

**THE PERCEPTIONS OF ELT STUDENTS AND TEACHERS TOWARDS
THE USE OF IWBS AT A VOCATIONAL AND TECHNICAL
HIGH SCHOOL**



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AUGUST 2017

**THE PERCEPTIONS OF ELT STUDENTS AND TEACHERS TOWARDS
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HIGH SCHOOL**

**A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF EDUCATIONAL SCIENCES
OF
BAHÇEŞEHİR UNIVERSITY**

BY

Ebru Pınar ELMACI

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF ARTS
IN THE PROGRAM OF ENGLISH LANGUAGE TEACHING**

AUGUST 2017

Approval of the Graduate School of Educational Sciences



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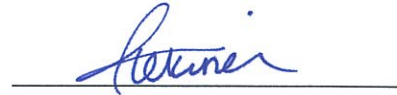


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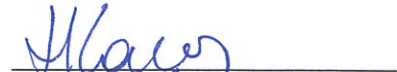
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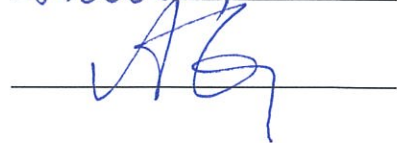
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ABSTRACT

THE PERCEPTIONS OF ELT STUDENTS AND TEACHERS TOWARDS THE USE OF IWBS AT A VOCATIONAL AND TECHNICAL HIGH SCHOOL

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Master's Thesis, Master's Program in English Language Teaching

Supervisor: Assist. Prof. Aylin TEKINER TOLU

August 2017, 75 pages

The purpose of this study was to investigate perceptions of ELT students and English teachers towards interactive whiteboards in the context of FATİH Project (Movement to Increase Opportunities and Technologies Project) in a vocational and technical high school in Turkey. This study was conducted using qualitative and quantitative research methods in to gather detailed information. The quantitative data were obtained through the questionnaires and qualitative data were obtained through semi-structured interviews. This research was conducted with two groups of participants in a vocational and technical high school, in İstanbul. First group participants were 207 ninth and tenth grade high school students and second group participants were 13 English teachers from the same school. The findings of the study showed that most of the teachers and students had positive perceptions towards the use of IWBs in their classrooms and they consider that IWBs are beneficial teaching tools in English language teaching. English teachers use IWB to attract students' interest in terms of interactivity, motivation, learning styles, variety of materials, authenticity.

Key Words: Interactive Whiteboard, Language Learning Motivation, English Language Education.

ÖZ

ÖĞRENCİLERİN VE ÖĞRETMENLERİN BİR MESLEKİ VE TEKNİK LİSESİNDE ETKİLEŞİMLİ TAHTA KULLANIMINA KARŞI ALGILARI

ELMACI, Ebru Pınar

Yüksek Lisans, İngiliz Dili Eğitimi Yüksek Lisans Programı

Tez Yöneticisi: Yrd. Doç. Dr. Aylin TEKİNER TOLU

Ağustos, 2017, 75 sayfa

Bu çalışmanın amacı İngilizce öğretmenlerinin ve öğrencilerin İstanbul'da bir mesleki ve teknik anadolu lisesinde FATİH (Fırsatları Araştırma ve İyileştirme) Projesi kapsamında etkileşimli tahta kullanımına yönelik algılarını araştırmak. Bu çalışma detaylı bilgi toplamak amacıyla nitel ve nicel veriler kullanılarak yürütülmüştür. Nicel veriler anketler, nitel verilerse görüşmeler vasıtasıyla toplanmıştır. Bu çalışma iki grup katılımcı tarafından yürütülmüştür. İlk grup katılımcılar 207 dokuz ve onuncu sınıf lise öğrencilerinden, ikinci grup katılımcılarsa aynı okuldan 13 İngilizce öğretmeninden oluşmaktadır. Çalışmanın bulguları öğretmenlerinin ve öğrencilerin çoğunun etkileşimli tahtanın İngilizce derslerinde kullanımına yönelik olumlu algıya sahip olduğunu ve etkileşimli tahtaların faydalı öğretim araçları olduğunu göstermiştir. İngilizce öğretmenleri etkileşimli tahtayı öğrencilerin interaktiflik, isteklendirme, öğrenme stilleri, materyal çeşitliliği, otantiklik, vs. açısından dikkatini çekmek kullanmaktadır.

Anahtar Kelimeler: Etkileşimli Tahta, Dil Öğrenme Motivasyonu, Yabancı Dil Eğitimi

To my grandfather Ömer ERKAN



ACKNOWLEDGEMENTS

Firstly, I would really like to express my sincere thanks to my honourable supervisor Assist. Prof. Aylin TEKİNER TOLU, for her encouraging guidance, close assistance and kind supervision in the completion of my thesis.

I would also like to thank my thesis examination committee members Assist. Prof. Hatime ÇİFTÇİ and Dr. Aslı SAĞLAM for their valuable suggestions and feedback.

Then, I would like to express great thanks to my dear mother Hafize who has encouraged and motivated me efficiently throughout the entire process, by building the enabling environment for me to finish this work on time. Without her, this thesis would not have been possible. I am lucky and proud to have such a person as her in my life.

I am also grateful to my dearest brother and best friend Erkan, and my father Nurettin who tried their best to give their support for me and lots of thanks for their strong patience during the process.

I would also like to thank my grandfather, Ömer ERKAN for his having faith in me completing this study.

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Chapter 1

Introduction

1.1 Overview

Nowadays technology innovations have affected every phase of foreign language teaching. Moreover, the rapid progress of technology has also resulted some changes in human needs. Educational institutions integrate technology in their classrooms. With the integration of information and communication technology (ICT) in the classrooms, integration of interactive whiteboards (IWB) in classroom settings has become a recent trend. Most of the countries like England, Spain, Denmark, Italy and the USA support this attempt of educational institutions. They carry on important enterprises to associate technological improvements with educational setting (Türel, 2011).

The integration of technology in education in recent time has gained great importance in Turkey. Related to these attempts over the world, to provide the best practice of technology use in educational institutions, Turkey has also introduced into a project named “FATİH”, which means “Movement of Increasing Opportunities and Improving Technology”, in 2010 in order to provide equality of opportunity in education and improve the “technology in schools in a way that informatics technology tools to engage more senses in the educational process”, thus, it integrates IWBs in primary and secondary public schools to eliminate the digital gap and enhance the quality of education. In the scope of this project it was planned to furnish classrooms with IWBs and Internet infrastructure (Fatih Project, 2013). It was planned to train teachers on both the use of IWBs and its integration into their instructional settings. Then they were expected to use the special e-content prepared for their lessons as well as prepare their own materials.

With the “FATİH Project in Education” we have entered a modernization period. In our country, the FATİH aims to ensure equality of opportunity in education and improve the technologies in our schools. The use of interactive whiteboards is spreading rapidly in the educational settings. The Fatih Project provides every

classroom in high schools with LCD smart boards and a stable Internet infrastructure and providing every student and teacher with a tablet computer.

The FATİH Project has strong pedagogical support. It is conducted to “provide every student with the best education, the highest quality educational content and equal opportunities” (MoNE FATİH Project Web, 2012, para. 1). It is a program that aims to create a new generation of students that is creative and innovative; which has the ability of critical thinking and problem-solving with advanced communication skills. FATİH project has brought a new perspective to education. It provides equality in education and it conveys the life into the education.

Many researchers have pointed out that integration of technologies in classroom settings increase the motivation of students, effectiveness of teachers and it provides collaborative learning environments (Smith, 2005; Higgins, 2005; Wall & Miller, 2005). Specifically, integration of IWBs as in Fatih Project provides encouraging benefits to learning. However, it must be accepted by its targeted users to fulfil its educational goals. According to Davis (1989), positive or negative attitudes of the users affects the acceptance of a new technology and the attitudes of the users are mainly depended on “perceived usefulness” and “perceived ease of use of the technology” (p.320). In other words, if the system’s learnability, responsiveness and efficiency are high, then this increases its acceptability (Folmer & Bosch, 2004). On the other hand, the complexity of any technology affects the technology adoption process of teachers (Aldunate & Nussbaum, 2013). A new technology considered to provide promising achievements would be successful and growth of investment if it is widely accepted by its users.

FATİH project consists of five components, which are; (a) provision of equipment and software substructure (b) provision of educational e-content and management of e-content, (c) effective information technology (IT) usage in curriculum, (d) provision of in-service training for teachers and (e) conscious, reliable, manageable, measurable use of IT. For this reason the following initiatives have been planned, phased and prioritized for 570.000 classrooms in 42.000 high, secondary and elementary schools: (a) installation of interactive whiteboard with LCD panel, (b) building internet network infrastructure (c) provision of IT tools e multi-function printer, scanner, tablets to be distributed to teachers and students e (d) giving in-service training to

teachers for the effective usage of IT tools in the classrooms and (e) the formation of e-contents during the process. (FATİH Project Web, 2012; MEB Activity Report, 2013)

This project provides hardware and broad band internet to all classrooms. Moreover, it provides e-content for subjects, sets up platforms for the integration of teachers into IT technologies and product development, and facilitation other activities including project implementation assistance. (MEB, 2012)

There are five major components of FATİH Project:

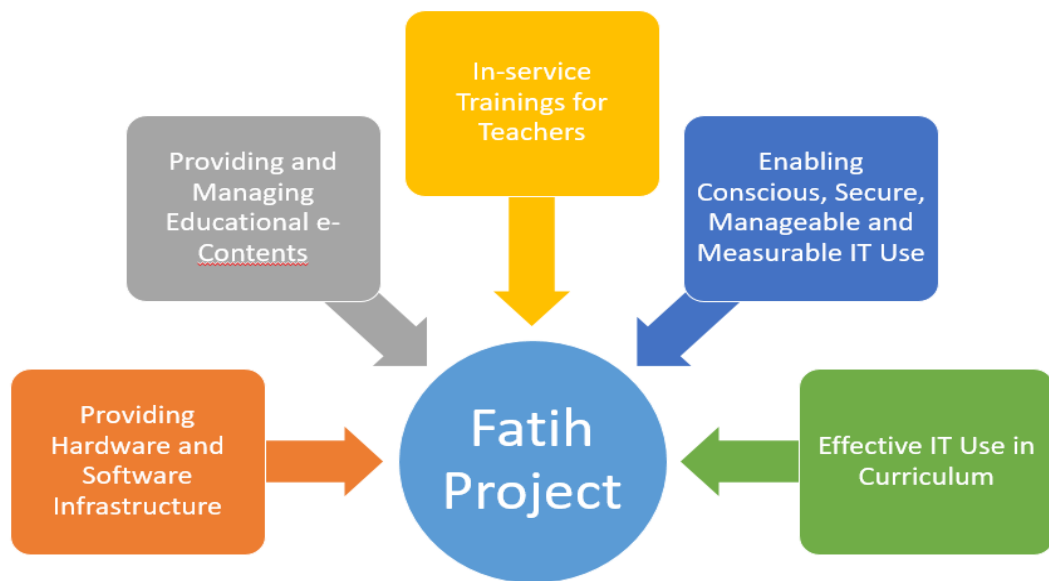


Figure 1. The major components of FATİH project in education

The classroom management system of the FATİH project provides an interactive communication between board tablet technology and teacher to student dialogue. Moreover, it maintains a higher efficiency in learning processes while also providing teachers with a better foundation on which to share the materials assign homework, and measure the learning levels for the students in a controlled atmosphere. A high speed secure internet (VPN) is used to accommodate each school and ensure their particular effective systematic usage. Systems installed and changes in the hardware in schools can be followed by school information system.

Interactive white boards in FATİH project were developed based on the specific requirements of Ministry of Education (Milliyet Newspaper, 2011). It is an

interactive whiteboard of 65” LCD display with an embedded computer that runs Microsoft Windows TM 7 and Linux Pardus TM 2011 operating systems. It can be operated by hand or a pen. It can be run as a standard computer. It is also integrated with a traditional whiteboard and chalkboard. In addition, it has special educational software called “Starboard TM Software for FATİH” that enables teachers to create their own content by inserting files such as video, image, animations or make their own graphics by using drawing tools or accessories (Fatih Project, 2011).

FATİH Project in Education is a multi-dimensional service and has a very important role in energising the domestic economy as it isn’t consisted of only a hardware and educational projects.

