

**REPUBLIC OF TURKEY
ÇAĞ UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES
DEPARTMENT OF ENGLISH LANGUAGE TEACHING**

**TURKISH EFL STUDENTS' OPINIONS TOWARDS THE USE OF TABLET PCs
AND INTERACTIVE WHITEBOARDS IN EFL CLASSROOMS**

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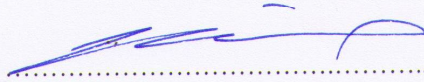
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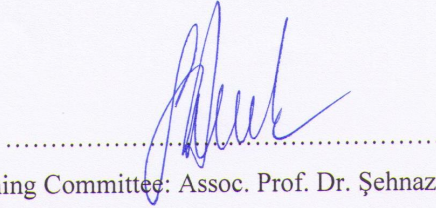
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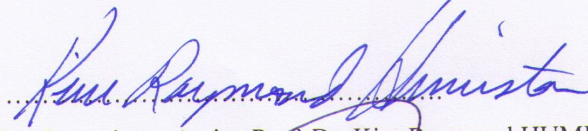
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ÖZET

İNGİLİZCE DİL SINIFLARINDA TABLET VE AKILLI TAHTALARIN KULLANIMINA İLİŞKİN ÖĞRENCİ GÖRÜŞLERİ

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Bu çalışmada, yabancı dil olarak İngilizce öğretimi yapılan sınıflarda öğrenim gören öğrencilerin akıllı tahta ve tablet kullanımına ilişkin görüşleri incelenmiştir. Çalışmanın örneklem grubunu Eğitimde Fırsatları Artırma ve Teknolojiyi İyileştirme (FATİH) Projesi kapsamında Muş İlinde İngilizceyi yabancı bir dil olarak öğrenen 160 ortaöğrenim öğrencisi oluşturmaktadır.

Veriler, öğrencilere dağıtılan anket yolu ile onların tablet ve akıllı tahta kullanıma ilişkin görüşleri incelenerek elde edilmiştir. İki bölümden oluşan anketlerin ilk bölümünde Ortaöğrenimde okuyan öğrencilerin İngilizce dil sınıflarında tablet kullanımına ilişkin görüşleri ile ilgili olarak 12 maddelik bölüm, ikinci kısımda ise İngilizce dil sınıflarında öğrenim gören öğrencilerin akıllı tahta kullanımına ilişkin görüşlerine ait 21 maddelik bölüm yer almıştır. Bunun yanı sıra, öğrencilerin demografik bilgilerinin analiz edilmesi için bir bölüm de ankette yer almıştır. Nicel araştırma yöntemleri kullanılan bu çalışmada verilerin analizinde istatistiksel yöntemler kullanılmıştır. Cinsiyet, yaş, bilgisayar tecrübesi, internet tecrübesi, tablet bilgisayara sahip olma durumu, tablet bilgisayar kullanım eğitimi alma durumu, haftalık akıllı tahta kullanım saati ve akıllı tahta kullanım eğitimi alma durumu gibi değişkenlerle öğrencilerin İngilizce dil sınıflarında akıllı tahta ve tablet kullanımına ilişkin görüşleri arasındaki ilişki incelenerek analiz edilmiştir. Verilerin istatistiksel analizinin ışığında öğrencilerin akıllı tahta kullanımları arttıkça onların bu teknolojilere olan ilgilerinin de arttığı söylenebilir. Öte yandan, öğrenciler üzerinde tablet bilgisayarların onların motivasyon ve öğrenmeleri üzerinde önemli bir artışa yol açmadığı gözlenmiştir. Demografik değişkenlerden akıllı tahta kullanımı ile yaş değişkeni arasında, tablet kullanımı açısından da haftalık akıllı tahta kullanım saati arasında anlamlı bir farklılık bulunmuştur.

Anahtar Kelimeler: Akıllı Tahta, Tablet, Bilgi ve İletişim Teknolojileri, Yabancı Dil Olarak İngilizce Öğrenimi.

ABSTRACT

TURKISH EFL STUDENTS' OPINIONS TOWARDS THE USE OF TABLET PCs AND INTERACTIVE WHITEBOARDS IN EFL CLASSROOMS

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The study investigated the opinions of Turkish EFL students towards the use of tablet PCs and interactive whiteboards in EFL classrooms. The sample group of this study included 160 Turkish EFL students from different high schools of Muş National Education Directorate within the scope of “Movement of Enhancing Opportunities and Improving Technology,” known as FATİH Project.

The data were gathered through a questionnaire distributed to 160 Turkish high-school students in order to explore their views towards the use of tablet PCs and interactive whiteboards. The questionnaire consisted of two sections. First section included a scale consisting of 12 items about tablet PC use and second section including 21 items about IWB use in EFL classrooms. Students' demographic information forms were also analyzed. Quantitative research methods were used to collect the data and statistical methods were used to analyze the obtained data. The relation between variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use is examined and analyzed. The findings in this study showed that the majority of the students have positive opinions with respect to the use of IWBs in EFL classrooms. On the other hand, it is observed that, the use of tablet PCs has not a considerable impact on students' motivation and learning. A significant difference is found between the scores of the means of item total score in accordance with Turkish EFL students' use of tablet PCs and the hours of IWB use per a week variable. In addition, A significant difference is found between the scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and age variable.

Key Words: Interactive Whiteboard, Tablet, Information and Communication Technologies, Learning English as a Foreign Language.

ABBREVIATIONS

ICTs	: Information and Communication Technologies
IWB	: Interactive Whiteboard
CALL	: Computer Assisted Language Learning
FATİH	: Movement of Enhancing Opportunities and Improving Technology
TUBİTAK	: Scientific and Technological Research Council of Turkey
EFL	: English as a Foreign Language
ESL	: English as a Second Language
FL	: Foreign Language
L1	: First Language
L2	: Second Language
SPSS	: Statistical Package for Social Sciences
F	: Frequency
SD	: Strongly disagree
D	: Disagree
N	: Neutral
A	: Agree
SA	: Strongly agree
STD	: Standard deviation

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CHAPTER I

1. INTRODUCTION

1.1. Background of the study

Tablet PCs and interactive whiteboards have been used as instructional tools in EFL classrooms lately. Ishtaiwa and Shana (2011) state that the use of instructional technologies has become an indispensable part of language education. Mishra and Koehler (2006) indicate that computers and educational software has increasingly become commonly used elements in instructional environments. According to BECTA (2004), these technologies are accepted as effective teaching and learning tools for accessing to electronic content. Therefore, many opportunities in relation to language education are given to the stakeholders of this education with the developments in technology. Ishtaiwa and Shana (2011) claim that multimedia materials, the recognition and synthesis of speech, video-conferencing, e-mail and discussion groups, electronic libraries, distance learning, self-monitoring and online evaluation are the components of technologies which are used in order to teach and learn English as a second language. Moreover, Hall and Higgins (2005) state that the use of this technology in education provides many advantages since an IWB includes the features of video player, television, overhead projector, computer, whiteboard and chalkboard.

It is the fact that instructional technologies and technological developments increase the quality of students' learning. According to Sağlam (2007), instructional tools make learning effective and permanent. Students need different learning activities because of their different individual needs and interests. They learn in different ways. Some of them learn better by listening. Other learners understand better by touching, writing or discussing. Yılmaz (2007) states that these technologies help teachers manage students' individual learning differences. If the number of instructional materials increases, the number of learning activities will increase.

Case and Truscott (1999) point out the significance of this tools in developing skills. Attention to individual needs and interests, computer-based learning helps to increase students' interaction with texts and hypertexts. It also helps the students improve their vocabulary, fluency, and understanding, which are important for improvement in different skills. Instructional tools also provide a broad array of beneficial sources such as web-based dictionaries, e-encyclopedias and search engines

for improving learners' individualized instruction. Required information, unknown words, new lexical items, collocations, grammar explanations, reading passages, puzzles, comprehension and pronunciation activities can be used with the help of these tools. Kenning and Kenning (1983) point out that students interact with each other, check other students' works and utter mistakes with the help of technology. The learners can also use these technologies to inform each other. Online forums are the places where students argue about courses and create plans for the future.

The use of technology also develops learner autonomy. The students take individual and personalized feedback by using technology-based instruments. Jonassen (1999) claims that with the help of the computers and technology, students can easily find, organize, save and use information, which enables greater autonomy in learning. The learners can learn the content with the use of authentic contexts and real-life experiences.

Students need less assistance from teachers with the help of technology use in language learning process. They control and organize their own learning. They can complete some activities on their own. Kenning and Kenning (1983) state that computers provide an individual working area to students. Students use their own computers at their own learning pace. Students decide and shape their study process. Other students are unable to see their works and this makes them relax. Comfortable and relaxed learning context lower students' levels of emotional features such as worry, anger, and tenseness. In addition, individual learning differences are important factors to comprehend a subject. For example, some students learn slowly and others learn fast. Slow students may not comprehend the focus of the lesson in a classroom because of restricted time and learning conditions. In such a case, a slow learner can find necessary materials and exercises from the Internet and go through them whenever and wherever s/he wants. All in all, learning pace and time limitations can be decreased with the help of technology.

1.2. Statement of the Problem

Tablet PCs and IWBs have been used increasingly in language education worldwide. According to BECTA (2004), these instructional technologies promote teaching and learning by giving different beneficial ways to access web-based information. Hall and Higgins (2005) indicate that countries invest in such technologies since they include modern and traditional teaching and learning features.

BECTA (2006) states that most of developed countries have invested in these tools for equipping their classrooms with instructional technologies lately. On the other hand, the use of IWB and tablet PC are fairly new in Turkey and most of Vocational High Schools do not have interactive whiteboards and tablet PCs, however, thanks to the assistance of The Ministry of National Education, these technologies have started to be used as educational instruments in state high schools. Turkish Government has launched FATİH Project, conducted by the Scientific and Technological Research Council of Turkey (TUBITAK), in order to use these educational technologies in the instruction.

