T.C.

ERCİYES UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

THE EFFECTIVENESS OF USING TABLET COMPUTERS IN TEACHING

VOCABULARY TO TURKISH EFL TEENAGE STUDENTS

Submitted by

Fitnat TAVACI GELİR

Supervised by

Assoc. Prof. Dr. İsmail ÇAKIR

MA Thesis

October 2015

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BİLİMSEL ETİĞE UYGUNLUK

Bu çalışmadaki tüm bilgilerin, akademik ve etik kurallara uygun bir şekilde elde edildiğini beyan ederim. Aynı zamanda bu kural ve davranışların gerektirdiği gibi, bu çalışmanın özünde olmayan tüm materyal ve sonuçları tam olarak aktardığımı ve referans gösterdiğimi belirtirim.
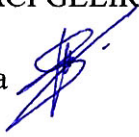
Fitnat TAVACI GELİR

YÖNERGEYE UYGUNLUK

''The Effectiveness of Using Tablet Computers in Teaching Vocabulary to Turkish EFL Teenage Students'' adlı Yüksek Lisans tezi, Erciyes Üniversitesi Lisansüstü Tez Önerisi ve Tez Yazma Yönergesi'ne uygun olarak hazırlanmıştır.

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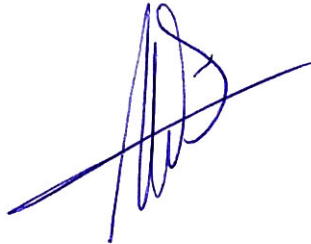
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Doç. Dr. İsmail ÇAKIR danışmanlığında **Fitnat TAVACI GELİR** tarafından hazırlanan **''The Effectiveness of Using Tablet Computers in Teaching Vocabulary to Turkish EFL Teenage Students''** adlı bu çalışma, jürimiz tarafından Erciyes Üniversitesi Sosyal Bilimleri Enstitüsü İngiliz Dili ve Edebiyatı Anabilim Dalında **Yüksek Lisans** tezi olarak kabul edilmiştir.

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TABLET BİLGİSAYARLARIN TÜRK ÖĞRENCİLERE İNGİLİZCE KELİME ÖĞRETİMİNDEKİ ETKİLİLİĞİ

Fitnat TAVACI GELİR
Erciyes Üniversitesi, Sosyal Bilimler Enstitüsü
Yüksek Lisans Tezi, Ekim 2015
Danışman: Doç. Dr. İsmail ÇAKIR

ÖZET

Bu yarı-deneysel araştırmanın amacı, yabancı dili İngilizce olan Türk lise öğrencilerine İngilizce kelime öğretiminde tablet bilgisayar kullanmanın etkililiğini incelemektir. Bu çalışma, tablet bilgisayarların yabancı dil öğrenmeyi, özellikle de yabancı dilde kelime öğretmeyi olumlu yönde etkileme potansiyeline sahip olduğunu varsayar. Araştırma, tablet bilgisayarların kullanımı yoluyla öğretim programının bir parçası olan birtakım etkili ve verimli kelime öğrenme yollarını vurgulamak için yapılmıştır. Hipotez, öğrencilerden yazılım materyallerini kullanmada her zamanki ders kitabını kullanmaya göre daha pozitif bir şekilde motive olmalarının beklenmesidir. Ayrıca kelime gelişiminin ders kitabında sunulan materyalleri kullanan katılımcılardan (kontrol grubu) ziyade yazılım materyali kullanan katılımcılar (deney grubu) için önemli ölçüde daha iyi olacağı beklenmektedir.

Araştırma, 2013–2014 Eğitim–Öğretim yılında Nevşehir Merkez 2000 Evler Anadolu Lisesi'nde yapılmıştır. Bu çalışmanın örneklemi, İngilizceyi yabancı dil olarak öğrenen 26 erkek ve 34 kız olmak üzere 9. sınıf Türk lise öğrencilerinden oluşmuştur (Toplam 60 öğrenci). Deney grubu, sınıfta araştırmacının kontrolünde tablet bilgisayar kullanmıştır. Kontrol grubu ise, yine sınıfta araştırmacının kontrolünde ders kitabı kullanarak geleneksel öğretim yoluyla kelime öğrenmiştir. Her iki grubun öğrencilerine de, dört oturum ve sekiz saatlik bir öğretim sürecinden önce ve sonra 25 kelimelik bir ön test ve son test uygulandı.