1. Within the scope of the project, the following can be achieved: an overall increase of domestic product, internal creative branding, development of information technologies using said domestic products, new technologies and products, opportunity for information technologies hardware, software, network infrastructure and internet access to be supplied to all school and classrooms, e-content, e-books to be given to students and teachers, energising domestic productions with tablets and creating work fields to domestic companies, and most importantly, cultivating a sense of entrepreneurship within our country’s youth.
2. The skills previously listed are known to us today as 21st century citizenship skills. It is the aim of the FATİH project to ensure these requirements for citizenship are met through the widespread use of technology, effective communication, analytical thinking, problem solving and corporation.

It will be easier to access information and information technologies will be both in students and teachers’ hands (MEB, 2012).

1.2 Theoretical Framework

The use of IWB has become widespread in many countries. It has a great importance as it is one of the most important technological advancements applied in state schools. “This proliferation has taken place despite the nontrivial cost of purchasing and maintaining IWB technology and the sometimes-considerable burdens of training staff to use them effectively” (Torff & Tirota, 2010, p.379). Thus, researchers have been investigating its implications in education. IWBs are considered as providing a lot of advantage, along with “increasing enjoyment and motivation for

learning; promoting enjoyment of classes for both learners and teachers through more varied use of resources; providing high level of interaction as learners enjoy interacting physically with IWB; supplying the capacity to present and discuss learners' work while focusing on student, original helps keep the class on task and raises self-esteem" (Al-Faki & Khamis, 2014, p.139).

As reported by Glover and Miller (2001), teachers use IWB "as an aid to efficiency where the enhanced screen size has led to improved vision of video material; as an extension device with the integration of multimedia materials to the point that the quality of teaching is improved; as a transformative device where learning takes place through board interaction and associated group and class discussion." (p. 272).

Consequently, "to keep pace with new technological developments, to increase their professional development and to contact positively with their students on a regular basis teachers' need to integrate technology into their teaching" (Jelyani, Janfaza & Soori, 2014, p. 20). In addition, perceptions of English teachers towards IWB use have great importance. In order to investigate the attitudes and perceptions of teachers and students, a few studies have been conducted by some researchers; such as, Elaziz (2008), Hall and Higgings (2005), Lee and Boyle (2004). This paper aims to find out the students and English teachers' attitudes and application of IWBs in language classrooms in Turkey.

1.3 Statement of the Problem

"Since the late 1990s there has been an increasing use of technology in educational settings worldwide." (Elaziz, 2008, p. 5). Although IWB is not regarded as a brand-new teaching tool in educational settings, IWB use in language classrooms is considered as a recent trend in Turkey. Utilization of interactive whiteboards has become highly popular as it is believed to provide significant benefits for teachers and the students "by facilitating learning and increasing students' motivation" (p.9). Almost every classroom in state schools have been furnished with IWBs to supply teachers and students a better quality of educational setting. IWBs provide teachers and students with many opportunities as it is one of the most important supplementary technological tools in educational settings. IWBs provide more prosperous language learning environment which increases the students' language learning motivation.

Therefore, this study will also focus on the attitudes of teachers and students' towards IWBs.

While some researchers have been investigated the attitudes of teachers and students towards IWBs (Glover & Miller, 2001; Hall & Higgins, 2005; Kennewell & Lee & Boyle, 2004; Levy, 2002; Schmid, 2007; Wall, Higgins, Smith, 2005), only a few studies focused on using IWBs in language learning process (Elaziz, 2008; Gray, 2005; Schmid, 2007). Since it is not specifically investigated the integration of IWB in language teaching in vocational and technical high schools and the attitudes of students and English teachers towards IWB use, the main concern of this study is teachers' and students' attitudes towards IWBs.

1.3. Purpose of the Study

In this study, it is aimed to investigate the attitudes of students and English teachers towards the use of interactive whiteboard, and also it measures teachers and students' perception towards IWB used in English courses. In addition, teachers' and students' thoughts on the effects of the using IWB on language learning motivation are investigated.

1.4 Research Questions

In consideration of the mentioned discussion above, the main objective of this study is to seek answers to these questions:

- 1- What are the English language teachers' attitudes towards the use of IWB in language courses in a vocational and technical high school?
- 2- What are the English language students' attitudes towards the use of IWB in language courses in a vocational and technical high school?

1.5 Significance of the Study

IWB is a recently used tool in Turkish state schools and this study will present teachers' and students' attitudes towards it. Moreover, with the application of Fatih Project, IWB has been used widely in classrooms since it makes teaching process more effective and provide a better way of learning. In other words, "classrooms have been

furnished with tools and devices in order to improve teaching and learning environment” (Al-Faki & Khamis, 2014, p.136). Therefore, the significance of IWB use in language teaching and learning process has been found out. As a result, IWB materials and resources have been created. Additionally, the role of teacher has a great importance while integrating IWB. Therefore, the perceptions of English teachers towards IWBs is of high importance.

Thus, the study will provide useful insights to educators studying on technology in education and it will also will provide a useful perspective to teachers. Moreover, this study will reflect students’ and teachers’ ideas about the effects of using IWB on language learning motivation and it will provide an inspiration to teachers who are using IWB or who are going to use it in the future.

1.6 Definitions

CALL: Computer-assisted language learning. Chapelle (2001) reported that “CALL refers to the area of technology and second language teaching and learning”.

IWB: “An interactive whiteboard is a large, touch-sensitive board which is connected to a digital projector and a computer as the projector displays the image from the computer screen on the board. The computer can then be controlled by touching the board, either directly or with a special pen” (BECTA, 2003b, p.1)

EFL: English as a Foreign Language.

ELT: English Language Teaching.

Fatih Project: A project of Ministry of National Education which aims to equip the state schools with technological infrastructure.

ICT: Information and Communication Technologies.

Chapter 2

Literature Review

2.1 Introduction

Nowadays, technology have become an important part of daily life. Therefore, technology has a significant role in every aspect of language teaching and learning process. As the technology provides convenience to the daily life, it is integrated with many areas. Education is one of them. The integration of technology into education has become one of the most common educational goals in Turkey. Integrating technological advancements into educational process create positive effects on teachers and students' perceptions towards language learning (Karataş & Sözcü, 2013). Since the technology has a vital role in the quality of education, most of the countries attempt to improve the achievement of technology integration in educational environments (Sayır, 2014).

As reported by Thornton and Houser (2005) technology has a significant role in language learning process. They claimed that “technology can help extend learner opportunities in meaningful ways” (p.218). However, today, technology in language education associates with computers. Computer Assisted Language Learning (CALL) makes language teaching and learning process more effective. According to McNeil (2000), CALL promotes the language learning and teaching process. Computers are one of the current and most widely used technological advancements in language learning process (Lee, 2008). Today, almost all schools have computers and the other equipment related to computers.

After diverse innovations in technology in educational field, one of the equipment related to computers is interactive whiteboard (IWB). “Interactive Whiteboards (IWB) present data to the whole class and enable students to work with them. They help present new topics in a very interesting, challenging and attention attracting way” (Brezinova, 2009, p.14). Interactive whiteboard is a tool which is used instead of traditional boards. This technologic board is a kind of computer and it has a large touch screen. This board can be connected to a computer and it has an internet connection. Interactive whiteboards are being used in Turkish state schools within

Fatih Project. Fatih Project is a project of Ministry of National Education and in context of this movement technological infrastructure has been established in public schools. It is a new experience for state schools; therefore, the first objective of this study is to investigate attitudes of teachers and students towards IWB use.

Furthermore, the use IWBs has gained a vital role in language teaching as it increases the efficiency of the language lessons. Therefore, it is important to focus on the benefits of IWBs and their effects on the language learning motivation of the students. According to some studies, teaching and learning process requires interactive whiteboards as a supportive tool (Glover & Miller, 2001; Lan & Hsiao, 2011; Wall, Higgins & Smith, 2005). Additionally, the effectiveness of IWB technology and its benefits were investigated by some researchers (Liu, 2009; Wall, Higgins & Smith, 2005).

Moreover, many studies investigate the language learning motivation of students. Studying the learning motivation of the students is a very important for an effective language learning process. Scholars claim that English lessons which are designed well aim to promote students' learning efficiency, draw their attention, increase their motivation and meet their learner needs (Allwright, 1983; Berwick, 1994; Nunan, 1988; Taylor, 1987).

This chapter will firstly present CALL and IWB related to their advantages in English language teaching and learning process. Then, it will give a background information of students' language learning motivation and the effects of technology use on students' language learning related to IWB use in context of Fatih Project.

2.2 Computer Assisted Language Learning (CALL)

Computer assisted language learning is considered as a kind of computer-based learning. Computer technology is in every aspect of language teaching and learning process. In this respect, computers are used as sources of knowledge and materials. According to Levy (1997), CALL as “the search for and study of applications of the computer in language teaching and learning” (p.1). English teachers benefit from the advantage of computers to provide both teachers and students with various educational materials (Kasapoğlu-Akyol, 2010). As stated in Levy's (1999) study, CALL facilitates language teaching and learning process. Moreover, CALL is defined as “an approach to language teaching and learning in which computer technology is used as

an aid to the presentation, reinforcement, and assessment of material to be learned, usually including a sustainable interactive element” (Davies, 2010, p. 261).

Moreover, according to Beatty (2003), CALL includes variety of activities that makes it difficult to define as a single idea. “CALL has come to encompass issues of material design, technologies, pedagogical theories and modes of instruction. Materials for CALL may include those which are purpose-made for language learning and those which adapt existing computer-based materials, video and other materials.” (p. 8).

According to Chapelle (2009), “technologies are used to expand learners’ experience with communities in which the target language is spoken and to connect them with individuals who engage in such practices as codeswitching” (p.748) Moreover, the recent importance of CALL “is on the pragmatic goal of marshalling professional knowledge in a manner that is useful for creating learning opportunities and demonstrating successful learning” (p. 742). “CALL can be used for providing practice with specific aspects of grammar, vocabulary, and pragmatics; it can be used for providing opportunities for comprehensible input and interaction” (p.748).

CALL is described in a different way by each researcher. Although the definitions of CALL are dissimilar to each other; same meaning is indicated. The development of CALL can be investigated under three main phases; “behaviouristic CALL, communicative CALL and integrative CALL” (Warschauer,1998, p. 57). Mora has also categorised the development of CALL in three phases in his article published in 2001.

2.2.1 Behaviouristic CALL. “Behaviouristic CALL, conceived in the 1950s and implemented in the 1960s and 1970s, could be considered a sub-component of the broader field of computer-assisted instruction.” (Warschauer, 1998, p. 57). In this stage behaviourist learning model, shaped CALL. Behaviouristic CALL based on the behaviourist learning model, thus it has the typical features of behaviourist learning. Computers used as tutor and repetitive language drills used in this context. “This mode of CALL featured repetitive language drills, referred to as drill-and-practice” (Rahimpour, 2011, p. 4). “The computer was viewed as a mechanical tutor which never grew tired or judgmental and allowed students to work at an individual pace” (Warschauer, 1998, p. 57). “Behaviouristic CALL was mainly used for extensive

drills, explicit grammar instruction and translation tests” (Ahmad, Corbett, Rogers & Sussex, 1985).

2.2.2. Communicative CALL. Communicative CALL arose in the late 1970s and 1980s. It was against behaviourist approach to language learning. The behaviouristic methods to language teaching were declined both theoretically and pedagogically, when computers were improved as more convenient for individual use. Thus, it was mainly depended on communication. In addition, CALL “aims at acquisition practice rather than learning practice,” “not try to judge and evaluate everything the student does,” and “use the target language exclusively” (Krashen, 1982, pp. 52–53). Communicative CALL considered computer as a tool and focused on use of forms rather than forms themselves. “Computer-based activities should focus more on using forms than on the forms themselves, teach grammar implicitly rather than explicitly, allow and encourage students to generate original utterances rather than just manipulate prefabricated language, and use the target language predominantly or even exclusively” (Rahimpour, 2011, p. 3). Taylor (1980) defined CALL with regard to “the use for activities such as conversation, written tasks critical thinking and computer as tool such as spelling and grammar check programs” (p.1). Grammar taught explicitly not implicitly and students were encouraged using target language freely. Students can create their own learning environment. As a result, students become autonomous learners as “it can give messages, check the student’s subsequent responses to the questions, give positive and negative scores to correct and wrong answers and finally corrects the errors made by the users and give the appropriate feedback” (Rahimpour, 2011, p. 5). Communicative CALL was “harmonious to cognitive theories which emphasized that learning was a process of discovery, expression and development”.