Various studies have been conducted to reveal students' views towards IWB use in second language education (Glover & Miller, 2007; Gray et al., 2005; Hall & Higgins, 2005; Kennewell & Morgan, 2003; Lee & Boyle, 2004; Levy, 2002; Moss, Jewitt, Levaâiç, Armstrong, Cardini, Castle, 2007; Schmid, 2006; Wall, Higgins, Smith, 2005). However, since IWB is a fairly new technology, the number of studies including the use tablet PCs in EFL classrooms is insufficient, thus, there is not sufficient scientific literature in relation to student's opinions towards tablet PC use in second language education. The current small-scale researches do not ensure comprehensive data corresponding with the use of tablet PCs in language education. Therefore, there is a vital need to reveal the opinions of Turkish EFL students towards tablet PC use in foreign language classrooms. This study attempted to reveal the relationship between the opinions of students towards the use of tablet PCs and IWBs regarding demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB.

1.3. Purpose of the Study and Research Questions

The study aimed to reveal Turkish EFL students' opinions towards the use of tablet PCs and IWBs in EFL classrooms. The study addressed the following research questions:

- 1- What are Turkish EFL students' opinions towards the use of tablet PCs in EFL classrooms?
- 2- What are Turkish EFL students' opinions towards the use of IWBs in EFL classrooms?

3- Is there any significant difference among Turkish EFL students' opinions towards tablet PC use in accordance with demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB?

4- Is there any significant difference among Turkish EFL students' opinions towards the use of IWBs in accordance with demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB?

1.4. Significance of the Study

It is indispensable to reveal students' opinions towards the use of tablet PCs and IWBs with the increasing use of different types of technology. These instructional technologies give opportunities both to teachers and students to promote second language education. The teachers are the key factors in the use of IWBs and tablet PCs and integrating this technology into their curriculum effectively. In addition, students' needs and expectations are vital to the teachers corresponding with the use of IWBs and tablet PCs. Due to insufficient literature including studies revealing Turkish EFL students' opinions towards the use of tablet PCs and IWBs, this study might present more statistical results indicating EFL students' opinions regarding tablet PC and IWB use.

1.5. Operational Definitions

ICTs: According to Blurton (2002), ICTs stand for *Information and Communication Technologies*. ICT includes technological tools and resources in order to generate, share and store information. The Internet, computers, television, radio, telephones are included in ICT.

IWB: SMART (2006) describes an *interactive whiteboard (IWB)* as “a touch-sensitive screen that works in conjunction with a computer and a projector” (p.5). The British Educational Communications and Technology Agency (BECTA) defines IWBs as follows:

An interactive whiteboard is a large, touch-sensitive board which is connected to a digital projector and a computer. 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. The potential applications are: 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 (BECTA, 2003b, p. 1).

E-Learning: Triacca et al. (2004) claims that e- learning was a sort of web-based education. The students and the teachers use an information network—the Internet for interaction or facilitation. It is especially used in higher education and provides learners to learn at all levels and wherever they want. It can be formal or non-formal. Rosenberg (2001) indicates that e-learning provides transferring a wide variety of procedures that increase the level of information and performance.

CALL: CALL stands for *Computer-assisted language learning*. Levy and Hubbard (2005) indicate that CALL is a method for showing and assessing the resources to teach. Levy and Hubbard (2005) also point out that CALL includes the technological devices such as smart phones, PDAs, DVD players, mp3 players, and IWBs to teach and learn a second language.

CMC: CMC stands for Computer-Mediated-Communication. According to Herring (1996), communication that happens between people with the help of computers. Warschauer (1997) state that CMC provides an opportunity to publish and show documents, multimedia materials and hypertexts.

CHAPTER II

2. LITERATURE REVIEW

2.1. Introduction

This chapter consists of four sections and their subsections. The first section is about ICTs in second language education. The second section gives information about CALL technologies in EFL classrooms, while the third section gives information about the place of interactive whiteboards in EFL classrooms, and the last section presents a review of literature on mobile learning.

2.2. ICT in Language Teaching Education

Blurton (2002) indicates that ICT is an broad term including a wide variety of technologies for obtaining, organizing, storing, and sharing information.

The use of ICTs in second language education is a popular tool today. According to Warschauer (1996), as an aid to the teacher, ICT has a considerable impact on second language education. The use of ICT provides advantages for both the teachers and the students. The stakeholders of education can easily find different language sources. It gives an opportunity to discover different ideas. According to Garrett (1987), the use of ICT also provides an opportunity to interact with the people who speak English as a mother tongue and this improves language skills.

Kenning and Kenning (1983) point out that with the help of the developments in technology, teachers have begun to change their methodologies, techniques and teaching styles in recent years. Student-oriented learning and constructivist learning have obtained significant implications for language teaching education. Lee (2000), Warschauer and Healey (1998) point out that students access, organize, store and transmit different authentic materials with the use of CALL. They can also integrate these materials into language skills. Lee (2000) claims that web-based and multimedia materials provide students a wide variety of communicative sources and exercises in language learning.

2.2.1. Advantages and Disadvantages of ICT

Warschauer (1996) states that with the developments in technology, computers have become common in every place of daily life and especially in

schools, thus language teachers have used technology-based instruction owing to the positive effects of computers in language learning lately. According to Larson (1999) and Li (1999), the technology-based language teaching becomes an important instrument in foreign language education thanks to the instructional features of these technologies. Alev (1997) states that instructional tools such as computers are helpful especially in teaching abstract things that are not easily learned. Besides them, instructional software designed to teach courses is often used in both classrooms and individual learning environments. According to Saka and Yılmaz (2005), one of the advantages of using computers in teaching is to develop students' learning by appealing to different senses at the same time. Therefore, animations, pictures, and sounds are used to create a peripheral learning environment in order to decrease the effects of traditional teaching environments. McDonald (2000) states online instruction provides a self-learning environment according to learners' learning speed, which enables the learners to learn the units when and where they want. Jonassen (1999) indicates that the learners can understand the content with the use of various audio-visual and authentic materials. The learners need less direction and guidance from teachers with the help of ICT. They organize their learning according to their learning differences.

According to Hsieh and Dwyer (2009), “online learning is a trend that has the potential to enhance learning, and increases the importance of knowledge of new teaching methods which apply to new learning environments” (p.36). Johnston, Killion and Oomen (2005) claim that new technologies, interactive web-based activities, e-courses have a significance to create constructivist learning atmosphere where students take part in classroom activities willingly. According to Warschauer (1996), the learners using the Internet show positive attitudes, attendance in the classroom and increased attention span. According to Picciano (2002), constructivist learning result in permanent learning products. The learners are able to use word processors, hypermedia, multimedia, drills and practice programs with the use of the Internet. They can participate in cooperative projects. Technology-enhanced learning gives an opportunity to cooperate people from different countries and cultural backgrounds. It creates a collaborative environment and a platform in which learners and peers search, analyze, discuss, share and construct new information. Rico and Vinagre (2000) state that the use of technology may help learners foster their motivation to learn the language. Technology-based tools provide opportunities such

as work on real-life problems whenever learners are suitable.

Case and Truscott (1999) point out the significance of ICT in developing skills. ICT-based learning helps the students improve their vocabulary, fluency, and understanding. Smith et al. (2005), Hall and Higgins (2005) state that ICT also offers different sources such as web-based dictionaries, e-encyclopedias and search engines, which are thought to be beneficial for students' learning. They can easily access to necessary information with the help of ICT tools. Murphy (1995) claims that working in teams on different projects to solve problems is an outcome of using technology in the classroom.

Thelmadatter (2007) also states the significance of ICT use in second language education. It helps to show and assess of materials. Online learning gives opportunities to use metacognitive strategies, which help learners control their own cognition. According to Flavell (1976), metacognition includes active monitoring and the organization of cognitive phases to reach goals. Sheorey and Mokhtari (2001) indicate that second language learners need more monitoring than L1 learners; therefore skills including metacognitive strategies and awareness are important factors in the learning process. Shin and Son (2007) state learners should learn how to research, organize, store, and share information. It is about learning to learn. Online educational websites, blogs and podcasts are used as tools for creating a student-centered learning. The students search, learn, and produce by using navigational and meta-cognitive strategies. The students read the hypertexts and access essential information on the Internet. They browse different web pages, check e-mails, and communicate with friends. Tanner and Jones (2007) indicate that the Internet provides new forms and different ways to interact with the information on the web pages.

Warschauer (2000) states that language teachers use the Internet to develop learner autonomy. Shin and Son (2007) state that students can easily find, organize, store, and transmit information, which promotes autonomy in learning with the help of technology. Kenning and Kenning (1983) state that computers provide an individual working area to students. Students use their own computers at their own learning pace. Students decide and shape their study process. Other students do not see their works and it makes them relax. In view of the circumstances, the levels of students' emotional features such as worry, anger, and tenseness are lowered. For example, some students learn slowly and some students learn fast. Individual differences are important factors to comprehend a subject. Pennington (1996) and

Warschauer (2000) claim that a slow learner can find necessary materials and exercises from the Internet and study with them whenever and wherever they want. Space and time limitations can be decreased with the help of technology. Kenning and Kenning (1983) point out that computers provide many opportunities such as interacting with other students, checking students' works and utterance mistakes, whereas a tape can merely record the sound and play it.