Bu çalışmadaki veriler başından sonuna kadar SPSS 20.0 versiyonu aracılığıyla işlendi. Araştırmanın sonuçları t-test ve Mann-Whitney U testi kullanılarak yorumlandı. Ayrıca deney grubu öğrencilerine derslerinin bir parçası olan tablet bilgisayar kullanımına ilişkin görüşlerini incelemek için bir anket uygulanmıştır. Sonuçlar, deney grubunun tablet bilgisayarlarla çalışmayı sevdiği ve kontrol grubundan daha fazla kelime öğrendiği ve unutmadığı varsayımını destekledi. Çalışma, ayrıca tablet bilgisayarların

kelime öğrenmede etkileşimli ve işbirlikçi bir ortam oluşturmak için ideal araçlar olduğunu ortaya çıkardı.

Bu araştırmanın, öğretmen adaylarının üniversitedeki eğitimine ve şu an görev yapmakta olan öğretmenlerin kelime öğretimi çalışmalarına mutlaka katkıda bulunacağı beklenmektedir.

Anahtar Kelimeler: kelime öğretimi, Türk lise öğrencileri, bilgisayar destekli dil öğrenme, tablet bilgisayarlar, Fatih Projesi, yabancı dil öğretimi, mobil tabanlı dil öğrenimi, bilgisayar destekli kelime öğretimi

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M.A. Thesis, October 2015
Supervisor: Assoc. Prof. Dr. İsmail ÇAKIR

ABSTRACT

This quasi-experimental study aims at investigating the effectiveness of using tablet computers in teaching vocabulary to Turkish EFL teenage students. This study hypothesizes that the tablet computer has a potential to positively affect foreign language learning, particularly vocabulary instruction. It was conducted to highlight some efficient and effective ways of vocabulary acquisition that can be part of the instructional program through the use of tablet computers. The hypothesis is that students are expected to be more positively motivated to use software materials than the usual textbook. It is also expected that vocabulary development would be significantly better for the participants who use software materials (experimental group) than the ones who use the materials presented in the coursebook (control group).

The research was carried out in the 2013–2014 academic year in 2000 Evler Anatolian High School, Nevşehir, Turkey. The sample group of this study was composed of 26 male and 34 female ninth grade Turkish EFL teenage students (totally 60 students). The experimental group used tablet computers in the classroom under the control of the researcher. The control group had traditional instruction using their textbook in the classroom under the control of the researcher. Both groups of students were given pre-tests and post-tests in respect to 25 vocabulary items before and after a four-session and eight-hour of treatment period.

The data in this study were processed from beginning to end via SPSS 20.0 version. The results of the study were interpreted by using a t-test and Mann-Whitney U test. The students of the experimental group were also given a questionnaire to analyze their views about using tablet computers as part of their courses. The results supported the hypothesis that the experimental group liked to work with tablet computers and that they learned and retained more vocabulary than the control group. The study also

revealed that tablet computers are ideal tools for creating an interactive and collaborative environment for vocabulary learning.

It is expected that this research will certainly contribute to the prospective teachers' university education and existing teachers' practices of vocabulary teaching.

Key Words: teaching vocabulary, Turkish teenage students, computer assisted language learning (CALL), tablet computers, the Fatih Project, teaching foreign languages, mobile assisted language learning (MALL), computer assisted vocabulary instruction (CAVI)

DEDICATION

I would like to dedicate my thesis

to my beloved mother, Nagihan TAVACI.