2.2.3 Integrative CALL. Integrative CALL is the recent one and it arose in late 1980s and 1990s. One of the main objectives of Integrative CALL is to “integrate various skills such as; listening, speaking, reading, and writing” (Yang, 2008, p 909). In addition, it aims to “integrate technology more fully into the language learning process. “In integrative approaches, students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the

computer lab on a once a week basis for isolated exercises” (p.910). Integrative CALL was based on multimedia technology and internet. It “integrates technology more fully into the language learning process” (Warschauer, 1998, p,59). “It includes two important technological developments which are Multimedia and the Internet” (Warschauer, 1996). “Multimedia provides various media formats such as sound, video, graphics, texts, pictures and animations. Internet is a computer network which provides useful benefits as well as communication and a wide range of information” (Warschauer, 1996). In late1980s and early1990s critics began against communicative CALL and many teachers adopted a more sociocognitive view communicative teaching. This point of view focused on language use in an authentic social context such as task-based, project-based and content-based approaches. These approaches attempted to merge students in authentic environments, and sought to combine the numerous skills of language learning. Warshauer and Healey (1998) declared that “Integrative CALL seeks to integrate different skills of language learning such as listening, speaking, reading and writing” (p.58). And also, “students learn to use a variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once a week basis for isolated exercises whether the exercises be behaviouristic or communicative” (p. 59) CALL aims to integrate current technology into language teaching and learning process to fulfil the language learning needs of the students. As a result, Warschauer and Healey (1998) state that “if the mainframe was the technology of behaviouristic CALL, and the PC the technology of communicative CALL, the multimedia networked computer is the technology of integrative CALL” (p.58). Table 1 points out Warschauer’s three stages of CALL.

Table 1 *Warschauer's Three Stages of CALL*

The Three Stages of CALL Stage	1970s-1980s: Structural CALL	1980s-1990s: Communicative CALL	21st Century: Integrative CALL
Technology	Mainframe	PCs	Multimedia and Internet
English-Teaching Paradigm	Grammar Translation & Audio- Lingual	Communicate Language Teaching	Content-Based, ESP/EAP
View of Language	Structural (a formal structural system)	Cognitive (a mentally-constructed system)	Socio-cognitive (developed in social interaction)
Principal Use of Computers	Drill and Practice	Communicative Exercises	Authentic Discourse
Principal Objective	Accuracy	Fluency	Agency

(Based on Kern & Warschauer, 2005; Warschauer, 1996; Warschauer, 2000a)

2.2.4 Advantages and Disadvantages of CALL in Teaching English as a Second Language. Recent information technology provides both teachers and students with inspiring opportunities. The traditional classrooms don't provide students "with versatile knowledge because of lack of authentic materials and time" as they are based on instruction (Agarwal, 2008, p.35) However, Computer assisted language learning can clarify this issue. Computers have important effects on foreign language learning and teaching. And using computers when teaching a foreign language may have both advantages and disadvantages.

2.2.4.1 Advantages of CALL. When the learners are exposed to authentic language tasks, they are "forced to have control over their own learning time", thus, they "effort to communicate" (Warschauer & Kern, 2005). CALL provides learners an opportunity to be "autonomous learners" who have characterized learning experience (Skinner, Ludwig & Judin, 2015).

Moreover, CALL enriches learning process by providing authentic learning resources which are student-centred (Skinner et. al., 2015). There are many motivating language teaching methods and CALL can be considered one of them (Ahmad, K. et al. 1985, Skinner, Ludwig & Judin, 2015) as CALL can make drills more attractive by providing learners a wide range of materials like computer games, animated graphics (Ravichadran, 2000). Thus, language learning process becomes more attractive with funny games and enjoyable activities. According to Lee (2000) reasons for using computers in language teaching are; computers make experiential learning possible for students, thus it increases students' motivation; computers enhance student performance and provide authentic materials; computers ensure greater interaction between students and teachers and students. Kenning and Kenning (1984) state the most important one as the interactive capability of computer and list the other advantages of computers as; "the computer gives individual attention to the learner and guides the learner towards correct answer" (p. 3). Moreover, computers adapt the material to students' performance and provides instant feedback. Therefore, computers promote the acquisition of knowledge; and, it provides teachers the opportunity to make better use of their time and pace. CALL activities attempt to engage students in interactions which provide them to establish connections with form and meaning. (Chapelle, 2009) These activities help teachers "make key linguistic characteristics salient by highlighting and providing opportunities for repetitions and modifications for particular forms and support modified interaction between the learner and the computer by providing the learner with control over when to request help, modify responses, and get access to repetition and review" (p.745)

Thus, teachers can fulfil the students' learning needs by providing variety of resources in terms of students' interests and levels on the computer. Computer use in language learning process raise the curiosity of students and promotes their motivation and confidence (Skinner & Austin, 1999). Thus, students enjoy doing the activities. According to Warschauer (2004), students spend more time on tasks when they work on the computer, it is a benefit to increase motivation.

As a result, CALL has many advantages both for teachers and students. Computers provide effective materials, increase students' motivation, and teachers feel themselves more comfortable when they use computers in their courses. It is clearly

understood that the computer use in language education process has a vital significance. Thus, a language teaching and learning without computers is deficient.

2.2.4.2 Disadvantages of CALL. Although computers have a lot of advantages to language teachers and learners, they also have some disadvantages. There are many teachers who have limited knowledge about technology, it is considered as one of the most common known limitation. Computers are beneficial only when the teachers are experienced in computer technology (Lai & Kritsonis, 2006). According to Skinner (2015), CALL supplies variety of beneficial materials which improve language learning skills such as reading, listening and writing while speaking activities are limited. Learners need to improve their fluency of speaking and pronunciation. Warschauer (2004) indicated that “a program should comprehend learners’ spoken input and evaluate it for correctness and appropriateness”. According to Gündüz (2005), there is no difference between working with computers and working in isolation. Thus, computers are not improving communication among learners, which is one the most important aim in any language lessons. She also states that it is not possible for computers to make open ended dialogues as they also cannot give feedback to these questions. Additionally, According to Iacob (2009), spending for long time in front of the screen to carry out activities has negative effects on both learners and teachers’ health (p. 144).

Consequently, CALL activities, resources and materials must be designed to minimize these disadvantages that are pointed out above. Materials selection and evaluation process is important to make English language teaching and learning more effective. They should depend on the interests of the learners and meet their needs.

2.3 The FATIH Project

FATIH Project in Education (Movement to Increase Opportunities and Improving Technology) was started with the aim of “providing equal opportunities in education and improving the technology in schools” (MEB FATIH Project Web, 2012, para. 1). It was launched with the purpose of achieving the “most effective usage of technology in schools”. It aims to provide every student with better education.

“FATIH project consists of five main principles, which are; (a) accessibility: offering service anytime, anywhere and independent from tools, (b)productivity:

providing target oriented and more productive development fields, (c) equality (equality of opportunity): enabling all shareholders access to the best service, (d) measurability: Providing accurate measurement of process and results and giving feedback accordingly for the development to be assessed better. (e) quality: Enhancing the quality of whole education in a measurable way” (MoNE Activity Report, 2011). It provides with better equality of opportunity; thus, it eliminates the digital gap and enhances the language learning quality. Therefore, it is designed to supply equality of education, eliminate the digital gap, and improve the quality in education.

FATIH Project in Education highlights the importance of assessing the students’ needs, wants and lacks. The project gives priority to both evaluating the success of the students in classes and analysing the data about their school history which points out their education and technology needs. In other words, analysing the needs of teachers and the students regarding implementation of the technology is one of the most important elements of the FATIH project.

One of the most important purposes of this project is to save each kind of information constructed in educational development of the student in a single identity system and form a framework where analysis can be conducted with a data pool. Being able to draw the right data among millions of data and analysis the related one will make it easier to win students by an individual educational tool who haven’t been included before and become a source of information in terms of directing students to the right profession considering the interest and success fields. It is must to conduct individual data analysis to win a student individually.

Firstly, the FATIH project works to locate a student’s shortcomings by evaluating exam results that identifies the lacking aspects of the students according to the exam results. The visual aspect is then incorporated by needs analysis conducted by the concerned teacher, in other words, this project introduces a new system to analyse the needs of the students visually. It identifies the fields of interest outside the course subjects and discovers the special skills. Once the target students have been organized and identified it is then possible specify their outlying interests. It is from these mentioned interests that the teacher may understand the talents the lay hidden beneath the exam scores. It provides better understanding and easier learning of lessons, and identifies the subjects that students are dealt with. Through this special

combination, the individual learning style of the students can be discovered (MEB, 2012).

With FATİH Project in Education, students will be able to enhance the learning process outside the school. This project will benefit them to acquire the course notes easily and access classroom projects, tasks and homework assigned by teacher independent from wherever they are. They can share the information produced with teachers. Furthermore, the students build up the topics learned with EBA content.

For that purpose, the following actions were performed for 570.000 classrooms in 42.000 schools “(a) installation of interactive whiteboard with LCD panel, (b) building internet network infrastructure (c) provision of IT tools e multi-function printer, scanner, tablets to be distributed to teachers and students, (d) giving in-service training to teachers for the effective usage of IT tools in the classrooms and (e) the formation of e-contents during the process” (MoNE FATİH Project Web, 2012, para.1).

2.4 Interactive Whiteboards (IWBs) in English Language Education

There are many descriptions for the interactive whiteboards. BECTA (The British Educational Communications and Technology Agency) made a clear definition: “An interactive whiteboard is a large, touch-sensitive board which is connected to a digital projector and a computer as the projector displays the image from the computer screen on the board. The computer can then be controlled by touching the board, either directly or with a special pen” (BECTA, 2003b, p.1). BECTA (2003a) defines the possible IWB use as “using web-based resources in whole-class teaching, showing video clips to help explain concepts, presenting students’ work to the rest of the classroom, creating digital flipcharts, manipulating text and practicing handwriting, and saving notes on the board for future use” (p.2). As Schmid (2007) specifies “the interactive whiteboard is a touch-sensitive electronic presentation device” (p.120). Moreover, it is “a multipurpose and flexible tool which can be used in all levels of education” (Lan &Hsiao, 2011). Thus, IWBs have changed the classroom activities and teachers by providing internet infrastructure as internet has “a role through which a teacher can bring the outside world into the classroom” (Al-Faki & Khamis, 2014, p. 136).

IWB technology support English language teaching with a computer technology. IWBs assist both learning and teaching process at the schools and “improve the quality of education” (Hall & Higgings, 2005). It has become an important requirement as it is a facilitator of classroom language learning. Moreover, “IWB technology has an increasing attention” (Schmid, 2007) and “it offers new possibilities for a language teacher”. According to Gerard, Greene and Widener (1999), IWB promotes “the teaching process of foreign languages in three main ways: supports the teaching process of foreign languages in three main ways: a) it helps the presentation of new linguistic and cultural elements, b) it supports interaction with the class and c) it promotes the teacher’s organizational skills” (p.3). In addition, IWB is an “innovative and supportive tool in language teaching process and with proper planning, preparation, and training, it could be a powerful instructional tool, which can be adapted for use with a wide range of subjects” (Bell, 2002, para.17). Furthermore, IWBs also enrich and enhance various language teaching activities such as; “brainstorming sessions, error analysis, editing drafts with highlighters or pens in different colours to analyse grammatical, syntactical or vocabulary features, planning, editing and proofreading drafts of written genres with the whole class, word order analysis, note taking, grammar practice and many others” (Jelyani, Janfaza &Soori, 2014, p.21).

In Turkey, in addition to most of the private schools which are furnished with IWBs in each class; “the Ministry of National Education (MNE) has launched a pioneering project by providing an interactive whiteboard in every classroom” in state schools (Sarac, 2015, p.19). It was aimed to promote students’ educational process and inspire the teachers to integrate different methods in order to teach effectively.

Schmid (2008) points out that IWBs provide easy access to multimedia resources in addition to “the facility to highlight, annotate, drag, drop and conceal linguistic units”. Moreover, teachers “can make use of the varied writing features to overwrite, underline, highlight or circle the elements they want the students to focus on” and “the document is typed and therefore very readable. It can also be saved and displayed at any time again” (Gerard, Widener & Greene, 1999, p.3). Moreover, English teachers can design activities related to IWB in order to raise interaction and encourages communication. These features of IWBs facilitates language teaching process and “enhances new kinds of learning processes” (p.4).