Costanzo (1989) and Ahmad et al. (1985) claim that computers are useful tools for students. They complete their tasks writing tests, new documents and working on linguistic forms by the help of computers. Computers do not face the difficulties that a teacher faces. For Ahmad et al. (1985) and Lee (2000) another advantage of computers is allowing students to ask questions to other people by using the keyboard. Some students are shy and they refrain from asking something in front of the class.

According to Forsyth (1996), thanks to ICT, students can manage their individual works. The use of ICT in second language education can help learners overcome the limitation of time and resources and the process of individualized learning can be maximized. Students have an opportunity to manage time and the components of language. Warschauer & Kern (2005) indicate that learners are able to learn to organize in order to interact with their classmates if they are exposed to dynamic and real-life experienced tasks. Unlike the traditional methods of language teaching, ICT in language learning supports learner-centered approach to language teaching. Learners get full exposure to the authentic target language according to his time and space of language learning. ICT, also, motivates the shy students remaining quiet in the classroom to ask questions or interact with the teachers and peers through Internet,

Although the use of ICT has many benefits in language education, there are some drawbacks of using ICT as well. Plowman, McPake and Stephen (2010) state that the use of ICT damages the social, intellectual and cognitive developments of children. The reason is that children are mostly isolated and they spend most of their time in front of the computers. They do not play games with their friends. Interaction with family members and friends is also decreased because of excessive technology use. It affects emotional development of children and sitting a long time may cause health problems such as obesity. Kenning and Kenning (1983) state that a computer is insufficient in creating an interactive learning atmosphere. According to Lai and

Kritsonis (2006), teachers and learners need to know how to use instructional technologies before the lesson.

2.3. The Place of Interactive Whiteboards in EFL Classrooms

2.3.1. The Use of IWBs in EFL Classrooms

In recent years a new tool has entered into educational environment. Clyde (2004) and Hall and Higgins (2005) state that “electronic whiteboard,” “digital whiteboard,” and “smart whiteboard.” are the terms which are often used instead of interactive whiteboard. Hennessy, Deaney, Ruthven and Winterbottom (2007) define IWBs as follows:

IWB systems comprise a computer linked to a data projector and a large touch-sensitive board displaying the projected image; they allow direct input via finger or stylus so that objects can be easily moved around the board or transformed by the teacher or students. They offer the significant advantage of one being able to annotate directly onto a projected display and to save the annotations for re-use or printing. The software can also instantly convert handwriting to more legible typed text and it allows users to hide and later reveal objects. Like the computer and data projector alone, it can be used with remote input and peripheral devices, including a visualiser or flexible camera, slates or tablet PCs (p.2).

Shenton and Pagett (2007) indicate that this technology works with computer and projector connection and it is a touch-sensitive screen. Hall and Higgins (2005) state that IWB is a technology which combines the benefits of all teaching tools like the, whiteboard, television, VCD player, overhead projector, and computer in one. SMART (2006) describes an interactive whiteboard as “a touch-sensitive screen that works in conjunction with a computer and a projector” (p.5). Although many names and definitions are used for this new technical tool, there is not a common name or definition to describe it in literature.

Beeland (2002) claims that IWB has increasingly been used in education lately. The first IWBs used in education resemble the normal whiteboards. Adiguzel, Gurbulak and Saricayir (2011) indicate that with its easy use and touchscreens, it has become common to be used for instructional aim. Lee (2010), Smith, Higgins, Wall

and Miller (2005) state that many European countries equip schools with these technologies considering their benefits to learning and teaching.

Türel and Johnson (2012) indicate that new developments with respect to the education system in Turkey provide students a constructivist atmosphere. Thus, foreign language teachers have used different instructional technologies such as IWBs in recent years.

2.3.2. The Advantages and Disadvantages of IWBs

Erduran and Tataroğlu (2010), Lan and Hsiao (2011) and Murcia (2008) state that the use of IWBs in education becomes more common day by day. According to Lan and Hsiao (2011), the use of IWBs for teaching aim is “not only a current trend but also a major policy of education” (p.172). In addition to a lot of studies being conducted abroad (Smith et al. 2005; Wall et al. 2005; Kennewell and Beauchamp 2007; Lewin et al. 2008; Wood and Ashfield 2008), most of developed countries have invested to equip their teaching and learning environments with IWBs. (Hall and Higgins, 2005; Shenton and Pagett, 2008; Wood and Ashfield, 2008). Students have positive attitudes towards the use of IWBs (Hall and Higgins, 2005; Morgan, 2008; Smith et al., 2005) and in specific subjects such as English (Elaziz, 2008), Geography (Ateş, 2010), and Social Studies (Kaya & Aydın, 2011).

Türel (2010) states that the use of IWBs in classrooms effectively provides many advantages to education. In this sense, Şad (2011) states that the use of IWBs in education contributes to learning with many advantages such as increasing motivation, student participation and active learning. Higgins, Wall and Smith, Hall and Higgins (2005), Tirota and Torf (2010) state that the use of IWBs increase both students’ and teachers’ motivation. Elaziz (2008) points out that “IWBs are perceived as good motivators in teaching and learning contexts by the students [from primary to higher education] and this motivational power can affect students’ achievement positively and reinforce learning” (p. 85).

Gillen, Kleine, Littleton, Mercer and Twiner (2007) indicate that interactive whiteboards that show faster and more fluent presentation than technology such as overhead projector and projection equipment provides teachers possibilities to respond by observing students better in terms of pedagogical interaction. According to Cogill (2002) interactive whiteboards that have an active role in increasing classroom interaction and class participation make learning enjoyable, and enrich

environment. Beauchamp (2004) claims that this technology makes class management easier since it provides opportunities for teachers make eye contact with students. According to BECTA (2003), IWBs have more advantages such as providing creative and attractive training equipment, increasing class motivation. Gillen, Kleine, Littleton, Mercer and Twiner (2007) indicate that IWBs help teachers to design contents including interactive visual sources. In addition, Türel and Demirli (2010) conclude similar results about the advantages of IWBs. In addition, they call attention to the fact that during the presentation, teacher and student notes and comments can be added. They also stress that this situation can contribute to learning by increasing social interaction.

2.4. Mobile Learning

2.4.1. Definition of Mobile Learning

Vavoula (2005) defines mobile learning as follows “any sort of learning that happens when the learner is not at a fixed predetermined location, or learning that happens when the learner takes advantage of the learning opportunity offered by mobile technologies”(p. 11).

2.4.2. Benefits of Tablet PCs

Tablet PCs have become a trend in our daily lives, especially in education. Alexander (2004) and Bryant (2006) state that mobile learning provides a constructivist learning atmosphere to promote students’ ability to learn. Valk, Rashid and Elder (2010) point out that mobile learning enhances student-oriented and group work. According to Xiang, et. al. (2009), tablet PCs are effective tools for presentation and organization of course materials. Siozos et.al. (2009) claim that thanks to tablet PCs, students can be assessed in everywhere. Alexander (2004) and Bryant (2006) indicate that students can access and share necessary information wherever they want. Bulun, Gülnar ve Güran (2004) state that peripheral and life-long learning is possible with the help of mobile learning.

CHAPTER III

3. METHODOLOGY

3.1. Introduction

This chapter presents the information about the methodology of the study is given, and the chapter consists of five sections: Research design of the study, the selection of the participants, instruments for data collection, procedure of data collection as well as the methods used for data analysis.

3.2. Research Design of the Study

For this study, a quantitative descriptive research method is employed to investigate the opinions of Turkish EFL students towards the use of tablet PCs and IWBs in EFL classrooms.

This study is a survey research study. Freankel (2012) states that the questionnaires are one of the most common used instruments in survey research. Freankel, Wallen and Hyun (2012) states that the main goal of a survey is to reveal the distinctive feature of a community. In addition, Freankel (2012) indicates that the subjects to be studied should be selected randomly from the population of interest. Also, this study aims to get the responses of students who study at different high schools of Muş, a town in the East Anatolian Region of Turkey, towards the use of IWBs and tablet PCs in EFL classrooms with the help of a questionnaire.

3.3. Participants

The sample group in this study consisted of 160 Turkish EFL students studying in the high schools of Muş, a town in the East Anatolian Region of Turkey. The sample for this study consists of 160 Turkish EFL students from different high schools of Muş. Of the participants, 97 were male and 63 were female.

3.4. Data Collection Instruments

Quantitative research method was used in the study. According to Dörnyei, “questionnaires are uniquely capable of gathering a large amount of information quickly in a form that is readily processable” (Dörnyei, 2003, p.1). In this study two

questionnaires were used to gather data (Appendix 1-2). First questionnaire was taken from an article by Rossing, Miller, Cecil and Stamper (2012) entitled *iLearning: The future of higher education? Student perceptions on learning with mobile tablets* published in Journal of the Scholarship of Teaching and Learning. Second questionnaire was taken from two articles, first article by Moss, G., Jewitt, C., Levaãiq, R., Armstrong, V., Cardini, A., & Castle, F. (2007) entitled *The interactive whiteboards, pedagogy and pupil performance evaluation* and, second one developed by Mathews-Aydinli and Elaziz (2010) which was taken from an article by entitled *Turkish students' and teachers' attitudes towards the use of interactive whiteboards in EFL classrooms* published in Computer Assisted Language Learning. In addition, students' demographic information form was asked to analyze. The questionnaire gathers socio-demographic information on the gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, and having the training of IWB use. The items of questionnaire were assessed on a scale ranging from 1 to 5 (Strongly disagree=1; disagree=2; neutral=3; agree=4; strongly agree=5).

3.5. Data Collection Procedure

Permission to administer the questionnaires was obtained from Governorship of Muş on 13th October, 2014 (Appendix 3). The researcher himself distributed the questionnaires to teachers and informed them about the study on 13th October, 2014. Teachers distributed students' questionnaire during their courses. Filling out the questionnaires took approximately 10 minutes.