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LIST OF ABBREVIATIONS

BECTA: British Educational Communications and Technology Agency

CALL: Computer Assisted Language Learning

CAVI: Computer Assisted Vocabulary Instruction

CELI: Conversational English Language Instruction

DVD: Digital Versatile Disc

EFL: English as a Foreign Language

ELL: English Language Learners

IT: Information Technologies

MALL: Mobile Assisted Language Learning

MEB: Milli Eğitim Bakanlığı (The Ministry of National Education in Turkey)

N: Number

PC: Personal Computer

PDA: Personal Digital Assistant

PE: Physical Education

S: Student

SPSS: Statistical Package for the Social Sciences

CHAPTER 1: INTRODUCTION

1.1. Presentation of the Study

"I do not fear computers. I fear the lack of them."

Isaac Asimov

In this section, initially, the general conditions of the study will be presented. Subsequent to this, the aim of the study will be explained. Next, the importance of the study and the limitations of the study will be clarified. As a final point, the research questions and the assumptions will be given along with the key concept definitions.

1.2. Statement of the Problem

Societies have significantly changed with the rapid development in the information and communication technology. As we think about the inefficiency of traditional instruction to overcome the obstacles in the teaching process, one of the best approaches is the utilization of information and communication technology. Computer assisted vocabulary learning has been gaining importance as it has been used effectively in education systems. As a result, it has been observed that tablet computers have started to gain a crucial role in this vocabulary learning method. Tablet computers are useful to students as they will provide much faster and easier access to information. The use of tablet computers in education is suitable for constructivist education approach, and it serves understanding the student-centered education (Durukan & Kamacı, 2012).

Foreign language vocabulary is viewed as an essential factor in successful communication (Ellis, 2001; Krashen, 1989; Nation & Waring, 2001). Yet, it is a fact that students have changed radically, especially in terms of learning vocabulary. Today's students, who were born with all the advances, are no longer the people being taught in the traditional education system (Prensky, 2001). In this regard, Tunçok (2010) states as follows:

Students being taught only by the traditional ways cannot defy the need to power down and, thus, they lose focus and motivation. Therefore, educators should learn the new forms instead of forcing learners to stick with the old ways and tune down. Teachers must be prepared for new ways of structuring tasks, establishing exchanges, guiding, monitoring interaction, evaluating performance and mastering the relevant computer applications in teaching vocabulary. The teachers' role has transformed from the lecturer and the only source of information in the classroom to a guide as they need to provide the necessary tools and materials to facilitate vocabulary learning. (p. 1)

Listening to the teacher or audio tapes alone after class is not effective for the students. Instead of this, English as a foreign language (EFL) learners can be more interactive with authentic materials, visuals and animations via the internet and computer-assisted language learning (CALL) tools such as tablet computers. Thanks to the internet and tablet computers, learners are given many chances to communicate and learn collaboratively whenever and wherever they want. Besides, they are more active in their own learning process as they have the possibility to take control over the process according to their needs, lacks and wants. As tablet computers offer them the opportunity to work individually, they may be able to determine their specific objectives, use the materials effectively, specify time and space for their learning, assess their results and redirect their process and define new objectives according to the

feedback and results they receive. Evaluating effectiveness of language learning materials and tasks is crucial for the development procedure. Likewise, evaluating tablet computers and their activities is an important aspect of their development.

There are a number of reasons for which people ought to use computer technology in foreign language learning, especially in vocabulary learning and teaching. Tablet Personal Computers (PCs), in this sense, offer many opportunities for language learners and teachers. To be specific, they can enable students to practice a lot in learning vocabulary thanks to a variety of language learning programs and help students to be motivated in learning a foreign language. They can also improve student achievement and expand authentic materials for learning a foreign language. Furthermore, they can enable greater interaction between teachers and students and students and peers, give automatic feedback to learners so as to develop their self-esteem and enlarge learners' global understanding.

1.3. Aim of the Study

This study aims to determine whether learning vocabulary will be higher for the students who will use tablet computers compared to the students who will use textbooks in a classroom environment.