Moreover, “Educators can use digital resources while maintaining dynamic interaction with the entire class, provide computer-based learning without isolating students and encourage a higher level of student interaction in both teacher-directed and group-based exchanges” (Saleem, 2012, p.130). “The functionality of the interactive white board and its accompanying software allows for the development of classroom activities that are engaging for students, so they encourage greater focus, participation and interaction, and improve student learning outcomes as a result” (p.130)

Additionally, “effective use of IWBs, the vital role of IWBs in capturing students’ attention and motivating them towards more participation in classroom activities, spontaneous incorporation of IWBs and other related software along with authentic course books containing rich, authentic and up to date materials” (Oz, 2014, p.174). Motivation and positive perceptions are important for language learning process. “Learning process cannot be started without a student's positive attitude” (Gerard, Widener & Greene 1999, p. 5) Students love to interact with IWB. “It is like a magic board brings true excitement in the classroom” (p.5).

2.4.1 Benefits of interactive whiteboards for students and teachers. Torff and Tirotta (2010) points out that for many teachers, “IWB technology has a great potential to improve learning and teaching in school and the technological capabilities of the IWB have a powerful allure for students which is a factor that boosts student motivation” (p.382). Levy (2002) points out that “greater opportunities for participation and collaboration are enabled by IWBs” (p. 1). “The students see the information which is presented through colourful and interactive game-like activities thanks to the IWB as motivating” (Yáñez & Coyle, 2010, p.454). “As teachers spend more time with their IWB, they start to come up with completely new ways to convey course concepts to their students, often using much richer media such as video, audio, animation and interactivity.” (Betcher & Lee, 2009, p.52).

As reported by BECTA (2003a), “effective IWB use in language lessons raises students’ self-confidence, enjoyment and motivation”. Al-Faki and Khamis (2014) assert that integration of IWB in language courses promotes learners’ participation by providing them to interact with contents on IWB screen. Furthermore, IWB use in the classrooms, arises unsuccessful students’ interest and promotes their language learning

process (Tataroğlu & Erduran, 2010). Learners feel more motivated and they are more eager to participate in the class activities as IWBs include enjoyable and attractive materials (Elaziz, 2008; Wall & Miller, 2005). When the students interact with IWB, their motivation on learning language increases and they focus their attention better (Biro, 2011).

In addition, students wish to have their work shown on the IWB as they have “motivation from a desire to actually use the board themselves” (Wall, Higgins, and Smith 2005, p. 859). Additionally, “The degree of engagement and participation was felt to be increased; this was considered particularly important for the less able students. One way in which teachers felt that this was achieved involved calling students up to the board to interact with the material; it was important that the students were able to drag words and images as objects rather than having to write or draw on the board” (Kennewell & Beauchamp, 2007, p. 230). Besides, Levy (2002) explains that “when students make presentations to their classmates, they seem more creative and self-confident owing to the IWBs” (p. 3).

Additionally, thanks to the save and print functions of IWBs, students may not need to take notes during the lesson (BECTA, 2003b; Bell, 2002). Thus, the materials can be shown on the IWB as an example or with the purpose of improving them (Elaziz, 2008); or “after a brainstorming activity, copies of resulting documents can be printed and distributed, as well as be saved for future work” (Bell, 2002, para. 15) or “they can be used again and shared with other colleagues” (Bannister, 2010, p. 3). Furthermore, students can access the saved lessons and use them for revisions (Tataroğlu & Erduran, 2010).

Smith (2001) claims that teachers can prepare more impressive lessons and present them more effectively with the support of IWBs. The students indicated that the visuals provide them with better understanding about what the teachers are talking (Wall, Higgins & Smith, 2005). They also stated that students enjoy the technology, especially “the visual aspects, audio and being able to touch the IWB”. Yáñez and Coyle (2010) indicated that “the visual elements on the IWB was thought to be a great support which helped their understanding of lesson content delivered in their second language” (p.454).

In addition, in Kennewell and Beauchamp’s (2007) study, interviews with the teachers were conducted to investigate their perceptions on how they felt IWB affected

teaching, learning and attainment. “The degree of engagement and participation was felt to be increased” (p. 230). Moreover, it was “valuable to be able to show students’ individual computer work on the IWB” (p.230). IWB provides teachers to “improve their presentations and activities as they learned more about the features and techniques of ICT, and they were motivated to improve their materials because ICT allowed them easily to make changes” (p.231).

Additionally, one of the advantages of IWBs were defined as “teachers’ having more time to engage with students’ learning where language lessons were carefully planned and prepared, with well-chosen and well-sequenced activities ready at the touch of a button” (Gray, Hagger-Vaughan, Pilkington & Tomkins, 2005, p.38).

Another advantage of IWBs, which Bell (2002) pointed out is that IWBs support “different learning styles”. For instance, “Tactile learners can benefit from touching and marking at the board, audio learners can have the class discussion, visual learners can see what is taking place as it develops at the board.” (Bell, 2002, para.6). Yáñez and Coyle (2010) also states that one of the most important advantage of IWBs, they offer activities which include “tactile elements and versatility” (p.454). “Since the teachers draw on a variety of resources to suit different needs and abilities, different learning styles present in any classroom can be better accommodated” (Yáñez & Coyle, 2010, p.454).

While IWBs have various benefits for students, they have also benefits for English language teachers. IWB help teachers “engage and elicit students’ prior knowledge through visually and conceptually appealing multimodal interactive displays; generate exploration and explanation opportunities that are rich in dialogic discourse; provide opportunities through higher-order questioning for students to transfer their learning to new or different contexts; create opportunities for students to generate their own representations and re-representations of concepts; review learning by moving flexibly through an interactive learning sequence” (Murcia, 2010, p. 86). In order to teach English effectively, IWB is a beneficial technology tool and support for teachers (Elaziz, 2008; Gashan & Alshumaumeri, 2015; Oz, 2014). IWBs provide language teachers “a wide range of teaching resources and satisfies diversified pedagogical needs of learners at the same time since whole class focus on these materials at the same time” (Elaziz, 2008, p.20). Moreover, it “may just serve to be the catalyst that finally moves schools away from the traditional paper-based model

towards a more integrated digital mode of operation” (Betcher & Lee, 2009, p.1). In addition, IWBs can “create engaging, interesting, interactive lessons that capture the attention and imagination of the students in pedagogically sound, creative ways” (p.8). As Betcher and Lee (2009) stated, “concepts can be explored, data can be manipulated, scenarios can be tinkered with... when all one’s resources are available in digital form, the possibilities are almost endless” (p.8).

IWBs help teachers arrange their teaching through creating folders, saving their notes and preparing materials based on their needs (Gerard, Widener & Green, 1999, p.4). Murcia (2010) asserts that “teachers do not have to search and prepare needed materials during the class; they have chance to prepare and store their resources on the computer memory, and then select whichever they need at any moment” (p.85).

2.5 Language Learning Motivation

As the students have different attitudes on what they want to do and how they want to learn, learner-centred curriculum has developed. Learners want to take responsibility for planning, organizing, managing and evaluating their own learning (Dan & Gabrielsen, 1988). In other words, they want to be involved in their learning process. In this way, learning is personalized, so, it is enhanced. Thus, the learners are motivated by playing an active role in their own learning. As investigated in the prior studies, motivation has a great effect on foreign language learning related to learning acquisition (Gardner, 1992; Hsu, 1986), the repetition of the various language teaching methods (Ames & Archer, 1988; Bacon & Finnermann, 1990), the motivation to communicate with the people who speak the target language (Ely, 1986) and constancy of studying the target language after the school is over (Ramage, 1990). Motivation has a great effect on learning process. It has an influence on learning achievement, the intention of speaking the target language, target language study after school is finished. If the students have more control over their learning, they feel more comfortable and it takes pressure off the students, therefore, they feel more motivated to learn the target language. Furthermore, when the students’ motivation increase, their learning attitudes affects positively and they acquire higher expectation for themselves, thus, they make more effort to learn.

McNabb (1999) claims that motivation enhances the learning environment and creates a positive learning atmosphere both for teachers and students find new methods of learning. Dusick (1998) asserts that motivation of teachers increases when they use IWBs in the lessons. Motivation depends on the teachers' personalities and it has a great importance in integrating ICT in lessons (Marcinkiewicz & Cox, 1996; Preston & Cox, 1999). Abdul Razak and Sanmugam (2010) explored the attitude and motivation of Malaysian teacher trainees in teaching English by the Internet resources and found positive effects among those variables. The findings showed that teaching English as a foreign language by using technology is interesting, and enjoyable. Thus, the technology provides teachers with more confidence in their teaching activities as it enhances their level of motivation. Lumley (1991) asserts that the teachers who use the technology to motivate students are more powerful and productive than the ones who simply use lectures and textbooks.

Technology enhances teachers and students' motivation through variety of activities and updated information. In addition, it promotes collaborative learning, improves communication skills, and increases the achievement of learners due to the reinforcement and various practices provided in the Internet (Warschauer, & Healey, 1998; Downes, Arthur, & Beecher, 2001). Furthermore, teachers have a significant role in the integration of technology in educational settings (Kidd & Song, 2005). According to Becker (2000), teachers are the most important people to integrate ICT in classrooms. According to Afshari, Bakar, Su-Luan, Samah and Fooi (2009), "technologies are constantly being developed to decrease the educator's workload and increase student learning, motivation, and knowledge of tools and skills necessary to become lifelong learners in the age of technology" (p. 94). Gashan and Alshumaimeri (2015) states that "teachers are significant agents in facilitating the incorporation of the IWB as teaching tools in EFL classrooms" (p. 171). Furthermore, the personality of teachers influences their students' learning achievements and plays an important role in the students' success (Tonelson, 1981; Aydin, 1998). Chan (2011) indicates that "although the high extrovert teachers were more effective in the classroom practices, there exists a contradiction between the predictions of psychologists and applied linguists in respect to the relationship between extroversion and learning or teaching in general" (para. 9). Grant and Cambre (1990) stated that "teachers who are aware of their own and others' type profiles are able to relate to the varied type

preferences of their students in order to improve the educational potential for each individual” (p. 6).

2.6 Conclusion

This chapter presented the related literature about CALL, Fatih Project, IWBs and language learning motivation. “IWBs have been used in education dates back to the late 1990s in some developed countries, but technologically developing countries, such as Turkey, IWBs are now becoming more and more common in educational institutions recently” (Elaziz, 2008, p.34). Based on the literature, it can be concluded that IWBs offer a wide range of benefits both for the students and for the teachers.

The following chapter will involve the methodology along with the research design, target population and participants, data collection procedures, and data analysis procedures.

Chapter 3

Methodology

3.1 Overview

This chapter gives information about the methodology of the study, and consists of five sections: Design of the study, target population and participants, procedures, trustworthiness, limitations, delimitations.

3.2 Research Design

This study aims to investigate the students and teachers' attitudes towards IWB in depth. Furthermore, it focuses on the IWB use in the context of FATIH Project in Education in Ümraniye Vocational and Technical High school.

As the main objective of this study was to answer the research questions about the IWB use within one school; in order to serve to the purpose of the study, descriptive research design was used including mixed method research.

In order to gather descriptive data, survey methods and observational methods are used since the aim of descriptive studies is to investigate *what is* (Borg & Gall, 1989). In other words, it can be defined as an aim to decide, explain or recognise what is (Ethridge, 2004). "Descriptive research does not fit neatly into the definition of either quantitative or qualitative research methodologies, but instead it can utilize elements of both, often within the same study" (Knupfer & McLellan, 1996, p. 1196). There are three main types of descriptive methods: observational methods, case-study methods and survey methods.

This study is a survey method study. Freankel, Wallen and Hyun stated that "the major purpose of a survey is to describe the characteristic of a population." (2012, p.393). The present study aims to measure perceptions of the students and teachers towards the use of IWB. Freankel et al. also indicates that "the subjects to be surveyed should be selected (randomly-if possible) from the population of interest." (2012, p. 398).

According to Freankel et al. (2012) “the most common types of instrument used in survey research are the questionnaire and the interview schedule”. This study uses two questionnaires as instruments for gathering data (p.399).

Mixed method research is described as “a kind of research technique in which researchers or investigators combine both quantitative and qualitative research methods, techniques or approaches in a particular study” (Creswell, Clark, Gutman & Hanson, 2003, p.230).