3.6. Data Analysis

The collected data were analyzed with descriptive statistics techniques for quantitative data. Package for Social Sciences (SPSS) version 18 was used to analyze data. Basic descriptive statistics (means and standard deviations) and inferential statistics (Kruskal Wallis and Mann-Whitney U tests) were applied to analyze the data collected through questionnaires. The mean scores ranged from 1.00 to 5.00. The scores from 1.00 to 1.80 were interpreted as the participants showing their strong disagreement with the item. The scores from 1.81 to 2.60 indicate disagreement. The scores from 2.61 to 3.40 indicate neutral with the item. The scores from 3.41 to 4.20 indicate agreement. The scores from 4.21 to 5.00 indicate strong agreement with the item.

To ensure the reliability of the instrument, Cronbach's Alpha value(s) was calculated. The Cronbach coefficient for the questionnaire regarding Turkish EFL students' opinions towards the use of tablet PCs in EFL classrooms was found out as 0.909. The Cronbach coefficient for the questionnaire regarding Turkish EFL students' opinions towards the use of interactive whiteboards in EFL classrooms was found out as 0.827. In order to see whether the items in the questionnaire were grouped as in the original study, a factor analysis was conducted. Kaiser–Meyer–Olkin (KMO) coefficients were also calculated as follows: 0,907 for the first scale and 0.861 for the second scale.

CHAPTER IV

4. RESULTS

4.1. Introduction

Descriptive statistics related to demographic variables are given in this section and the findings obtained from the study were divided into two subsections: Turkish EFL students' opinions towards the use of interactive whiteboards in EFL classrooms and Turkish EFL students' opinions towards the use of tablet PCs in EFL classrooms. The results and findings has been presented in table forms.

4.2. Descriptive statistics related to demographic variables

In this study, the relationship between Turkish EFL students' use of tablet PCs and IWBs with demographic variables was prompted to examine. Frequency and percentage distributions related to the demographic variables of the sample were given in this section.

Table 1 shows that 97 of 160 participants in the survey are male, 63 of them are female. The proportion of males correspond to 58,1%, females correspond to 41,9%. This ratio shows that the majority of the ideas are by men in the sample.

Table 1. Gender Differences

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	97	58,1	58,1	58,1
	Female	63	41,9	41,9	58,1
	Total	160	100,0	100,0	

Table 2 shows that 10% respondents are between the ages of 13 and 15, 80,6% of them are between the ages of 16 and 17, and the rest of them are between the ages of 18 and 19. This ratio, as a percentage, shows that the majority of the ideas of students between the ages of 16-17.

Table 2. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	13-15	16	10,0	10,0	10,0
	16-17	129	80,6	80,6	90,6
	18-19	15	9,4	9,4	100,0
Total		160	100,0	100,0	

Table 3 shows that 32,5% of the respondents have their own computers and 67,5% of them do not have their own computers.

Table 3. Computer Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	52	32,5	32,5	32,5
	No	108	67,5	67,5	100,0
Total		160	100,0	100,0	

Table 4 shows that 8,8% of the respondents are inexperienced, 57,5% of them are mid-level, 28,1% of them are advanced-level, and 5,6% are expert at computer use. According statistics in Table 4, the level of EFL Turkish students' computer use is mainly mid.

Table 4. The Experience of Computer Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Inexperienced	14	8,8	8,8	8,8
	Mid-level	92	57,5	57,5	66,3
	Advanced	45	28,1	28,1	94,4
	Expert	9	5,6	5,6	100,0
Total		160	100,0	100,0	

Table 5 shows that 10% of the respondents are inexperienced, 48,8% of them are mid-level, 28,8% of them are advanced-level, and 12,5% are expert at Internet

use. This ratio, as a percentage, shows that, the level of EFL Turkish students' Internet use is mainly mid.

Table 5. The Experience of Internet Use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Inexperienced	16	10,0	10,0	10,0
	Mid-level	78	48,8	48,8	58,8
	Advanced	46	28,8	28,8	87,5
	Expert	20	12,5	12,5	100,0
	Total	160	100,0	100,0	

Table 6 indicates that 81,9% of the respondents have their own tablet PCs and 18,1% of them do not have their own tablet PCs.

Table 6. Tablet PC Ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	131	81,9	81,9	81,9
	No	29	18,1	18,1	100,0
	Total	160	100,0	100,0	

Table 7 shows that 95% of the respondents do not have the training of using tablet PC, on the other hand, 5% of them have the training of using tablet PC.

Table 7. Having the training of using Tablet PC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	5,0	5,0	5,0
	No	152	95,0	95,0	100,0
	Total	160	100,0	100,0	

Table 8 indicates that 6,9% of the respondents have the training of using IWB, on the other hand, 93,1% of them do not have the training of using IWB.

Table 8. Having the training of using IWB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	11	6,9	6,9	6,9
	No	149	93,1	93,1	100,0
Total		160	100,0	100,0	

Table 9 shows that 75% of the respondents use IWB between 1-5 hours, 20% of the respondents use IWB between 6-10 hours, 3,1% of the respondents use IWB between 11-15 hours, and 1,9% of them use IWB between 16 and over hours. This ratio, as a percentage, shows that the majority of EFL Turkish students use IWB 1-5 hours per a week.

Table 9. The hours of IWB use per a week

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	120	75,0	75,0	75,0
	6-10	32	20,0	20,0	95,0
	11-15	5	3,1	3,1	98,1
	16 and over	3	1,9	1,9	100,0
Total		160	100,0	100,0	

4.3. Results of Questionnaire

4.3.1. Descriptive statistics related to the opinions of Turkish EFL students towards the use of tablet PCs in EFL classrooms

The questionnaire was analyzed in terms of three categories: learning, motivational issues, and differences between the use of tablet PC and traditional learning methods. The results are shown and interpreted in the following sections.

4.3.1.1. Students' opinions towards the use of tablet PCs in terms of their impact on learning

Six items in the student questionnaire aimed to investigate students' opinions towards the use of tablet PCs in terms of their impact on learning. As it is seen from Table 10, for the first item, a group of students (33,2%) agreed with the idea that tablet PC help them apply course content to solve the problems. A high percentage

(25%) is neutral about this item. For the second item, a group of students (38,8%) believed that tablet PCs help them learn the course content. Furthermore, the percentage of students who stated neutral is 27,5%. For the third item, a group of students (41,3%) proposed that tablet PCs help them connect new ideas in new ways. The percentage of students who stated neutral is 20,6%. For the fourth item, a group of students (38,7%) agreed with the idea that tablet PCs help them participate in the course activity in ways that enhanced their learning. The percentage of students who stated neutral is 23,8%. For the sixth item, A group of students (40,6%) agreed with the idea that tablet PCs help them develop skills that apply to their career. The percentage of students who stated neutral is 25%. For the twelfth item, a group of students (41,2%) proposed that tablet PCs are fundamental supplements to the class. The percentage of students who stated neutral is 20,6%. When the results were examined, it was observed that a high percentage stated that they are neutral.

Table 10. Students' opinions towards the use of tablet PCs in terms of their impact on learning

		SD	D	N	A	SA	Mean	STD
Q1	F	41	26	40	34	19	2,77	1,35
	Percentage	25,6%	16,3%	25,0%	21,3%	11,9%		
Q2	F	40	14	44	42	20	2,92	1,36
	Percentage	25,0%	8,8%	27,5%	26,3%	12,5%		
Q3	F	34	27	33	47	19	2,93	1,33
	Percentage	21,3%	16,9%	20,6%	29,4%	11,9%		
Q4	F	38	22	38	45	17	2,88	1,33
	Percentage	23,8%	13,8%	23,8%	28,1%	10,6%		
Q6	F	32	23	40	37	28	3,03	1,37
	Percentage	20,0%	14,4%	25,0%	23,1%	17,5%		
Q12	F	34	27	33	37	29	3,00	1,40
	Percentage	21,3%	16,9%	20,6%	23,1%	18,1%		

4.3.1.2. Students' opinions in the context of using tablet PCs related to motivational issues

Four items in the student questionnaire aimed to investigate students' opinions towards the use of tablet PCs in terms of their impact on motivational issues. As it is seen from Table 11, for the fifth item, a group of students (31,9%) agreed with the idea that tablet PCs help them develop confidence in the subject area. On the contrary, a group of students (44,4%) disagree with this idea. participate in the course activity in ways that enhanced their learning. For the seventh item, a group of students (35,6%) believed that tablet PCs motivate them learn the course material more than class activities that do not use tablet PCs. On the other hand, a group of students (40,6%) disagree with this idea. For the eighth item, a group of students (27,5%) agreed with the idea that they participate more in class during the activities with tablet PCs than during activities that do not use tablet PCs. In contrast, a high percentage (51,9%) disagreed with this idea. They thought that they participate more in class during the activities without tablet PCs. For the ninth item, a group of students (34,4%) proposed that their attention to the task is greater using tablet PC. The percentage of students who disagreed with this idea is 50,7%. When the results were examined, it was observed that the use of tablet PCs has not a considerable effect on students' motivation.

Table 11. Students' opinions towards the use of tablet PCs in terms of their impact on motivational issues

		SD	D	N	A	SA	Mean	STD
Q5	F	35	36	38	29	22	2,79	1,34
	Percentage	21,9%	22,5%	23,8%	18,1%	13,8%		
Q7	F	33	32	38	36	21	2,87	1,33
	Percentage	20,6%	20,0%	23,8%	22,5%	13,1%		
Q8	F	38	45	33	25	19	2,69	1,43
	Percentage	23,8%	28,1%	20,6%	15,6%	11,9%		
Q9	F	46	35	24	32	23	2,69	1,43
	Percentage	28,8%	21,9%	15,0%	20,0%	14,4%		

4.3.1.3. Students' Opinions related to differences between the use of tablet PCs and traditional learning methods

Two items in the student questionnaire aimed to reveal students' opinions related to differences between the use of tablet PCs and traditional learning methods. As it is seen from Table 12, for the tenth item, the majority of students (55,7%) agreed with the idea that tablet PCs are more convenient compare to a desktop or laptop computer. For the eleventh item, a high percentage (43,2%) believed that it is easier to work in a group using tablet PCs than other group activities.