Other purposes of this research are below:

1. To improve vocabulary learning among EFL teenage students for the English language

2. To increase learners' vocabulary knowledge so that they are able to converse fluently

3. To help teachers to analyze the development and importance of teaching and learning vocabulary through the use of tablet computers

4. To analyze the effectiveness of teaching and learning through tablet computers among teenagers and teachers at the elementary level

5. To elicit the views of the EFL teenage students over the use of tablet computers and multimedia teaching at the elementary level

1.4. Significance of the Study

At present, studies on teaching vocabulary to Turkish EFL teenage students are of paramount importance. In the process of teaching and learning English, the computer technology is used by many schools, so its effectiveness is unquestionable. In order to establish the effectiveness of the tablet computers, it was intended to carry out this study entitled, "The Effectiveness of Using Tablet Computers in Teaching Vocabulary to Turkish EFL Teenage Students". This study may suggest useful insights into ways of teaching and learning vocabulary with tablet computers. Findings of the study may guide teachers working at secondary and high schools in putting tablet computers into use for vocabulary learning purposes. The study may also suggest new ways of vocabulary teaching and learning experiences at schools.

This research study aims to investigate the effectiveness of using tablet computers in teaching English vocabulary to Turkish EFL teenage students. The use of tablet PCs to enhance students' learning process has a number of benefits for language teachers and learners. According to Tokaç (2005):

> Language teachers have numerous responsibilities such as presenting language items, helping students practice language items learned earlier and providing opportunities for students to improve reading, listening, speaking and writing skills in the target language. Teachers have to allocate sufficient time for all phases of the learning process to be able to create an optimum language learning environment. Because of teachers' heavy workload, computers can help teachers in certain areas such as vocabulary learning and revision. (p. 7)

1.5. Research Questions

The present study investigated the following research questions:

1. Is there a difference between the vocabulary learning level of the students using tablet computers before and after the study?

2. Is there a difference between the vocabulary learning level of the students using textbooks before and after the study?

3. Is there a difference between the gain scores of the students who used the tablet computers and the gain scores of the students who used the textbooks?

4. Does gender affect students' scores in the pre- and post-test?

5. What is the general attitude of the students towards using tablet computers in learning vocabulary?

6. Does gender affect the general attitude of the students towards using tablet computers in learning vocabulary?

7. What are the experiences of the students using tablet computers as a vocabulary learning tool?

1.6. Assumptions

The particular interest of this study is the effectiveness of using tablet computers versus textbook based approaches to vocabulary teaching and learning. The research aims at overcoming the problems of learning vocabulary effectively among Turkish EFL teenage students. The results of this study are expected to support the hypothesis that the experimental group will like to work with tablet computers and that they will learn and retain more vocabulary than the control group.

Finally, it will hopefully provide relevant information for educators about using tablet computers in similar contexts. It may be of benefit to researchers and teachers who intend to conduct a similar study in the future. It is also expected that teachers who

find it difficult to encourage their students to study outside the classroom and students who are willing to take control and manage their own learning can make use of this study.

1.7. Organization of the Thesis

This thesis consists of five chapters. It begins with an introduction in the first chapter. Then, it presents the statement of the problem, the purpose of the study, the significance of the study, the research questions, the assumptions, the organization of the thesis and the definitions of the key terms.

The second chapter deals with the review of literature. It includes information about tablet PCs, the contribution of tablet PCs to learning and teaching school subjects, advantages and drawbacks of tablet PCs. It also gives explanation about the Fatih Project, Mobile Assisted Language Learning (MALL) and Computer Assisted Vocabulary Instruction (CAVI). Finally, it presents an overview of the previous research studies in the field.

Chapter three explains the methodology of the study in detail. The design of the study, the setting and participants of the study, the data collection tools and procedure, the data analysis procedure and the pilot study are described.

Chapter four includes the presentation and analysis of the data. The data analysis methods, the analysis of the quantitative data and the analysis of the attitude data are described.

Finally, in the fifth chapter, conclusions are drawn from the findings of the study in the light of the relevant literature. Then, the findings are discussed. Lastly, the implications of the study, the limitations of the study and the suggestions for further research are mentioned.

1.8. Definitions of Key Terms

Teaching Vocabulary: It is the act of instructing the collection of words a person knows and uses.

Turkish Teenage Students: It is defined as the Turkish students aged between 15 and 18 and studying at a high school.