According to Mertler and Charles (2005), there are of two kinds of data: qualitative data, mainly descriptive, and quantitative data, mainly numerical. However, this study was conducted with gathering and analysing both qualitative and quantitative data. Although mainly quantitative data were collected through questionnaires, qualitative data were also obtained through interviews to enrich the data and better understand the perceptions of the teachers and students.

3.3 Target Population and Participants

This study was conducted at a vocational and technical high school due to its convenience to the researcher. The primary aim of the school is to train qualified technical personals which will meet the technical staff needs of the country by providing specialized instruction. The school includes special formations such as electricity, electronics, information technology, machinery, building. Moreover, the school provides traineeship opportunities to each student in their 3rd or 4th year in the school. Students have 4 hours English lessons in a week while ninth grades have 6 hours of English lessons. However, school provides extra English courses and the teachers teach technical English related with the students’ departments as learning English is very important to further their education and to find better job opportunities.

Each classroom was furnished with IWB technology and IWB facilities were installed. Moreover, the staff were trained how to use IWB and launched programs. Although, the teachers have replaced throughout the years, all the teachers have been trained how to use IWB as it is compulsory in-service training for the teachers who work at state schools. Furthermore, the students can see all the book on the IWB and there is also an additional surface to write on alongside the interactive whiteboard.

A subgroup of total population forms the target population which means sample of the study. And the results of the study can be generalized to this target

population (Omar, 2014). There are two types of sampling: probability and non-probability sampling.

Probability samples are “random process rather than human judgements to select individuals or other units for a study” (Rog & Bickman, 2009, p.78). However, non-probability samples “are best used to provide information about specific cases or members of the study population intrinsically interesting or important for the study” (p. 79)

“Non-probability sampling consists of five types: convenience (selection of cases based on their availability for the study and ease of data collection), snowball (group members identify additional members to be included in sample), and quota (selection of sample by interviewers that yields the same proportions as in the population on easily identified variables), purposive sampling (selection of cases that are based on specific purposes related to research questions), self-selection sampling (individuals or organizations volunteer to take part in the research)” (p.82).

This study was conducted with convenience sampling in order to select teachers and students to be interviewed.

This research was conducted with two groups of participants in Umraniye Vocational and Technical High School in İstanbul. First group participants were 207 tenth and ninth grade high school students and second group participants were 13 English teachers from the same school. This school was institution where the classrooms were equipped with Interactive White Boards (IWBs) within the scope of FATIH project. The teachers and students had been using IWBs in this school for three years.

3.4 Procedures

3.4.1 Data collection procedure. Questionnaires are uniquely capable of gathering a large amount of information quickly in a form that is readily processable (Dörnyei, 2003, p.1). O’Maley and Chamot (1990) point out that using questionnaires are one of the most efficient data collection instruments in order to collect data from an immense population. Moreover, in this study, both quantitative and qualitative research methods were used in the study. Quantitative research methods “are a focus on deduction, confirmation, theory or hypothesis testing, explanation, prediction, standardized data collection, and statistical analysis” (Johnson & Onwuegbuzie, 2004,

p.18). “Qualitative findings grow out of three kinds of data collection: in-depth, open-ended interviews; direct observation; and written documents” (Patton, 2002, p.4). In an attempt to increase the credibility and transferability, in this study, data were collected through two different instruments. Two questionnaires conducted for gathering quantitative data, one for teachers and one for students (Appendix A-B). Both were prepared by Elaziz (2008) entitled Turkish students’ and teachers’ attitudes towards the use of interactive whiteboards in EFL classrooms aiming to ascertain young learners’ EFL teachers’ perception of IWB use in language classes in terms of teaching. In addition, Interviews with students and teachers were conducted for gathering qualitative data. For the interview questions, see Appendix C and D.

The researcher herself used an online survey program and shared the link of the questionnaires with students and teachers, and informed them about the study on March 20th, 2017. English teachers shared the links of students’ questionnaire during their courses while they were filling online teachers’ questionnaires at the same time. Filling out the online questionnaires took approximately 10 minutes.

3.4.1.1 Questionnaire. In this study, the questionnaire was prepared by Elaziz (2008) and Cronbach Alpha of this questionnaire is 0.78, which shows that it is reliable. It has two sections; the first section consists of twenty-one questions with five-point Likert-scale items aiming to have information about teachers’ general attitudes towards IWB. See Appendix A. Second section consists of twenty-one questions with five-point Likert-scale items aiming to have information about students’ general attitudes towards IWB. See Appendix B. Since the questionnaire was not used with technical high school students in Elaziz’s (2008) study, some minor adaptations in students’ questionnaire. In items 9 and 11 adapted to measure the increase of students’ participation and motivation when IWB is used. In teachers’ questionnaire, item 22 was omitted as all the staff were trained compulsorily how to use IWB) were applied to adapt it to technical high school students and EFL teachers in those schools.

Teachers’ questionnaire consists of 21 items and measures teachers’ attitudes towards IWBs and includes Likert-scale items from strongly agree to strongly disagree. The items from 1 to 9 measure teachers’ attitudes in terms of teaching with IWBs. The items from 10 to 16 measure teachers’ general attitudes toward the use of

IWBs. The items from 17 to 20 measure teachers' attitudes in terms of motivational issues. The item 21 measure teachers' attitudes related to training.

Students' questionnaire consists of 21 items and measures students' attitudes towards IWBs and includes Likert-scale items from strongly agree to strongly disagree. The items from 1 to 4 measure students' attitudes about IWBs and learning. The items from 5 to 7 measure students' attitudes related to technical issues. The items from 8 to 16 measure students' attitudes related to motivational issues. The items from 17 to 19 measure students' attitudes related to time management and organizational issues. The 20th and 21st items measure students' attitudes related to differences between traditional board and IWBs.

The Turkish version of questionnaire was translated by two experts separately and compared the versions and verified. It was given to students in Turkish to provide their full understanding of items.

3.5.1.2 Semi structured interviews with the participants. With the purpose of obtaining additional information about teachers' opinions and their motivation to use IWB, randomly chosen 4 volunteered English teachers and 10 students were interviewed face-to-face after the survey data were analysed. The interviews took place at the school during the break times and each took approximately 5 minutes.

The primary aim of the interviews was eliciting more detailed information about the students and the teachers' opinions on IWB use in English lessons with technical high school students. The interview questions were conducted related to this objective. Appendix C and D contain the interview. Semi-structured interviews can induce spontaneous conversations as they contain open ended questions, thus, it is difficult to take notes during the interview (Cohen & Crabtree, 2006). Therefore, interviews were recorded by the researcher with the permission of the participants and transcribe them through the recordings afterwards.

3.4.2 Data analysis procedures. For the first and second research questions, the data were gathered through survey and interviews with the aim of understanding students and teachers' attitudes of the use of IWB in educational settings. All the items in the questionnaires were analysed using Statistical Packages for Social Sciences

(SPSS 17). Basic descriptive statistics (means and standard deviations) were employed to analyse the data collected through questionnaires.

In order to elicit more detailed information about the research questions, qualitative data were gathered through interviews with the teachers and students. The data were analysed by the researcher by using content analysis technique (Miles & Huberman, 1994). “Raw data will not be useful unless it is analysed systematically, namely, the researcher can allocate units of meaning to the descriptive or inferential information compiled during a study by coding, categorizing and dividing the data into them” (Basit, 2003, p. 143). As a result, both students’ and teachers’ responses were first typed on Word and then read several times to get familiar with the data. Next, they were categorized according to key words and common themes by using different colours and highlighting tool until they developed some meaning. According to common themes and key words, the responses were commented and a general result was obtained.

3.4.3 Trustworthiness. In order to create a trustworthy qualitative research paper, Guba (1981) mentions four criteria; credibility, transferability, dependability, conformability. “In credibility of internal validity, the investigators assure that the study has measured what virtually is aimed to measure or test” (Shenton, 2004, p. 131). To achieve credibility in this study, member check strategy was employed and the participants were informed about the results to check that their words match what they actually intended to say in order not to cause any misunderstanding.

For the transferability criterion, “It is critical that researchers provide dense background information about the informants and the research context and setting to allow others to assess how transferable the findings are” (Krefting, 1991, p.220). Shenton (2004) states that “it is the responsibility of the investigator to ensure that sufficient contextual information about the fieldwork sites is provided to enable the reader to make such a transfer” (p.69). Therefore, thick description of the study, procedures, participant and setting were provided in a detailed way.

In order to establish dependability, which is also a criterion for trustworthiness and about the consistency of the data, the thesis advisor checked the accuracy of the findings, interpretations and conclusions. Finally, as for the last criterion, conformability, Guba (1981) indicated that conformability viewed neutrality as

researchers' objectivity which is "the degree of neutrality, fairness and being unbiased in analysing and representing the results" (p.5). Survey and interviews were applied to "enrich the perspectives from which the researcher approached the questions and the data obtained from any of them was subject to be confirmed by others" (Sandelowski, 1986, p.31).

3.5 Limitations

Although the present study investigated the current perceptions of all students and English in association of IWB usage in terms of teaching, a certain caveat should be heeded concerning the following limitations before commenting on the results.

One of the initial limitations was the miniscule number of English teachers who participated in this study due to time constraints. Such limitations would skew the validity of the results of the study. There were only 220 participants who were in the same school in this latest study. Of that number, the classification could be further broken down, with 13 participants being teachers and the rest being students. Whether all participants indicated that they used IWB in their English lessons, their curriculum and syllabus would still differ from each other in terms of their levels. Thus, the duration of IWB usage in their classes probably differ from each other and it may lead to difference in their perspectives on IWB. Moreover, since only one school was used in the administration of this study, and it focused on same limited group of participants, the results should not be generalized in broader application. Further data-gathering and analysis with a larger pool of participants at various settings would give proper results that could be applied in broader terms.

3.6 Delimitations

The current study focused only on school students and teachers' attitudes towards IWB use in English classes at one Technical and Vocational High. The number of English teachers who participated in the study was 13. Furthermore, the number of the interviewees for the study was limited because of the reliance on using volunteers. However, the data was analysed in-depth and the researcher was able to mine data rich in descriptions of the setting, participants, and methods. Therefore, the

readers could determine whether this study is in any way useful and applicable in their own situation.



Chapter 4

Results

4.1 Introduction

This study explored the students and teachers' attitudes towards IWBs used in English lessons in context of Fatih Project. Moreover, teachers and students' thoughts about the effects of using IWBs on language learning motivation were investigated. This chapter addresses the results of basic descriptive analysis of gathered data by questionnaires in first section. In the second section, the results of interviews were presented.

4.2 Results of Questionnaires

The teachers' questionnaires were analysed according to four categories: teaching (Questions 1-9), general attitudes (Questions 10-16), motivation (Questions 17-20), and training (Question 21). The results are shown and interpreted in the following sections.

4.2.1. Teachers' attitudes to learning. In order to answer the first research question "What are the English language teachers' attitudes towards the use of IWB in language courses in a vocational and technical high school?" the questionnaire data were analysed. The questionnaires were taken by 13 English teachers who were working in the same school. In the first sections, the items between 1 and 9 include the teachers' perceptions towards the use of IWB in English lessons. In the second section, the items between 10 and 16 focus on the general attitudes towards the use of IWB in English lessons. The items between 17 and 20 in the third section are related with motivational issues. And the last section item 21 indicates the competencies of English teachers.

4.2.1.1 Teachers' perceptions towards the use of IWB in English lessons.

There are nine items in the first part of the questionnaire which is related with the perceptions of the teachers towards IWBs in English lessons. According to the results

which can be seen in Table 2, teachers agreed (15,4%) or strongly agreed (84,6%) that using IWB resources reduces time spent writing on the board (Q1), and 92,3% think that they don't spend much time for the preparation of the lessons when using IWB (Q2), 100% thinks that IWBs provide easier access to different sources and teacher can show them to students immediately (Q 3). Most of the teachers agreed (15,4%) or strongly agreed (84,6%) that IWBs are beneficial for saving and printing the materials generated during the lesson (Q4) and 100% of the teachers think that IWBs can be a good supplement to support teaching (Q7). Moreover, all of the teachers think that IWBs make them more efficient teachers (Q8) and using IWBs makes it easier for a teacher to review, re-explain, and summarize the subject (Q9). All of them assert that more effective explanations can be given with the use of IWBs (Q5) and they can easily control the whole class with the help of the using IWBs (Q6).