Table 12. Students' opinions towards difference between tablet PCs and traditional learning methods

		SD	D	N	A	SA	Mean	STD
Q10	F	24	22	25	39	50	3,43	1,43
	Percentage	15,0%	13,8%	15,6%	24,4%	31,3%		
Q11	F	26	24	41	34	35	3,17	1,36
	Percentage	16,3%	15,0%	25,6%	21,3%	21,9%		

4.3.2. Descriptive statistics related to the opinions of Turkish EFL students towards the use of IWB in EFL classrooms

The questionnaire was analyzed in terms of six categories: learning, technical issues, affective factors, motivational issues, time and organization, and differences between IWBs and traditional whiteboards. The results are shown and interpreted in the following sections.

4.3.2.1. Students' opinions to learning

Four items in the student questionnaire aimed to investigate the students' opinions towards the use of IWBs in terms of their impact on learning. As it is seen from Table 13, the students agreed with all of the statements in this category. For the first item, a majority of the students (60,7%) agreed that they learn more when their teachers use an IWB in the classroom. For the second item, a high percentage (65%) stated that teacher's use of IWB made the lessons easier to understand, and for the fifth item, a high percentage (78,8%) stated that they find the opportunity to learn from different sources with the use of IWB. For the fourth item, a majority of students (84,4%) indicated that using audio-visual materials with IWBs help them understand the lesson better.

Table 13. Students' opinions related to learning

		SD	D	N	A	SA	Mean	STD
Q1	F	10	25	28	54	43	3,59	1,21
	Percentage	6,3%	15,6%	17,5%	33,8%	26,9%		
Q2	F	8	17	31	63	41	3,70	1,11
	Percentage	5,0%	10,6%	19,4%	39,4%	25,6%		
Q5	F	4	13	17	60	66	4,06	1,03
	Percentage	2,5%	8,1%	10,6%	37,5%	41,3%		
Q4	F	3	9	13	57	78	4,23	0,95
	Percentage	1,9%	5,6%	8,1%	35,6%	48,8%		

4.3.2.2. Students' opinions related to technical issues

Three items in the questionnaire asked to reveal students' opinions towards the use of IWBs in the context of technical issues. As it is seen from Table 14, for the sixth item, a fairly high percentage (76,9%) agreed that problems with sunlight and IWB screen, on the other hand, for the third item, a high percentage (65,6%) agreed that IWBs make it easier for them to see the teachers' drawings and diagrams. Students indicated that if the physical conditions are appropriately organized, IWBs can be beneficial for showing visual materials. For the seventh item, a small percentage (29,4%) agreed with the idea that IWBs often break down and recalibration causes a waste of time.

Table 14. Students' opinions related to technical issues

		SD	D	N	A	SA	Mean	STD
Q6	F	10	8	19	56	67	4,01	1,14
	Percentage	6,3%	5,0%	11,9%	35,0%	41,9%		
Q3	F	11	19	25	53	52	3,72	1,22
	Percentage	6,9%	11,9%	15,6%	33,1%	32,5%		
Q7	F	39	43	31	23	24	2,68	1,37
	Percentage	24,4%	26,9%	19,4%	14,4%	15,0%		

4.3.2.3. Students' opinions related to affective factors

Four items in the questionnaire asked to investigate the opinions of students' in the context of affective factors in EFL context. As it is seen from Table 15, for the eighth item, 40% of students agreed with the idea that they like going to the front of the class to use IWB. For the ninth item, a small percentage (10,7%) agreed with the idea that IWBs are difficult to use for me. In other words, a high percentage (71,9%) thought that the use of IWB is easy. For the tenth item, a majority of students (53,1%) agreed with the idea that they prefer lessons that are taught with an IWB. For the eleventh item, A small percentage (19,4%) stated that they feel uncomfortable when their works are shown to the whole class with IWB.

Table 15. Students' opinions related to affective factors

		SD	D	N	A	SA	Mean	STD
Q8	F	22	30	44	35	29	3,11	1,29
	Percentage	13,8%	18,8%	27,5%	21,9%	18,1%		
Q9	F	67	48	28	11	6	2,00	1,10
	Percentage	41,9%	30,0%	17,5%	6,9%	3,8%		
Q10	F	19	19	37	44	41	3,43	1,31
	Percentage	11,9%	11,9%	23,1%	27,5%	25,6%		
Q11	F	49	49	31	15	16	2,37	1,28
	Percentage	30,6%	5,6%	19,4%	9,4%	10,0%		

4.3.2.4. Students' opinions related to motivational issues

Five items in the questionnaire asked to reveal students' opinions related to motivational features in the context of IWB use. As it is seen from Table 16, for the twelfth item, a high percentage (59,4%) proposed that they concentrate better when their teacher uses an IWB. For the thirteenth item, a great percentage (51,9%) agreed with the idea that they participate in lessons more when their teacher uses an IWB. For the fourteenth item, the majority of students (66,9%) agreed with the idea that IWBs make learning more interesting and exciting. For the fifteenth item, a group of students (45,7%) agreed with the idea that it is easier to keep their attention when an IWB is used during the lesson. For the sixteenth item, a high percentage (51,9%) thought that the use of IWB makes it easier for them to be motivated during the

lesson. The mean scores on Table 16 show that the majority of students thought that the use of IWB increases their motivation and concentration.

Table 16. Students' opinions related to motivational issues

		SD	D	N	A	SA	Mean	STD
Q12	F	17	10	38	48	47	3,61	1,26
	Percentage	10,6%	6,3%	23,8%	30,0%	29,4%		
Q13	F	19	20	38	47	36	3,38	1,28
	Percentage	11,9%	12,5%	23,8%	29,4%	22,5%		
Q14	F	9	9	35	57	50	3,43	1,31
	Percentage	5,6%	5,6%	21,9%	35,6%	31,3%		
Q15	F	49	49	31	15	16	3,81	1,11
	Percentage	30,6%	5,6%	19,4%	9,4%	10,0%		
Q16	F	17	20	40	55	28	3,35	1,21
	Percentage	10,6%	12,5%	25,0%	34,4%	17,5%		

4.3.2.5. Students' opinions related to time management and organizational issues

Three items in the questionnaire asked to reveal students' opinions related to time management and planning issues. As it is seen from Table 17, for the seventeenth item, a group of students (48,1%) believed that they can keep up with the pace of lessons in which IWBs are used. For the eighteenth item, the majority of students (51,9%) proposed that the lessons become more organized when an IWB is used. For the nineteenth item, a high percentage (71,9%) agreed with the idea that the use of IWB saves time.

Table 17. Students' opinions related to time management and organizational issues.

		SD	D	N	A	SA	Mean	STD
Q17	F	25	52	34	25	24	2,81	1,29
	Percentage	15,6%	32,5%	21,3%	15,6%	15,0%		
Q18	F	16	17	44	48	35	3,43	1,22
	Percentage	10,0%	10,6%	27,5%	30,0%	21,9%		
Q19	F	11	12	22	47	68	3,93	1,21
	Percentage	6,9%	7,5%	13,8%	29,4%	42,5%		

4.3.2.6. Students' opinions related to the difference between traditional boards and IWBs

Two items in the questionnaire asked to find out students' opinions related to the difference between traditional boards and IWBs. As it is seen from Table 18, for the twentieth item, a group of students (28,2%) believed that there is no difference between their teacher's use of a traditional board and an IWB in terms of teaching techniques and methods. For the twenty-first item, a group of students (20,7%) thought that there is not much difference between an IWB and a traditional board.

Table 18. Students' opinions related to difference between traditional boards and IWBs

		SD	D	N	A	SA	Mean	STD
Q20	F	40	34	41	31	14	2,65	1,28
	Percentage	25,0%	21,3%	25,6%	19,4%	8,8%		
Q21	F	58	40	29	18	15	2,32	1,32
	Percentage	36,3%	25,0%	18,1%	11,3%	9,4%		

4.4. Findings related to the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PCs and demographic variables

In this section, the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and demographic variables was examined and their significance levels were investigated.

Crosstab analysis was applied for revealing the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and demographic variables and Chi-Square test was used for examining their significance levels. Non-parametric tests were used to investigate the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and demographic variables because of the distribution of this sample. Therefore, Mann-Whitney U test was used for demographic variables which consist of two categories, whereas Kruskal Wallis tests were applied for demographic variables which consist of three or more categories.

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and gender variable.

As it is seen from Table 19, no significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.336$ ($p>.05$). Therefore, gender of students has no effect on students' tablet PC use. When Table 10 was examined, the means of item total score in accordance with male students' use of tablet PC were found as 77,51 and the means of item total score in accordance with female students' use of tablet PC were found as 84,65.

Table 19. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and gender variable.

	Gender	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Male	93	77,51	7208,50	2837,500	,336
	Female	67	84,65	5671,50		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and age variable.

As it is seen from Table 20, no significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.164$ ($p>.05$). Therefore, the age of students has no effect on students' tablet PC use.

Table 20. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and age variable.

	Age	N	Mean Rank	df	χ^2	Sig.
Total	13-15 years	16	88,34	2	3,611	,164
	16-17	129	81,95			
	18-19	15	59,70			

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and computer ownership variable.

As it is seen from Table 21, no significant difference was found between computer ownership variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.258$ ($p>.05$). Therefore, computer ownership of students has no effect on students' tablet PC use.