Computer Assisted Language Learning (CALL): It is an approach to language teaching and learning in which computer technology is used as an aid to the presentation, reinforcement and assessment of material to be learned, usually including a substantial interactive element**.**

Tablet Computers: A tablet computer, or simply tablet, is a mobile computer with display, circuitry and battery in a single unit. Tablets come equipped with sensors, including cameras, a microphone, an accelerometer and a touchscreen, with finger or stylus gestures substituting for the use of computer mouse and keyboard.

The Fatih Project: It is a new project, titled the Movement of Enhancing Opportunities and Improving Technology (FATİH), which seeks to integrate state-of-the-art computer technology into Turkey's public education system**.** On November 22, 2010, the former Prime Minister of Turkey, Recep Tayyip Erdoğan, initiated the project.

Teaching Foreign Languages: It is defined as teaching adults and children whose first or main language is not the target language. This can be done abroad, and the students may be learning the target language for either business or leisure reasons.

Mobile Assisted Language Learning (MALL): It describes an approach to language learning that is assisted or enhanced through the use of a handheld mobile device.

Computer Assisted Vocabulary Instruction (CAVI): It consists of practices involving the use of computers for vocabulary learning and instruction purposes.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Today, computer and Internet technologies are valuable tools to assist in learning a foreign language, including its vocabulary. They create a new language learning environment. The effects of computers and multimedia in language learning have been discussed for some time by practicing educators, parents and related people who want to know whether technology in language learning is more effective for teaching and learning a foreign language than the traditional environment and methods (Goodfellow, 1994). As the purpose of the present study is to explore the effectiveness of computer assisted vocabulary teaching through the use of tablet computers within the scope of the Fatih Project with teacher-led vocabulary teaching based on textbooks, the use of tablet computers in vocabulary teaching will be discussed.

According to Miller (2008), the landscape of technology for classroom instruction continues to expand, along with creative uses for the technology in teaching and learning activities. The tablet PC, with its digital pen and ink, has opened a new realm of possibility in student interaction, collaboration and engagement. Study of its use in information literacy instruction has been limited, but the tablet PC and similar technology, i.e. interactive whiteboards, have been tested in several other educational settings (as cited in Miller, 2008).

Research on the effects of technology in general on teaching and learning has been conducted and continues to be investigated. One of the most prominent fields of

research has been on interactive multimedia and its effect on learning in different fields including language learning. Literature review for the purpose of this study focuses on the domain of CALL Research (Computer Assisted Language Learning Research) and the use of tablet computers.

According to Friedman (2005), it is inconceivable that the technology, specifically the information technologies (IT), cannot be kept out of educational systems especially in such an era in which the technological advances are everywhere (as cited in Ayas, Çakır, Ergun, Pamuk, & Yılmaz, 2013). Aside from educational systems, the information technologies have introduced lots of innovations, changes, facilities and advantages to many other fields such as financial affairs, e-business, communication, etc. Therefore, a number of academicians, educators, trainers and teachers from all over the world and in Turkey have been studying and researching on the use of technology in teaching and learning activities via a broad range of projects and investigations. In this respect, Akkan, Çakıroğlu and Güven (2012) emphasize that integrating technology in educational settings is considered as the one of the fundamental reforms (as cited in Ayas, Çakır, Ergun, Pamuk, & Yılmaz, 2013). To be specific, technology integration projects have already been initiated in US and in some other developed countries with large amount of budgets in order to transform the educational systems (Bebell, O'Dwyer, Russell, & Tao, 2007; Chen, Kao, & Sheu, 2003; Crompton, & Keane, 2012; Dale, 2008; Joureau, 2011; Milli Eğitim Bakanlığı [MEB], 2012a; Numata, & Vallance, 2011; Quality Education Data, 2004; Ricci, 2011; Saine, 2012). Similarly, Turkey initiated piloting the technology integration Project called FATİH in 2012 at 52 public schools (4 elementary schools and 48 high schools) and planned to extend this project to all public schools in next few years (MEB, 2012b, 2012c). The main objective of the project has been determined as to transform schools into more productive places in which students learn better. More specifically, the main

objectives of the FATİH project are: (1) to provide equal educational opportunities to students from different regions, (2) to improve information technologies used in schools, and (3) to integrate technology into teaching and learning activities so as to support students' learning (MEB, 2012c).