Table 2 *Teachers Attitudes in terms of Teaching*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q1	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376
Q2	10	76,9	2	15,4	0	0	0	0	1	7,7	1,46	1,127
Q3	0	0	0	0	0	0	1	7,7	12	92,3	4,92	4,69
Q4	0	0	0	0	0	0	2	15,4	11	84,6	4,69	,480
Q5	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376
Q6	0	0	0	0	0	0	1	7,7	12	92,3	4,92	,277
Q7	0	0	0	0	0	0	1	7,7	12	92,3	4,92	,277
Q8	0	0	0	0	0	0	3	23,1	10	76,9	4,77	,439
Q9	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376

4.2.2.2. Teachers' general attitudes toward the use of IWBs. There are seven items in the second part of the questionnaire which is related with general attitudes towards the use of IWBs in English lessons. The results, which can be seen in Table 3, indicate that the teachers have positive attitudes towards the use of IWBs. In item 10, all of the teachers agreed (15,4%) or strongly agreed (84,6%) that they like using IWB technology in their lessons and all of them have positive attitudes toward the use of IWB in language instruction (Q12). Moreover, 92,3% strongly disagree and 7,7% disagree that they have negative attitudes toward the use of IWBs in language instruction (Q13). All the teachers strongly disagree (92,3) or disagree (7,7) that their students are not ready for IWB technology (Q14). However, 61,5% strongly disagree and 15,4% disagree that traditional methods are not sufficient for teaching English while 23,1% percent thinks that traditional methods are sufficient (Q15). Moreover, 12 English teachers out of 13 believe that they do well with IWB-based applications while only one English teacher perceives opposite (Q16).

Table 3 *Teachers' General Attitudes Towards the Use of IWBs*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q10	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376
Q11	0	0	0	0	0	0	11	84,6	2	15,4	1,15	,376
Q12	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376
Q13	12	92,3	1	7,7	0	0	0	0	0	0	1,08	,277
Q14	12	92,3	1	7,7	0	0	0	0	0	0	1,08	,277
Q15	8	61,5	2	15,4	0	0	3	23,1	0	0	1,85	1,281
Q16	11	84,6	1	7,7	0	0	0	0	1	7,7	1,38	1,121

4.2.2.3. Teachers' attitudes in terms of motivational issues. Four items in this section investigated the motivational issues related to the attitudes of teachers toward IWB use. According to the teachers (%100) IWB use makes learning more enjoyable and interesting (Q17). Moreover, 7,7% agree or 92,3% strongly agree that IWB technology helps them keep the students' attention longer (Q18) and this technology increases the interaction and participation of the students (Q19). Thus, teachers (%100) indicate that students are more motivated to learn English when they use IWB in English lessons (Q20).

Table 4 *Teachers' Attitudes in terms of Motivational Issues*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q17	0	0	0	0	0	0	1	7,7	12	92,3	4,92	,277
Q18	0	0	0	0	0	0	1	7,7	12	92,3	4,92	,277
Q19	0	0	0	0	0	0	1	7,7	12	92,3	4,92	,277
Q20	0	0	0	0	0	0	2	15,4	11	84,6	4,85	,376

4.2.2.4. Teachers' attitudes in terms of training. Item 21 aims to find out if the teachers need a special training to use IWB technology or not. As it can be noticed in the Table 5, for the twenty-first item, teachers' answers are different from each other: 46,2% of teachers strongly disagreed and 23,1% disagreed with item twenty-one while 15,4% of teachers agreed and 15,4% strongly agreed. 30,8% of teachers think that they need a special training to teach with IWB technology while 69,3% of teachers think they don't need a special training to teach with IWB.

Table 5 *Teachers' Attitudes to Training*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q21	6	46,2	3	23,1	0	0	2	15,4	2	15,4	2,31	1,601

4.3 Interview Results with the Teachers

English teachers' opinions about the use of IWB in English lessons were collected through semi-structured interviews to enrich the data. It is aimed to have more detailed information and better understand the attitudes of the teachers on IWB use. The objectives and procedures of the study were clarified to the participants. The participation was voluntary and four volunteered English teachers participated in the interview. Before the interview and audio recording started, interviewees were affirmed that the data obtained from them would not be revealed in order to keep the data private. Thus, the participants were anonymized. Moreover, their survey data is in line with the summary of the interview data.

When we consider their experience and age, the first interviewee has been teaching for 10 years and she is 33 years old. The second interviewed teacher has been in the field of teaching for 5 years, she is 29. The third interviewee has been teaching for 3 years and she is 26. Finally, the fourth interviewed teacher has been doing this job for 5 years, she is 28 years old. Moreover, when the educational experiences of the teachers is examined; they graduated English Language Teaching and English Language and Literature. All of the participants had a compulsory in-service training on the IWB.

4.3.1 Motivation and learning. Regarding motivation and learning, at the interview, teachers were asked: Do you notice any improvement on students' motivation during lessons? If yes, can this motivation be kept for long time?

Most of the teachers mentioned that the use of IWB affects students' motivation in a positive way when they learn English.

First interviewee mentioned that there is an improvement on students' motivation and their motivation is kept for a long time.

I observed an important improvement on their motivation when I use IWB. They want to participate a lot more. We have 80-minute lessons, it is very difficult to sustain their motivation for long time without IWB. It helps students keep their interest for so long time as IWB provide various sources and materials such as songs, videos, web pages, online flashcards. (Interviewee 1)

The second interviewee pointed out that:

Of course, there is an improvement on students' motivation. IWB provides various visual and audio materials to them and these materials increase students' motivation. (Interviewee 2)

The third interviewee declared that the students don't lose their motivation when they use IWB. She added:

I sometimes give chance to students to prepare and present their own materials such as leaflets, posters, blogs, magazines. In addition, I use their works in the lessons. They feel highly motivated. Their motivation to learn English never ends when I use IWB as it attracts their attention by visual and audio materials. (Interviewee 3)

The fourth interviewee indicated that:

Using IWB makes students more enthusiastic to learn English as they can keep their attention longer time because it is enjoyable for them. Moreover, it provides easier review and summary of the subject, thus, it makes teachers more efficient. (Interviewee 4)

4.3.2 Diversity of materials and multimedia features. In the interview teachers were asked to: Do you think is it necessary to use IWB in English lessons? Why? / Why not?

The first interviewee believes that it is very necessary to use IWB in English lessons because it provides various opportunities to enrich lessons. She added:

I think IWBs are very beneficial tools for English lessons. IWBs provide many opportunities both for the teachers and for the students. Teachers can prepare different kinds of materials and activities for students. (Interviewee 1)

The second interviewee asserted:

Using IWB is very important and necessary in English lessons. Besides, it motivates students; it also takes their attention and increases their participation. In addition, this is a technology era, and technology is a part of our life, especially the students' life, thus, students are used to technologies such as tablets, mobile phones, computers. Using IWB while teaching enhances their learning. That's why it is very necessary to use IWB in English lessons. (Interviewee2)

The third interviewee emphasized the role of authentic and interactive materials while the fourth teacher focused on visual materials which are easily accessible on IWB:

It is more important to maintain students' motivation than just to motivate them for a short time. Teachers should use authentic materials such as songs, web pages, TV broadcasts, films, leaflets, posters. In addition, teachers should also prepare interactive and communicative lessons to keep up the students' interest for English lessons. IWB is the best support for teachers. (Interviewee 3)

There is always a great difference between the lessons when I use IWB and when I don't use it. For 80-minute sessions students can get bored easily if I don't provide them visual materials. IWB is my best assistance. It helps me maintain their interest and participation. (Interviewee 4)

4.3.3 Participation. Regarding participation, teachers were asked: What are the advances in the classroom dynamics when you use IWB?

When the responses of the teachers to the first interview question was analysed, it is clearly seen that the use of IWB changes the classroom dynamics in a positive way. The second interviewee added:

When I use IWB, students show more eagerness to learn. They want to participate more. They seem to like it and they enjoy more. (Interviewee 1)

The second interviewee mentioned the necessity of using IWB related to time. She indicated that:

Using IWB reduces time teachers spent writing on the board, thus, students have more time to be involved in various learning activities. In addition, IWB provides

teachers to reach different materials during the lesson and teachers can give more effective explanations. (Interviewee 2)

The other interviewees mentioned the same point and last interviewee added:

The use of IWB changes the classroom dynamics in a positive way as it provides variety of opportunities both for the teachers and the students as it creates a more effective learning environment. Moreover, IWB use promotes participation of the students during the lessons as it encourages them to be involved in an interaction with work on the IWB. (Interviewee 4)

4.4 Results of Student Questionnaires

The students' questionnaires were analysed according to five categories: learning (Questions 1-4), technical issues (Questions 5-7), motivation (Questions 8-16), time/organization (Questions 17-19), and differences between IWBs and traditional whiteboards (Questions 20 and 21). The results are shown and interpreted in the following sections.

4.4.1 Students' attitudes to learning. In order to answer the second research question "What are the English language students' attitudes towards the use of IWB in language courses in a vocational and technical high school?" the students' questionnaire data were analysed. The questionnaires were taken by 207 ninth and tenth grade students who were studying in the same school.

In the first section, the items between 1 and 4 includes the students' attitudes towards the effect of IWBs on their learning. In Table 6, majority of the students agreed or strongly agreed that they learn more when their teacher uses IWB (Q1); only 13 students strongly disagree (5,3%) or disagreed (1,0%). The students either strongly agreed (73,4%) or agree (19,8%) that it is easier to understand when the teacher uses IWB (Q2). In addition, 91,3% of students perceive that visual and audio IWB sources help them understand the lesson better (Q3). They (90,3%) believe that they have an opportunity to learn from different sources with the help of IWB (Q4).

Table 6 *Students' Attitudes to Learning*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q1	11	5,3	2	1,0	0	0	40	19,3	154	74,4	4,57	0,973
Q2	2	1,0	2	1,0	1	,5	41	19,8	152	73,4	4,55	,978
Q3	11	5,3	3	1,4	4	1,9	34	16,4	155	74,9	4,54	1,008
Q4	10	4,8	5	2,4	5	2,4	40	19,3	147	71,0	4,49	1,014

4.4.2 Students' attitudes to technical issues. The items between 5 and 7 investigated the students' attitudes toward the use of IWB in terms of technical issues. The findings in Table 7 points out that the majority of students agree (14,5%) or strongly agree (78,3%) that using IWB make the teacher's drawings easier to see (Q5), however, 64,3% also think that deficiencies in IWB screen and sunlight in the classroom make it sometimes difficult to see things on the board (Q6). Moreover, the majority (78,3%) strongly disagree or disagree that IWBs often break down and recalibration takes time, thus, it doesn't cause waste of time (Q7).

Table 7 *Students' Attitudes to Technical Issues*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q5	11	5,3	2	1,0	2	1,0	30	14,5	162	78,3	4,59	,980
Q6	90	43,5	43	20,8	12	5,8	26	12,6	36	17,4	2,40	1,554
Q7	109	52,7	53	25,6	8	3,9	13	6,3	24	11,6	1,99	1,367

4.4.3 Students' attitudes to motivational issues. Eight items investigated students' attitudes to motivational features derived from the use of IWBs. The results in Table 8 point out that overall students (90,4%) like using IWB in English courses (Q8). Moreover, the majority (91,3%) of students say that they want to participate more when they use IWB (Q9), and 92,2% of students prefer lessons that are taught with IWB (Q10). In addition, 91,7% of them believe that they feel more motivated when the teacher use IWB (Q11). As stated in the mean scores, the majority of students (89,8%) state that they concentrate better when the teacher use IWB (Q12) and 90,8% of students indicate that they participate more when IWB is used (Q13). According to 89,3% IWBs make learning more interesting and exciting (Q14), and 89,8% believes that it is easier for them to keep their attention when IWB is used during the English lessons (Q15). The students agree (17,4%) or strongly agree (72,9%) with the ideas that it is easier for them to be motivated during the lesson (Q16).