Table 21. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and computer ownership variable.

	Computer Ownership	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	52	86,92	4520,00	2474,000	,223
	No	108	77,41	8360,00		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and the experience of computer use variable.

As it is seen from Table 22, no significant difference was found between the experience of computer use variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.821$ ($p>.05$). Therefore, the experience of computer use of students has no effect on students' tablet PC use.

Table 22. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and the experience of computer use variable.

	The Experience of Computer Use	N	Mean Rank	df	χ^2	Sig.
Total	Inexperienced	14	80,39	3	,918	,821
	Mid-level	92	77,87			
	Advanced	45	84,08			
	Expert	9	89,67			

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and the experience of Internet use variable.

As it is seen from Table 23, no significant difference was found between the experience of Internet use variable and the means of item total score in accordance

with Turkish EFL students' use of tablet PC $p=.494$ ($p>.05$). Therefore, the experience of Internet use of students has no effect on students' tablet PC use.

Table 23. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and the experience of Internet use variable.

		The Experience of Internet Use	N	Mean Rank	df	χ^2	Sig.
Total		Inexperienced	16	76,06	3	2,399	,494
		Mid-level	78	86,29			
		Advanced	46	75,12			
		Expert	20	73,85			

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and tablet PC ownership variable.

As it is seen from Table 24, no significant difference was found between tablet PC ownership variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.562$ ($p>.05$). Therefore, computer ownership of students has no effect on students' tablet PC use.

Table 24. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and tablet PC ownership variable.

		Tablet PC Ownership	N	Mean Rank	Sum of Ranks	U	Sig.
Total		Yes	131	80,46	10540,00	1643,000	,562
		No	27	74,85	2021,00		

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and having the training of using tablet PC variable.

As it is seen from Table 25, no significant difference was found between having the training of using tablet PC variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.150$ ($p>.05$). Therefore, having the training of using tablet PC has no effect on students' tablet PC use.

Table 25. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and having the training of using tablet PC variable.

	Having the Training of Using Tablet PC	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	8	103,50	828,00	424,000	,150
	No	152	79,29	12052,00		

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and having the training of using IWB variable.

As it is seen from Table 26, no significant difference was found between having the training of using IWB variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.062$ ($p>.05$). Therefore, having the training of using IWB has no effect on students' tablet PC use.

Table 26. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and having the training of using IWB variable.

	Having the Training of Using IWB	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	11	105,64	1162,00	543,000	,062
	No	149	78,64	11718,00		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of tablet PC and the hours of IWB use per a week variable.

As it is seen from Table 27, a significant difference was found between the hours of IWB use per a week variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.041$ ($p<.05$). Therefore, the hours of IWB use per a week has an effect on students' tablet PC use.

Table 27. Scores of the means of item total score in accordance with Turkish EFL students' use of tablet PC and the hours of IWB use per a week variable.

	The hours of IWB use per a week	N	Mean Rank	df	χ^2	Sig.
Total	1-5 hours	120	77,97	3	8,233	,041
	6-10	32	80,47			
	11-15	5	138,50			
	16 and over	3	85,33			

4.5. Findings related to the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and demographic variables

In this section, the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and demographic variables was examined and their significance levels were investigated.

Crosstab analysis was applied for revealing the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and demographic variables and Chi-Square test was used for examining their significance levels. Non-parametric tests were used to investigate the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and demographic variables because of the distribution of this sample. Therefore, Mann-Whitney U test was used for demographic variables which consist of two categories, whereas Kruskal-Wallis tests were applied for demographic variables which consist of three or more categories.

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and gender variable.

As it is seen from Table 28, no significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.934$ ($p>.05$). When Table 19 was examined, the means of item total score in accordance with male students' use of IWBs were found as 80,24 and the means of item total score in accordance with female students' use of IWBs were found as 80,86. Therefore, it was found that, the item-total scores' value of males in terms of IWB use was close to the item-total scores' value of females in terms of IWB use.

Table 28. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and gender variable.

	Gender	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Male	93	80,24	7462,50	3091,500	,934
	Female	67	80,86	5417,50		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and age variable.

As it is seen from Table 29, a significant difference was found between age variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.026$ ($p<.05$). When Table 20 was examined, it was observed that, the level of students' ages increases, whereas the level of students' IWB use decreases.

Table 29. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and age variable.

	Age	N	Mean Rank	df	χ^2	Sig.
Total	13-15 years	16	85,50	2	7,335	,026
	16-17	129	83,46			
	18-19	15	49,73			

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and computer ownership variable.

As it is seen from Table 30, no significant difference was found between computer ownership variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.258$ ($p>.05$). Therefore, computer ownership of students has no effect on students' IWB use.

Table 30. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and computer ownership variable.

	Computer Ownership	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	52	86,47	4496,50	2497,500	,258
	No	108	77,63	8383,50		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and the experience of computer use variable.

As it is seen from Table 31, no significant difference was found between the experience of computer use variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.267$ ($p>.05$). Therefore, the experience of computer use of students has no effect on students' IWB use.

Table 31. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and the experience of computer use variable.

	The Experience of Computer Use	N	Mean Rank	df	χ^2	Sig.
Total	Inexperienced	14	79,14	3	3,953	,267
	Mid-level	92	86,46			
	Advanced	45	70,83			
	Expert	9	70,06			

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and the experience of Internet use variable.

As it is seen from Table 32, no significant difference was found between the experience of Internet use variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.136$ ($p>.05$). Therefore, the experience of Internet use of students has no effect on students' IWB use.

Table 32. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and the experience of Internet use variable.

		The Experience of Internet Use	N	Mean Rank	df	χ^2	Sig.
Total	Inexperienced		16	73,03	3	5,538	,136
	Mid-level		78	87,24			
	Advanced		46	68,64			
	Expert		20	87,48			

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and tablet PC ownership variable.

As it is seen from Table 33, no significant difference was found between tablet PC ownership variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.258$ ($p>.05$). Therefore, computer ownership of students has no effect on students' IWB use.

Table 33. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and tablet PC ownership variable.

		Tablet PC Ownership	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes		131	82,35	10788,50	1394,500	,084
	No		27	65,65	1772,50		

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and having the training of using tablet PC variable.

As it is seen from Table 34, no significant difference was found between having the training of using tablet PC variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.978$ ($p>.05$). Therefore, having the training of using tablet PC has no effect on students' IWB use.

Table 34. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and having the training of using tablet PC variable.

	Having the Training of Using Tablet PC	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	8	80,06	640,50	604,500	,978
	No	152	80,52	12239,50		

Mann-Whitney U test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and having the training of using IWB variable.

As it is seen from Table 35, no significant difference was found between having the training of using IWB variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.895$ ($p>.05$). Therefore, having the training of using IWB has no effect on students' IWB use.

Table 35. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and having the training of using IWB variable.

	Having the Training of Using IWB	N	Mean Rank	Sum of Ranks	U	Sig.
Total	Yes	11	82,27	905,00	800,000	,895
	No	149	80,37	11975,00		

Kruskal Wallis test was applied for investigating the relationship between the means of item total score in accordance with Turkish EFL students' use of IWBs and the hours of IWB use per a week variable.

As it is seen from Table 36, no significant difference was found between the hours of IWB use per a week variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.130$ ($p>.05$). Therefore, the hours of IWB use per a week has no effect on students' IWB use.

Table 36. Scores of the means of item total score in accordance with Turkish EFL students' use of IWBs and the hours of IWB use per a week variable.

	The hours of IWB use per a week	N	Mean Rank	df	χ^2	Sig.
Total	1-5 hours	120	78,10	3	5,657	,130
	6-10	32	80,08			
	11-15	5	120,50			
	16 and over	3	114,33			

CHAPTER V

5. CONCLUSION

5.1. Summary

This study aimed to investigate Turkish EFL students' opinions towards the use of tablet PCs and IWBs in EFL classrooms. This study also aimed to examine and analyze the relationship between Turkish EFL students' opinions towards the use of tablet PCs and IWBs with demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use. The sample group of this study included 160 Turkish EFL students from different high schools of Muş National Education Directorate within the scope of FATİH Project.

Four research questions were asked in this study. The first research question was asked to reveal students' opinions towards the use of tablet PC in EFL classrooms; second research question was asked to find out students' opinions towards the use of IWB in EFL classrooms; third question was asked to investigate the relationship between Turkish EFL students' opinions towards the use of tablet PC and demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use; and the fourth one was asked to reveal the relationship between Turkish EFL students' opinions towards the use of IWB and demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use.

The data were gathered through a questionnaire distributed to 160 Turkish high-school students in order to explore their views towards the use of IWB and tablet PC in EFL classrooms. The questionnaire consisted of two sections. First section including a scale consisting of 12 items was about tablet PC use and second section including 21 items was about IWB use in EFL classrooms. Students' demographic information forms were also analyzed. Quantitative research methods were used to collect the data and statistical methods were used to analyze the obtained data.

According to the results, 97 of 160 participants in the survey are male, 63 of them are female. The proportion of males correspond to 58,1%, females correspond to 41,9 %. 10% respondents are between the ages of 13 and 15, 80,6% of them are

between the ages of 16 and 17, and the rest of them are between the ages of 18 and 19. 32,5% of the respondents have their own computers and 67,5% of them do not have their own computers. 8,8% of the respondents are inexperienced, 57,5% of them are mid-level, 28,1% of them are advanced-level, and 5,6% are expert at computer use. According to these statistics, the level of Turkish EFL students' computer use is mainly mid. 10% of the respondents are inexperienced, 48,8% of them are mid-level, 28,8% of them are advanced-level, and 12,5% are expert at Internet use. This ratio, as a percentage, shows that, the level of Turkish EFL students' Internet use is mainly mid. 81,9% of the respondents have their own tablet PCs and 18,1% of them do not have their own tablet PCs. 95% of the respondents have the training of using tablet PC, on the other hand, 5% of them do not have the training of using tablet PC. 6,9% of the respondents have the training of using IWB, on the other hand, 93,1% of them do not have the training of using IWB. 75% of the respondents use IWB between 1-5 hours, 20% of the respondents use IWB between 6-10 hours, 3,1% of the respondents use IWB between 11-15 hours, and 1,9% of them use IWB between 16 and over hours. This ratio, as a percentage, shows that the majority of Turkish EFL students use IWB 1-5 hours per a week.

