a better learning because visual materials presented to the learners might provide a better learning as it refers to learners' more than one organ.⁴³

When teachers' pedagogical background is taken into the consideration in the process of education designed with IWB, learning outcomes may depend on teachers' behaviors and attitudes towards learners.⁴⁴ Hence, every teacher should be in a positive attitude to construct a bridge between himself and the learners or among the learners. This interaction leads the teacher to use all his creativity to engage all learners and design the lesson according to the learning process.⁴⁵ This learning process can be constructed around IWB and audio-visual materials provided by the internet. Training is essential for technology use in education⁴⁶ but surprisingly, all the teachers in this study and their students claimed that they could use IWB easily although they had not had any training beforehand. The study revealed that their personal computers and cell phones were the dominant factors in their ability to use IWB.

Given IWB use in EFL classrooms, it is undeniable that there are some challenges that IWB users encounter during the lessons. One of these challenges is electricity cuts and the recalibration of IWB. When the electricity is cut off, the recalibration of IWB takes a long time and this reduces the time that may be allotted to the activities. So, a great number of IWB users think that such a problem is a waste of time. The result about this technological problem is similar to the result in a study.⁴⁷ Another challenge

⁴¹ CLOKE, C.- SHARIF, S. 2001.

⁴² MAYER, R. E. 2003.

⁴³ KORKMAZ, O.- CAKIL, I. 2013.

⁴⁴ BALL, N. 2011: "**Technology in Adult Education ESOL Classes**". *Journal of Adult Education*, 40(1), 12-19.

⁴⁵ CARDENASA, J. M. F.- DE LA GARZAB, L. S. 2010.

⁴⁶ HOPEY, C. 1999.

⁴⁷ GURSUL, F.- TOZMAZ, G. B. 2010. "**Which one is smarter? Teacher or Board**". *Procedia Social and Behavioral Science* 2, 5731-5737. DOI:

is sunlight that makes the IWB screen hard to see well, especially in overcrowded classrooms. When education in large classrooms is considered, it might be hard to use IWBs effectively and help all learners to engage in practices because of the students who are indifferent, distracted or cannot see the board clearly. Therefore, some in-class activities such as pair-work can be useful to lessen this negative influence.⁴⁸ The last but the most significant challenge is that course books used in English lessons are not integrative enough with IWB. A high percentage of the participants advocated that the course books needed to be revised for IWB use and supported with enough supplementary materials from the internet.

In conclusion, this study revealed that IWB provided source variety motivation and time-saving. In addition to these positive factors, some specific components have come to the fore in the light of the quantitative and qualitative data results. First, a high percentage of the participants have positive attitudes towards IWB use in EFL classrooms. Second, IWB users can face some challenges and technical problems while using IWB. Third, audio-visual materials integrated with technology make foreign language teaching and learning easier. Finally, gender is not an effective factor in using IWB.

In sum, when all the results and findings of the study are considered, the study indicates that the use of IWB must be learner-centered. Effective IWB use in EFL classrooms rests on the potential of teachers' attitudes constructed on teaching and learning objectives. Effective IWB use in foreign language teaching and learning depends on an understanding of how it can be used in a classroom. To the extent that IWB users remain focused on learner-centered activities and learning objectives, IWB use in EFL classrooms remains effective and beneficial. IWB contributes to students' productive communication and thinking and students' knowledge can be enhanced by the active engagement that IWB provides and by teachers' strategies.⁴⁹

10.1016/j.sbspro.2010.03.936

⁴⁸ Gray, C., -Vaughan-HAGGER, L.- Pilkington, R., - SALLY-ANN, T. 2005. **"The pros and cons of interactive whiteboards in relation to the key stage 3 strategy and framework"**. Language Learning Journal, 32(1), 38-44. DOI: 10.1080/09571730585200171.

⁴⁹ RUTH, K., NEIL, M., PAUL, W., - JUDITH, K. S. 2010. **"Can the Interactive Whiteboard Support Young Children's Collaborative Communication and Thinking in Classroom Science Activities?"** International Journal of Computer-Supported Collaborative Learning, 54, 359-383. DOI: 10.1007/s11412-010-9096-2

Pedagogical Implications

This study implicates that a high percentage of the teachers have positive attitudes towards this technological tool. They believe that IWB use in the lessons is helpful in developing learners' skills in spite of some drawbacks such as technical problems and material discrepancy. Another problem that English teachers face is material design and integration of the course books with IWB. The course books, which are provided by the Ministry of National Education, should be revised to be integrated with IWB in such a way that teachers can use all audio-visual materials on the same screen. There are some deficiencies in terms of online materials such as the lack of e-book, podcasts, downloadable handouts and on-line classrooms. To overcome this discrepancy, teachers can blend on-line and downloadable activities with the current course books to meet the learners' needs.

Second, teachers might have difficulty while assessing the students' performance in the classroom. Since lessons equipped with IWB are intensively based on the task and in-class practices, teachers can use on-line tests or exercises to assess their students and to provide cost effectiveness.

Finally, thanks to the FATİH Project, which is still being carried out, a high percentage of the classrooms were equipped with IWBs, but there are still some discrepancies in using it as an effective multimedia tool at high schools. So English teachers should be trained about how to use IWB effectively in EFL classrooms.

This study is limited in terms of learning through IWBs. The teaching methods in use of IWB were not examined in this study. Another limitation is the scope of the study. The study focused on solely EFL teachers in the city of Kars in Turkey. So it cannot be generalizable to all Turkey.

In the light of the limitations, further research about IWBs can be conducted in different institutions and an experimental study or an action research might be conducted to examine learning through IWB.

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