Table 8. Students' Attitudes to Motivational Issues

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q8	12	5,8	4	1,9	4	1,9	31	15,0	156	75,4	4,52	1,051
Q9	12	5,8	4	1,9	2	1,0	40	19,3	149	72,0	4,50	1,042
Q10	10	4,8	3	1,4	3	1,4	40	19,3	151	72,9	4,54	,974
Q11	11	5,3	2	1,0	5	2,4	39	18,8	150	72,9	4,52	,999
Q12	11	5,3	6	2,9	4	1,9	34	16,4	152	73,4	4,50	1,051
Q13	11	5,3	4	1,9	7	3,4	37	17,9	151	72,9	4,50	1,042
Q14	11	5,3	4	1,9	7	3,4	40	19,3	145	70,0	4,47	1,037
Q15	9	4,3	9	4,3	3	1,4	41	19,8	145	70,0	4,47	1,032
Q16	11	5,3	3	1,4	6	2,9	36	17,4	151	72,9	4,51	1,019

4.4.4 Students' attitudes to time management and organizational issues.

Issues of time management and lesson organisation were investigated by three items. The results in Table 9 shows that students strongly disagree (60,0%) or disagree (21,3%) with the idea that they cannot follow the lessons when the teacher use IWB (Q 17). Moreover, students agree (20,3%) or strongly agree (68,1%) that lessons become more organized when IWBs are used (Q 18) and 85,5% indicates that the use of IWBs saves time (Q 19).

Table 9 *Students' Attitudes to Time Management and Organizational Issues*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q17	125	60,0	44	21,3	2	1,0	7	3,4	29	14,0	1,89	1,417
Q18	14	6,8	5	2,4	5	2,4	42	20,3	141	68,1	4,41	1,119
Q19	16	7,7	4	1,9	10	4,8	36	17,4	141	68,1	4,36	1,174

4.4.5 Students' attitudes to differences between traditional boards and IWBs.

Two items investigated students' attitudes related to differences between traditional boards and IWBs. According to the scores in Table 10, the students strongly disagree (58,0%) or disagree (21,7%) with the idea that there is not much difference between an interactive whiteboard and a whiteboard (Q 20). Furthermore, they strongly disagree (62,8%) or disagree (23,2%) with the idea that there is no difference between their teachers' use of whiteboards and IWBs in term of teaching techniques and methods (Q 21).

Table 10 *Students' Attitudes to the Difference Between Traditional Boards and IWBs*

	Strongly disagree		Disagree		No idea		Agree		Strongly agree		MEAN	STD
	F	%	F	%	F	%	F	%	F	%		
Q20	120	58,0	45	21,7	9	4,3	13	6,3	20	9,7	1,88	1,318
Q21	130	62,8	48	23,2	3	1,4	6	2,9	20	9,7	1,73	1,251

4.5 Interview Results with the Students

Students' opinions about the use of IWB in English lessons were gathered through semi-structured interviews to enrich the data. The participation to interview was voluntary. At first, the students were ensured that the data obtained from them would not be revealed in order to keep the data private. Thus, the students were anonymized just as the interviews with teachers.

When we consider their grades, the first 6 interviewee were ninth grade while the other four interviewed students were tenth grades. After the survey data were analyzed, three questions were asked to students in order to elicit more detailed information about their perceptions of IWB use in English lessons. Ten volunteered students participated in the interview. Two questions were asked to the students aiming to elicit additional information about IWB use in English classes.

4.5.1 Motivation and learning. Regarding students' motivation and learning, at the interview, students were asked: What are the effects of using IWB on your language learning? Why? /Why not?

Students state that they feel more motivated when the teacher uses IWB as it can be seen in the sample quotation below.

I feel more active when the teacher uses IWB. All the other teachers should use it because we love learning with videos, visuals and audio. I love using technology tools, it is a part of my personal life, outside of the school environment. That's why I feel more motivated when the teacher uses IWB. (Interviewee 1)

The second interviewee indicated that they concentrate better when the teacher integrates technology into English lessons with IWB.

I concentrate on the subject better when the teacher uses IWB and I learn better. That's why IWB motivates me to learn English. (Interviewee 2)

The third interviewee declared:

When the teacher use IWB, I feel more motivated. It is very important not only in English lessons but also in other lessons. (Interviewee 3)

The fourth interviewee said IWB takes their attention and he added:

We have fun when the teacher uses IWB. I can concentrate on the lesson better. In addition, I can understand better. This makes me feel happy and I love English lessons. (Interviewee 4)

The fifth interviewee described his use of IWB on his learning English motivation as:

I enjoy the lesson more when the teacher use IWB. I can concentrate on the subject better because IWB draws my attention. (Interviewee 5)

Moreover, next interviewee described the positive effects of using IWB on their learning English as:

Teacher can underline important parts and we can follow the lesson better. We can take notes easier and see related and interesting videos with the lesson. We all want to participate more when the teacher uses IWB. (Interviewee 6)

The next interviewee clarified that:

I always enjoy more when the teacher uses IWB because technology is part of my personal life, outside of the school environment. That's why I feel more motivated when the teacher uses IWB. IWBs are enjoyable and effective technology tools for us. (Interviewee 7)

The eighth interviewee mentioned technological function of IWB on his learning English and stated that:

We can search information during the lesson time, watch videos related to the subject by connecting the internet. When we don't understand the lesson, IWB

is a visual support for better understanding. Thus, it motivates us for English lessons. (Interviewee 8)

The next interviewees described the positive effects of using IWB on their language learning as:

I prefer lessons that are taught with IWB. I enjoy and understand better. It motivates me to learn English. (Interviewee 9)

When the teacher uses IWB I feel more motivated during the lesson. It is easier for me to keep my attention when the teacher use IWB. (Interviewee 10)

4.5.2 Diversity of materials and multimedia features. Regarding diversity of materials and multimedia features, at the interview, students were asked: Do you think is it necessary to use IWB in English lessons? Why? /Why not?

Students indicate that they love using technology tools such as IWBs and tablets in lessons. First interviewee stated that:

As I mentioned before, IWB helps me understand the lesson better. It is a great opportunity to find and use different sources during the lesson. I love going to the front of the class to use IWB. It attracts me because it is a technology tool. (Interviewee 1)

The second interviewee mentioned that it is technology era and it is a part of our lives and he added:

It is necessary to use IWBs in English lessons as it is a technology tool. And technology is a part of our lives. That's why I prefer lessons with IWB. It draws my attention. I enjoy lessons more when IWB is used. I feel eager to participate. (Interviewee 2)

The third interviewee mentioned the time and multimedia functions of IWBs:

I think IWB saves time in English lessons. Teacher doesn't spend time while writing on the board. She can use EBA sources or slights. Highlighting, zooming, using multimedia attracts our attention more and we learn better. (Interviewee 3)

The next interviewee indicated:

There is a big difference between traditional board and IWB. IWB saves time. As it is a technology tool, it attracts us. (Interviewee 4)

The fifth interviewee said he believes it is very necessary to use IWB in English lessons because it helps them understand the lessons better. He added:

I think IWBs are very necessary tools for English lessons. IWBs help us understand the lessons better as it provides audio and visual materials. I always enjoy more when the teacher uses IWB. (Interviewee 5)

Moreover, the other interviewees shared similar ideas about the necessity of the IWBs and the next interviewee added:

It is fun when the teacher uses IWB, we play games and listen songs. Additionally, IWB encourages me to participate lessons because I love technology. It makes the lessons more interesting and exciting. I feel more motivated during the lesson. Lastly, book is more fun when we review it on IWB. That's why IWBs are very necessary. (Interviewee 6)

The next interviewee addressed the visual and auditory advantages of IWB and indicated that:

When the teacher uses audio and visual materials with IWB, I understand the lesson better. IWB is also a great opportunity to for us not to get bored during the lesson. When we are about to get bored, teacher shows videos or we play games on IWB. We sometimes use different sources. It is fun, I learn better. (Interviewee 7)

The eighth interviewee indicated that IWB helps them to learn more as it visualizes the context, thus it makes their learning easier.

I learn better and more when the teacher uses IWBs because I like learning with visuals. IWB helps us learn better as it provides visual and audial materials of the book. And also, I like playing games on IWB. (Interviewee 8)

The ninth interviewee addressed multimedia features of IWB and added:

When the teacher use IWB for an activity, I feel motivated and want to participate in the activities more. It provides videos, visuals and audio. We watch videos in English. I feel more motivated. (Interviewee 9)

The last interviewee mentioned his use of IWB as:

IWB helps us practice the subject because it has summary of the previous lessons. It helps me learn by myself. It encourages me to participate more because I

love using it. IWB attracts my attention to the important parts of the lesson. It is like a highlighter for me. (Interviewee 10)

4.6 Summary of the Results

In this study, the findings are reviewed concerning two research questions written above. When the data of the questionnaire and interviews are analysed for the first research question, it can be assumed that most of the teachers had positive perceptions towards IWBs in English courses. They agreed that IWBs supported variety of materials for the students by providing them with various opportunities.

Moreover, findings of questionnaire and interviews pointed out that IWB is enjoyable and beneficial tool for the participants in terms of reaching a wide range of materials. Most of the teachers were agreed that they notice improvements on students' motivation during lessons when they use IWB. IWB affects students' motivation in a positive way when they learn English.

Additionally, the interviews with the students supported this statement, too. As it is pointed out in the findings of the questionnaire and interviews for the second research question, students have positive attitudes towards IWB use as it helps them understand the lesson better by various visual and audio materials. Learning becomes more interesting and enjoyable. Moreover, multimedia features of IWB, attracts students' interest and it motivates them. Besides, it motivates students; it also draws their attention and increases their participation as they love technology. Thus, integrating this technology tool into the English lessons, increases their motivation.

Chapter 5

Discussion and Conclusions

This study aimed to explore the students' and teachers' perceptions toward the use of IWBs in English courses. The researcher used two questionnaires and interviews to find out students' and teachers' attitudes toward IWBs. The participants in this study were selected from a state high school in İstanbul in which the classrooms were furnished with IWB technology in context of Fatih Project. Fatih Project is a project of Ministry of Education which aims to provide technological equipment in state schools around Turkey. Two research questions were asked in this study.

1. What are the English language teachers' attitudes towards the use of IWB in language courses in a vocational and technical high school?
2. What are the students' attitudes towards the use of IWB in language courses in a vocational and technical high school?

In order to find out the teachers and students' perceptions towards the use of IWB two questionnaires were applied. 207 high school students in 9th and 10th grades responded the students' questionnaire and 13 English teachers responded the teachers' questionnaire. Interviews were also conducted with 4 teachers and 10 students to have a deeper understanding about their use of IWB and attitudes towards the use of IWBs.

The first research question found out teachers' attitudes towards IWBs; second research question found out students' attitudes towards IWBs. The, results showed that teachers and students have positive attitudes towards IWBs and they stated that IWBs are beneficial tools in English courses. According to results teachers believe that using IWBs increases students' motivation and helps them teach English more efficiently. However, students also asserted that the use of IWBs effects their motivation in a positive manner.

In this chapter, the findings of the current study were examined related to the research questions under the two headings below. Moreover, pedagogical implications will be provided. Lastly, recommendations for future research will be underlined.

5.1 Discussion of Findings for Research Questions

5.1.1 Discussion of the findings of research question 1: What are the English language teachers' attitudes towards the use of IWB in language courses in a vocational and technical high school? The teachers' questionnaire and interviews were conducted to explore the attitudes of English teachers towards the use of IWBs in English lessons. The questionnaire showed that the teachers had positive attitudes toward the use of IWBs in their English lessons and they think that IWBs are beneficial teaching tools in language teaching. Teachers mostly agree that IWBs draw students' motivation and appeal to all students concerning their different learning styles by various multimedia tools, visuals and audio supports. Moreover, according to the findings, IWBs increase motivation, interaction and participation of the students. The results resemble with the findings of Hall and Higgins' (2005) research which stated that multimedia can raise the interest of students with different learning abilities just as Bell (2002) stated that IWB can easily comply with almost all learning styles. Besides, the data from the survey showed that teachers believe that practicing IWB motivates teachers to advance their professional development. Teachers feel more confident and efficient when they use IWB because it provides teachers to collect the attention of all the students by entertaining activities and variety of materials related to IWB (Oz, 2014; Turel & Johnson, 2012).

Teachers also consider that learners care more about learning English as technology has a vital role in students' lives. IWB encourages teachers to integrate technology into lessons, thus, the lessons become more interesting and enjoyable for students. Additionally, teachers believe that teaching is easier when they use IWB as it provides them easier review and summary of the lesson and they can keep their students' attention longer with the help of IWB technology as it provides authentic materials such as songs, web pages, TV broadcasts, films, leaflets, posters. Moreover, it provides easier review and summary of the lesson with various features such as highlighting and zooming. This statement is in line with Wall, Higgins and Smith's (2005) research in which it was indicated that according to students; IWB make teachers more productive and effective.