When the relationship between Turkish EFL students' opinions towards the use of tablet PC and demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use was examined, it was found that, no significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.336$ ($p>.05$). No significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.164$ ($p>.05$). Therefore, the age of students has no effect on students' tablet PC use. No significant difference was found between computer ownership variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.258$ ($p>.05$). Therefore, computer ownership of students has no effect on students' tablet PC use. No significant difference was found between the experience of computer use variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.821$ ($p>.05$). Therefore, the experience of computer use of students has no effect on students' tablet PC use. No significant difference was found between the experience of Internet use variable and the means of item total score in accordance

with Turkish EFL students' use of tablet PC $p=.494$ ($p>.05$). Therefore, the experience of Internet use of students has no effect on students' tablet PC use. No significant difference was found between tablet PC ownership variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.562$ ($p>.05$). Therefore, computer ownership of students has no effect on students' tablet PC use. No significant difference was found between having the training of using tablet PC variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.150$ ($p>.05$). Thus, having the training of using tablet PC has no effect on students' tablet PC use. No significant difference was found between having the training of using IWB variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.062$ ($p>.05$). Thus, having the training of using IWB has no effect on students' tablet PC use. A significant difference was found between the hours of IWB use per a week variable and the means of item total score in accordance with Turkish EFL students' use of tablet PC $p=.041$ ($p<.05$). Thus, the hours of IWB use per a week has an effect on students' tablet PC use.

When the relationship between Turkish EFL students' opinions towards the use of IWB and demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB use was examined, it was found that, no significant difference was found between gender variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.934$ ($p>.05$). A significant difference was found between age variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.026$ ($p<.05$). No significant difference was found between computer ownership variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.258$ ($p>.05$). Thus, computer ownership of students has no effect on students' IWB use. No significant difference was found between the experience of computer use variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.267$ ($p>.05$). Thus, the experience of computer use of students has no effect on students' IWB use. No significant difference was found between the experience of Internet use variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.136$ ($p>.05$). Therefore, the experience of Internet use of students has no effect on students' IWB use. No significant difference was found

between tablet PC ownership variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.258$ ($p>.05$). Thus, computer ownership of students has no effect on students' IWB use. No significant difference was found between having the training of using tablet PC variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.978$ ($p>.05$). Therefore, having the training of using tablet PC has no effect on students' IWB use. No significant difference was found between having the training of using IWB variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.895$ ($p>.05$). Therefore, having the training of using IWB has no effect on students' IWB use. No significant difference was found between the hours of IWB use per a week variable and the means of item total score in accordance with Turkish EFL students' use of IWBs $p=.130$ ($p>.05$). Thus, the hours of IWB use per a week has no effect on students' IWB use.

The findings of this study revealed that the majority of the students have positive opinions with respect to the use of IWBs. Students believe that the use of IWBs is very useful in learning English. Students indicate that they learn and understand better if the material is presented with IWB. Students also think that the use of IWB increases their motivation, concentration and self-confidence. The use of IWBs in EFL classrooms make lessons amusing and attractive. Students participate more in the classroom activities. On the other hand, the majority of students state that they are neutral related to the use of tablet PCs in EFL classrooms. A high percentage of them disagree with the idea that the use of tablet PCs increase their motivation and concentration. Although they prefer traditional learning methods instead of using tablet PCs, they indicate that tablet PCs are more convenient compare to traditional boards.

5.2. Discussion

According to the results of this study, it is apparent that the majority of students state that they are neutral related to the use of tablet PCs in EFL classrooms. A high percentage of them disagree with the idea that the use of tablet PCs increase their motivation and concentration. Although they prefer traditional learning methods instead of using tablet PCs, they indicate that tablet PCs are more convenient compare to traditional boards. In contrast to the results of this study, Valk, Rashid and Elder (2010) indicate that the use of tablet PCs promotes student-oriented and individualized learning. Further researchers found that tablet PCs increase learning,

motivation, individualization in learning (de Winter et al., 2010; Enriquez, 2010). Students have also indicated that activities using tablet PCs promote collaborative learning and improve interactions with students (Shuler et al., 2010). Another result of this study present that only the hours of IWB use per a week variable has a considerable effect on students' tablet PC use. The expected result of this study is that students have positive opinions towards the use of tablet PCs, yet they state that they like using traditional learning methods. They also indicate activities using tablet PCs are not as effective as other classroom activities. The reasons of these responses might that students do not have knowledge and skills related to the use of tablet PCs. Students do not know how to use tablet PCs properly. Students use tablet PCs for playing games and surfing on the Internet. They rarely download necessary course materials from the Internet.

When the significance level among Turkish EFL students' opinions towards the use of tablet PCs in accordance with demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the hours of IWB use, having the training of IWB was examined, it was observed that only the hours of IWB use variable has a considerable effect on students' tablet PC use.

Another result of this study show that Turkish EFL students have positive opinions towards the use of IWBs. The results of the current study show similarity with the results of Ajzen and Fishbein (1980). Their results show that students have positive opinions towards the use of IWB. Students feel themselves more easeful when they use IWB and they think that IWBs are the beneficial components of EFL classrooms. These results support the finding in Wall et al. (2005), in which the majority of students stated that IWB has a positive effect on motivation. These results are parallel with the study of Weimer (2001). The results of his study indicate that the level of the students' motivation increases with the use of IWB. Kennewell and Beauchamp (2003) agree with the idea that the use of IWB increases students' participation and keep students' attention. Glover and Miller (2001) state that IWBs draw students' attention and increase their motivation. This findings supports the results of Hall and Higgins (2005) and Levy (2002), in which students indicate that they enjoy the lessons where IWBs are used. Students indicate that their lessons are faster, more enjoyable and interesting (Beeland, 2001; Levy, 2002; Marzano and Haystead, 2010; Smith et al., 2006; Smith, et al., 2005).

When the significance level among Turkish EFL students' opinions towards

the use of interactive whiteboards in accordance with demographic variables such as gender, age, the experience of computer use, the experience of Internet use, tablet ownership, the number of hours of IWB use, having the training of IWB was examined, it was observed that only age variable has a considerable effect on students' IWB use.

5.3. Limitations

There are some limitations of this study. First of all, the researcher just applied a questionnaire including two sections for obtaining data to investigate Turkish EFL students' opinions towards the use of IWBs and tablet PCs. It is more preferable to use some other measurement tools to gather more detailed data such as direct observations and interviews. This study is limited to some state high-schools of Muş. Thus, the results of study cannot be generalized.

5.4. Implications and Suggestions for Further Study

This study was carried out in order to investigate Turkish EFL students' opinions towards the use of IWBs and tablet PCs in EFL classrooms. Amongst the findings, it was concluded that students have positive views towards the use of IWBs. IWBs are commonly admitted as a positive addition to the classroom learning environment. Thus, the use of IWBs has considerable effects on students' success and motivation. On the other hand, students have neutral and negative opinions related to tablet PC use. The results indicate that students need sufficient training about using tablet PCs appropriately. In relation with this, students should be provided with the knowledge of tablet PC use. It would be useful to understand the features of tablet PCs. It is a necessity to carry out this study with a larger sample size to make better generalization and confirmation of the results of my research.

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7. APPENDICES

Sevgili Öğrenci Arkadaşlarım,

Bu form ile Muş İlindeki Ortaöğrenim Öğrencilerinin İngilizce derslerinde akıllı tahta ve tablet bilgisayar kullanımına ilişkin görüşlerinin araştırılması amaçlanmıştır. Vereceğiniz bilgiler sadece bilimsel araştırma amaçlı kullanılıp çalışmanın istatistiksel verilerini oluşturacağından anketi eksiksiz ve samimi olarak doldurmanızı rica ederim. Anket iki bölümden ve toplam 33 sorudan oluşmaktadır. Lütfen isminizi yazmayınız.

İlgi ve katkılarınız için teşekkür eder, derslerinizde başarılar dilerim.

Arş.Gör. Veysel Emir EKE
Muş Alparslan Üniversitesi
Eğitim Fakültesi/ İngiliz Dili Eğitimi ABD

Demographic Information (Kişisel Bilgiler)				
1. Gender (Cinsiyet)	<input type="checkbox"/> Male (Erkek)	<input type="checkbox"/> Female (Bayan)		
2. Age (Yaş)	<input type="checkbox"/> 13-15 years	<input type="checkbox"/> 15-17 years	<input type="checkbox"/> 17-19 years	
3. Computer ownership (Kendinize ait bilgisayarınız var mı?)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
4. The experience of computer use (Bilgisayar kullanım tecrübeniz)	<input type="checkbox"/> Inexperienced (Acemi)	<input type="checkbox"/> Mid-level (Orta)	<input type="checkbox"/> Advanced (İleri)	<input type="checkbox"/> Expert (Uzman)
5. The experience of Internet use (İnternet kullanım tecrübeniz)	<input type="checkbox"/> Inexperienced (Acemi)	<input type="checkbox"/> Mid-level (Orta)	<input type="checkbox"/> Advanced (İleri)	<input type="checkbox"/> Expert (Uzman)
6. Tablet PC ownership (Tablet bilgisayara sahip misiniz?)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

7. Having the training of using tablet PC (Tablet bilgisayar kullanım eğitimi aldınız mı?)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
8. Having the training of using interactive whiteboard (Akıllı tahta kullanım eğitimi aldınız mı?)	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
9. Haftalık akıllı tahta kullanım saatiniz (The hours of IWB use per a week)	<input type="checkbox"/> 1-5 hours	<input type="checkbox"/> 6-10 hours	<input type="checkbox"/> 11-15 hours	<input type="checkbox"/> 16 hours and above

7.1. Appendix 1

STUDENTS' OPINIONS TOWARDS THE USE OF TABLET PCs IN EFL CLASSROOMS

(İNGİLİZCE DİL SINIFLARINDA TABLET BİLGİSAYARLARIN KULLANIMINA İLİŞKİN ÖĞRENCİ GÖRÜŞLERİ)

Cevabınız için " Tamamen katılıyorum " dan " Hiç katılmıyorum "a doğru sıralanan ölçekte uygun kutucuğa X işareti koymanız gerekmektedir. Cevaplarınız sadece bilimsel amaçlı kullanılacaktır. Lütfen HİÇBİR SORUYU BOŞ BIRAKMAYINIZ. Değerli zamanınızı ayırarak, araştırmaya katkı sağladığınız için tekrar teşekkürlerimi sunarım.	Strongly agree (Tamamen katılıyorum)	Agree (Katılıyorum)	Neutral (Kararsızım)	Disagree (Katılmıyorum)	Strongly Disagree (Hiç katılmıyorum)
1. Tablets help me apply course content to solve problems. (Tabletler, ders içerikleri ile problem çözümünde bana yardımcı olurlar).					
2. Tablets help me learn the course content. (Tabletler, ders içeriklerini öğrenmemde bana yardımcı olurlar).					
3. Tablets help me connect ideas in new ways. (Tabletler, yeni yollarla fikirlerin bağdaştırılmasında bana yardımcı olurlar).					
4. Tablets help me participate in the course activity in ways that enhanced my learning. (Tabletler, öğrenmemi geliştirecek ders aktivitelerinde yer almam konusunda bana yardımcı olurlar).					
5. Tablets help me develop confidence in the subject area. (Tabletler, konu alanında özgüvenimin artmasında bana yardımcı olurlar).					
6. Tablets help me develop skills that apply to my career and/or professional life. (Tabletler,					

akademik kariyer ve/veya mesleki hayatımda uygulayabileceğim becerileri geliştirmemde bana yardımcı olurlar).					
7. Tablets motivate me to learn the course material more than class activities that did not use tablets. (Tabletler, ders materyallerini öğrenmemde tablet kullanılmayan ders aktivitelerine göre daha motive edici olurlar).					
8.I participate more in class during the activities with tablets than during activities that do not use the tablets. (Tablet kullanılan ders aktivitelerinde tablet kullanılmayanlara göre daha fazla yer alırım).					
9.My attention to the task(s) is greater using the tablets. (Tablet kullanımı ile ödevlere olan dikkatim fazla olur).					
10.Tablets are more convenient compare to a desktop or laptop computer. (Tabletler, masaüstü yada dizüstü bilgisayarla karşılaştırıldığında daha kullanışlıdır).					
11. It is easier to work in a group using tablets than it other group activities. (Tabletleri kullanan gruplarda çalışmak, tablet kullanmayan gruplarda çalışmaktan daha kolaydır).					
12. Tablets are more important supplements to the class. (Tabletler, dersler için önemli tamamlayıcılardır).					

7.2. Appendix 2

**STUDENTS' OPINIONS TOWARDS THE USE OF INTERACTIVE
WHITEBOARDS IN EFL CLASSROOMS
(İNGİLİZCE DİL SINIFLARINDA AKILLI TAHTA KULLANIMINA
İLİŞKİN ÖĞRENCİ GÖRÜŞLERİ)**

<p>Cevabınız için “Tamamen katılıyorum” dan “Hiç katılmıyorum”a doğru sıralanan ölçekte uygun kutucuğa X işareti komanız gerekmektedir. Cevaplarınız sadece bilimsel amaçlı kullanılacaktır. Lütfen HİÇBİR SORUYU BOŞ BIRAKMAYINIZ. Değerli zamanınızı ayırarak, araştırmaya katkı sağladığınız için tekrar teşekkürlerimi sunarım.</p>	<p>Strongly agree (Tamamen katılıyorum)</p>	<p>Agree (Katılıyorum)</p>	<p>Neutral (Kararsızım)</p>	<p>Disagree (Katılmıyorum)</p>	<p>Strongly Disagree (Hiç katılmıyorum)</p>
<p>1. I learn more when my teacher uses interactive whiteboard. (Öğretmenim akıllı tahta kullandığında daha fazla öğreniyorum).</p>					
<p>2. It is easier to understand the lesson when my teacher uses an IWB. (Öğretmenimiz akıllı tahta kullandığında konuyu anlamak daha çok kolaylaşıyor).</p>					
<p>3. IWBs make the teachers' drawings and diagrams easier to see. (Akıllı tahta sayesinde öğretmenin yazım ve çizimleri daha anlaşılır hale geliyor).</p>					
<p>4. Using audio and visual materials with IWBs helps me understand the lesson better. (Akıllı tahta kullanımı ile görsel ve işitsel materyaller</p>					

konuyu daha kolay anlamamı sağlıyor).					
5.I find the opportunity to learn from different sources with the use of IWB. (Akıllı tahta sayesinde bir konuyu daha fazla ve değişik kaynaktan öğrenme imkanı buluyorum).					
6.Sometimes deficiencies of the IWB screen and sunlight in the classroom make it difficult to see the things on the IWB.(Zaman zaman görüntü bozuklukları veya güneş ışığının yeterince engellenmemesi tahtadakileri görmemi olumsuz etkiliyor).					
7.IWBs often break down and recalibration causes a waste of time. (Akıllı tahtalar sıklıkla bozuluyor ve tekrar ayarlanması zaman kaybına sebep oluyor).					
8.I like going to the front of the class to use the IWB. (Sınıfın önüne çıkıp akıllı tahtayı kullanmayı seviyorum).					
9.It seems difficult for me to use IWB.(Akıllı tahtayı kullanmak bana zor geliyor).					
10.I prefer lessons that are taught with an IWB. (Akıllı tahtanın kullanıldığı dersleri tercih ederim).					
11.It makes me uncomfortable when my work is shown to the whole class on the IWB. (Benim çalışmamın ya					

da ödevimin tüm sınıfa akıllı tahta ile gösterilmesi beni rahatsız ediyor).					
12.I concentrate better when my teacher uses an IWB. (Akıllı tahta ile ders anlatıldığında derse daha fazla konsantre oluyorum).					
13.I participate in lessons more when my teacher uses an IWB. (Öğretmenimiz akıllı tahta kullandığında derse daha fazla katılıyorum).					
14.IWBs make learning more interesting and exciting. (Akıllı tahtalar öğrenmeyi daha zevkli ve ilginç hale getiriyor).					
15.It is easier to keep my attention when an IWB is used during the lesson. (Akıllı tahta kullanılırken dikkatimi daha kolayca toplayabiliyor ve daha uzun süre koruyabiliyorum).					
16.Use of an IWB makes it easier for me to be motivated during the lesson. (Akıllı tahta kullanımı derse karşı motive olmamı kolaylaştırıyor).					
17.When my teacher uses an IWB, I cannot keep up with the lesson because the pace of the lesson is much faster. (Öğretmenim akıllı tahta ile ders anlatırken çok hızlı ilerlediği için takip edemiyorum).					
18.The lessons become more					

organized when an IWB is used. (Akıllı tahta kullanımı ile dersler daha planlı ve organize hale geliyor).					
19.Using an IWB saves time. (Akıllı tahta kullanımı zaman kazandırır).					
20.There is no difference between my teacher's use of a traditional board and an IWB in terms of teaching techniques and methods. (Öğretmenlerimizin akıllı tahta kullanırkenki ders anlatımı ile normal tahtayla ders anlatırkenki öğretim tarzları ve yöntemleri aynıdır).					
21.I think there is not much difference between an IWB and a normal whiteboard. (Bana göre normal tahta ile akıllı tahta arasında çok büyük bir fark yoktur).					

7.3. Appendix 3. Permission from Muş National Education Directorate



T.C.
MUŞ VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : 17480297/605.01/4508584

13/10/2014

Konu: Akıllı Tahta, Tablet Bilgisayar
Kullanımı, Öğrenci Görüşü Araştırması

MUŞ MİLLÎ EĞİTİM MÜDÜRLÜĞÜNE

İlgi :Muş Alparslan Üniversitesi Rektörlüğü, Genel Sekreterliğinin 23/09/2014 tarih ve 79236777-605.1/529 sayılı yazısı

Muş Alparslan Üniversitesi, Yabancı Diller Eğitimi Bölümü, İngilizce Dili Eğitim Anabilim Dalı, Araştırma görevlisi olarak görev yapan Veysel Emir EKE'nin Fatih Projesi kapsamında, Müdürlüğümüze bağlı Okulların "İngilizce Dil Sınıflarında Akıllı Tahta ve Tablet Bilgisayar kullanımına ilişkin Öğrenci Görüşleri" konulu anket çalışması, yapmasını;

Makamlarınızca da uygun görülmesi halinde olurlarınıza arz ederim.

Nurettin ÖZDAŞ
Millî Eğitim Şube Müdürü

OLUR
13/10/2014

Cevdet ARSLAN
Millî Eğitim Müdürü