Furthermore, in this study, it was found out that using IWBs in English courses provide teachers easier review and summary of the subjects and saves teaching time. This statement is in line with Gashan and Alshumaimeri's (2015) argument which

stated that “understanding how to use all the options offered by the IWBs will ensure better gains in integrating IWBs in EFL classes” (p.182).

The questionnaire was supported with the interview data. The interview results showed that IWBs are very beneficial tools for English lessons and IWBs provide many opportunities both for the teachers and for the students. Moreover, it provides teachers with easier review and summary of the subject. Furthermore, teachers can prepare different kinds of materials and activities for students. Thus, teachers feel more effective because IWBs encourage students to be interactive learners as it increases their participation by giving them opportunities to participate in the activities actively. In other words, it makes them more efficient teachers. From the perspectives of the teachers, students are used to technologies such as tablets, mobile phones and computers. In addition, as it is a technology era, and technology is a part of life, students show interest when they use IWBs to watch videos on the Internet or when the teachers show picture related to the topic. IWBs increase students’ motivation by drawing their attention and maintaining their interest. Thus, using IWB while teaching enhances their learning.

According to the survey results, most of the teachers think that they do well with IWB-based applications. The time consumed for the design of the materials was not indicated as an issue by the majority of the teachers while one of them asserted that IWBs increase their preparation time. Moreover, the survey results indicated that most of the teachers state that they do not need more training to be able to use IWB, as all the staff have been trained how to use IWB because it is a compulsory in-service training for the teachers who work at state schools. However, few teachers think that they need a special training to use IWB more effectively. This is in accordance with Celik’s (2012) findings in which he pointed out that “in order to make the quality of technology integration in classrooms certain, teachers need to be trained to become familiar with IWB and to understand the best methods to use it” because IWBs are not just tools, they are also the new methods of teaching (p.125).

5.1.2 Discussion of the findings of research question 2: What are the students’ attitudes towards the use of IWB in language courses in a vocational and technical high school? After the data of the questionnaire and interviews are analysed for the second research question, it is assumed that most of the students had

positive perceptions towards using IWBs in English courses. In addition, one of the most crucial reasons which trigger students to gain positive perceptions was that IWB provides variety of materials for students such as visuals, videos, songs, movies, games, etc. As they indicated during the interview, IWBs are enjoyable and beneficial tools for students in English courses. However, they confirmed that IWBs provided a wide range of materials for the students such as songs, web pages, blogs, TV broadcasts, videos, movies, leaflets, posters, and anything written in English. The students and teachers' positive perceptions towards the use of IWB can be seen in many studies in the literature. Elaziz (2008) indicated that teachers and the students had positive perceptions towards the use of IWB by stating IWBs provide various opportunities such as saving the materials created throughout the lesson, reaching various resources and displaying them to the students instantly, giving more effective explanations, easier re-explaining, and summarizing the subject.

Moreover, questionnaire results with the students showed that IWB is pleasurable and beneficial tool for the students in terms of reaching rich materials. Additionally, the interviews with the students supported this statement, too. IWB is a great opportunity to find and use different sources during the lesson. Students can search information during the lesson time, watch videos related to the subject by connecting to the internet. Moreover, students indicate that IWB is a visual support for better understanding as they can bring together variety of materials and endless resources such as; "text, images, audio, video, 'draggable' objects and, of course, a seemingly infinite collection of resources from the web" (Betcher & Lee, 2009, p.8). Thus, it motivates students for English lessons.

According to the second research question's questionnaire and interviews findings, IWB attracts students' interest and increase their motivation, and provides various affordances to enrich the learning experience, support both teaching and learning, and also, leads to implementation of student centred and communicative methods and activities.

5.1.3 Pedagogical implications. This is a technology era and students meet technology when they are younger. In order to attract the students' attention, teachers need to present communicative, student centred activities. According to the results of the surveys and interviews, teachers should provide students with different kinds of

activities and materials during the lessons. Moreover, they should also provide extra activities which will appeal to all students' learning needs and interests such as games, craft work, role-plays, communication activities to support and enrich IWB use in the classroom setting.

The results of the study show that teachers should integrate IWB technology into their lessons since IWB provides tools which enhances and enriches language learning and makes it more enjoyable and effective in English classes. According to the findings gathered from the survey and interviews, the students should be provided with adequate authentic materials such as songs, web pages, blogs, TV broadcasts, videos, movies, leaflets, posters, and anything written in English through IWB to make learning more efficient. "One of the implications about the use of IWB effectively that is teachers may encourage students to engage actively with multimedia resources (videos, websites, pictures, online texts), which added an element of authenticity to the lessons and provided support for the various tasks that the students needed to accomplish" as Schmid (2008) asserted in his study.

Moreover, Al-Faki and Khamis (2014) stated that "interactive whiteboard facilitates learner's participation by enabling them to interact with materials on the board" (p.138). As Grey et al. (2005) indicate that "teachers must be careful not to take the role of "show and tell" while conducting lessons with IWB". The importance of students' involvement in their own learning by use of IWBs is highlighted through the results of teachers' interview. Furthermore, more training to teach with IWB technology may be beneficial for teachers.

5.2 Conclusion

In this study, it is explored the perceptions of students and teachers towards the use of IWB in English courses and how IWBs facilitate teaching and learning process in classes. Concerning the IWB use in educational setting, the findings of the study pointed out that teachers consider that IWB integration in language teaching process has positive effects on students. The questionnaire and interviews pointed out that both the teachers and students had positive attitudes towards using of IWBs in their English lessons. They indicated IWB should be integrated in language classrooms to enhance and enrich English lessons, as it draws learners' attention. In addition, they indicated that when they use IWB in English lessons frequently and take benefit from it most of

the time. Most of the teachers pointed out that they use IWB increase students' participation and motivation. IWB makes learning and teaching more enjoyable and effective as it is used to show the book, zoom in, draw and underline with red pen, show the answers, PPT presentations, playing audio records.

According to the results, IWBs were considered as facilitative tools to make teaching and learning process more effective. Most of the teachers state that IWBs draw learners' interest and achieve their learning needs by providing authentic materials such as songs, web pages, blogs, TV broadcasts, videos, movies, leaflets, posters.

5.3 Recommendations

The present study has been conducted in two parts. The first phase is a survey with 13 volunteer teachers and 207 ninth and tenth grade polled. The next phase are interviews with 4 volunteer teachers and 10 volunteer students. However, upon further study, conducting a research with more participants from different schools can provide a wide range of opinions related to the issue. Therefore, having a larger sample from multiple of schools would likely give more representative results for the use of IWB in English courses.

Moreover, a longitudinal study with multiple observations of classroom could be conducted in order to gather more accurate data about the use of IWB in English language teaching. Even though the current study included both qualitative and quantitative data, more interviews with different age groups of students and classroom observations could be organized in order to collect more reliable data about the use of IWB in English courses.

Finally, how and for what purposes the teachers use IWB in English lessons should also be investigated in further research.

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APPENDICES

A: Teacher Questionnaire

For the following items, please circle the answers that best show your opinion and answer the questions below the table.

1) Strongly disagree 2) Disagree 3) No idea 4) Agree 5) Strongly agree

1. Using the IWB resources reduces the time I spend writing on the board.	1	2	3	4	5
2. When using IWBs in the classroom, I spend more time for the preparation of the lesson.	1	2	3	4	5
3. Using IWBs makes it easier to reach different sources and display them to the whole class immediately.	1	2	3	4	5
4. IWBs are beneficial for saving and printing the materials generated during the lesson.	1	2	3	4	5
5. I can give explanations more effectively with the use of IWBs.	1	2	3	4	5
6. With the help of using the IWB, I can easily control the whole class.	1	2	3	4	5
7. I think IWBs can be a good supplement to support teaching.	1	2	3	4	5
8. Using IWBs makes me a more efficient teacher.	1	2	3	4	5
9. Using IWBs makes it easier for a teacher to review, re-explain, and summarize the subject.	1	2	3	4	5
10. I like using IWB technology in my lessons.	1	2	3	4	5
11. I feel uncomfortable using IWBs in front of my students.	1	2	3	4	5

12. I have positive attitudes toward the use of IWBs in language instruction.	1	2	3	4	5
13. I have negative attitudes toward the use of IWBs in language instruction.	1	2	3	4	5
14. I do not think my students are ready for this technology.	1	2	3	4	5
15. What I do in class with traditional methods is sufficient for teaching English.	1	2	3	4	5
16. I am not the type to do well with IWB-based applications.	1	2	3	4	5
17. I think IWBs make learning more enjoyable and more interesting.	1	2	3	4	5
18. I can keep my students' attention longer with the help of IWB technology.	1	2	3	4	5
19. I think IWBs increase the interaction and participation of the students.	1	2	3	4	5
20. I think my students are more motivated when I use an IWB in my lessons.	1	2	3	4	5
21. I believe that training is required to teach with IWB technology.	1	2	3	4	5

B: Student Questionnaire

Aşağıdaki ifadelere ne kadar katılıyorsunuz? Size en uygun olan kutuyu işaretleyiniz ve tablo sonunda sorulan sorulara cevap veriniz.

Aşağıdaki tabloda sayıların anlamı şu şekildedir:

- 1) Kesinlikle katılmıyorum 2) Katılmıyorum 3) Fikrim yok 4) Katılıyorum 5) Kesinlikle katılıyorum

1. Öğretmenim akıllı tahta kullandığında daha çok öğreniyorum.	1	2	3	4	5
2. Öğretmenim akıllı tahta kullandığında dersi anlamak daha kolay.	1	2	3	4	5
3. Akıllı tahta ile görsel ve işitsel materyallerin kullanılması dersi daha iyi anlamama yardımcı oluyor.	1	2	3	4	5
4. Akıllı tahtanın kullanımı derse karşı ilgimi artırır.	1	2	3	4	5
5. Akıllı tahta kullanımı dersleri daha eğlenceli yapar.	1	2	3	4	5
6. Akıllı tahtanın ekranındaki eksiklikler ve sınıf içindeki güneş ışığı bazen akıllı tahtadaki şeyleri görmeyi zorlaştırır.	1	2	3	4	5
7. Akıllı tahta sık sık arızalanır ve yeniden ayarlanması zaman kaybına sebep olur.	1	2	3	4	5
8. Tahtaya çıkıp akıllı tahtayı kullanmak hoşuma gider.	1	2	3	4	5
9. Akıllı tahta kullanılıncaya derse daha çok katılmak isterim.	1	2	3	4	5
10. Akıllı tahta ile işlenen dersleri tercih ederim.	1	2	3	4	5
11. Öğretmen akıllı tahta kullandığında daha iyi motive olurum.	1	2	3	4	5

12. Öğretmen akıllı tahta kullandığında daha iyi konsantre olurum	1	2	3	4	5
13. Öğretmen akıllı tahta kullandığında derse daha çok katılırım.	1	2	3	4	5
14. Akıllı tahta öğrenmeyi daha ilginç ve heyecanlı yapar.	1	2	3	4	5
15. Ders esnasında akıllı tahta kullanıldığında dikkatimi toplamam daha kolaydır.	1	2	3	4	5
16. Akıllı tahtanın kullanılması ders esnasında motive olmamı daha kolaylaştırır.	1	2	3	4	5
17. Öğretmenim akıllı tahta kullandığında dersi takip edemiyorum.	1	2	3	4	5
18. Akıllı tahta kullanıldığında dersler daha düzenli olur.	1	2	3	4	5
19. Akıllı tahtanın kullanımı zaman kazandırır.	1	2	3	4	5
20. Öğretme teknikleri ve metotları bakımından öğretmenimin akıllı tahta kullanması ile geleneksel tahta kullanması arasında bir fark yoktur.	1	2	3	4	5
21. Akıllı tahta ve beyaz tahta arasında çok fark yoktur.	1	2	3	4	5

C: Teachers' Interview Questions

1. Do you think is it necessary to use IWB in English lessons? Why? / Why not?
2. What are the advances in the classroom dynamics when you use IWB?
3. Do you notice any improvement on students' motivation during lessons?



D: Students' Interview Questions

1. Do you think it is necessary to use IWB in English lessons? Why? / Why not?
2. What are the positive effects of using IWB on your learning English?



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