2.2. Mobile Assisted Language Learning (MALL)

Mobile Assisted Language Learning, known as MALL, is a modern approach to foreign language learning that is assisted via the use of the mobile devices such as cellphones, MP3 and MP4 players, PDAs, iPhone, iPad, etc. It is a subset of CALL and mobile learning. Besides, the study of Sharples and Vavoula (2008) describes MALL as a new research field to some extent although people have now been using mobile devices occasionally (Chen, 2013).

Another major characteristic of MALL is its connectivity (Chen, 2013). Thanks to the GPRS, Wi-Fi and 3G Internet access that mobile devices have, language learners have the chance of being involved in meaningful and authentic interactions, which are not usually available in traditional language learning environments, particularly in informal language learning situations or outside the classroom (cf., Bo-Kristensen et al., 2009; Vavoula, 2005). In this respect, the study of Lan et al. (2007), Chang and Hsu (2011) reveal that learning a foreign language cannot be restricted to one-way individual learning, but can be expanded to a two- or multi-way collaborative learning.

Thus far, various mobile technological devices have been exploited for a variety of research topics. To be specific, studies with mobile phones have focused on different aspects of learning a foreign language. For instance, Houser and Thornton (2005) investigated learning vocabulary through the use of mobile phones; Stockwell (2007, 2010) evaluated students' attitudes towards MALL; Baleghizadeh and Oladrostam (2010) focused on fostering grammatical accuracy; and Kessler (2010) did a study on

improving speech fluency. Similarly, there have been research studies with PDAs on several themes. For instance, Ozok et al. (2008) examined students' and teachers' perceptions and attitudes towards the usability of PDAs. Looi and Wong (2010) found PDAs effective in creative learning of idioms. In the same way, Chang and Hsu (2011) also found PDAs effective in promoting intensive reading comprehension.

Actually, a majority of MALL studies consider mobile devices as a new resource for content delivery, rather than tools that will facilitate new learning (Chen, 2013). According to Kukulska-Hulme and Shield (2008), the collaborative and communicative aspects of MALL have not been fully exploited. Thus, MALL researchers should investigate the effectiveness of mobility with digital and location-aware technologies in language learning (Kukulska-Hulme, 2009). In this respect, Stockwell (2010) suggests that the usage of mobile tools in the learning process and in naturalistic settings should be investigated in order to achieve this goal, and the perceptions of learners towards mobile devices should be examined. Language teachers can offer learners valuable guidance on how to better utilize them to reach the learning goals only through a better understanding of MALL in the language learning process (Chen, 2013).

There are some considerable and crucial differences between MALL and traditional language learning. Kukulska-Hulme (2009) claims that MALL devices are portable and ubiquitous; for this reason, they increase learning opportunities. In this sense, Chen (2013) states, ''As access to mobile devices can be at any time and from any place—as long as students carry their device—the time and space constraints of formal language learning can be greatly reduced, offering more flexible informal learning opportunities''. (p. 21)

According to Valk et al. (2010), MALL facilitates alternative learning processes and teaching methods. On the other hand, the study of Looi and Wong (2010) asserts

that MALL has a role in bridging the gap between formal and informal learning spaces. Chen (2013) states as follows:

> Students in Looi and Wong's study learned the meaning and usage of new prepositions and idioms in the formal classroom setting, and then they went out of the classroom to take photos illustrating the newly acquired words and idioms with network-enabled pocket PCs. It was concluded that the combination of formal and informal learning fosters contextualized learning, productive outputs and a socio-constructivist acquisition of the target language. By synthesizing learning inside and outside of the classroom, students are encouraged to take more responsibility for their learning, thus developing their independent learning skills (Barrs, 2012) and benefitting their future studies. (p. 21)

2.3. Importance of Vocabulary in Second Language Acquisition

Words are known as the integral parts of a language. Knowledge of the target language can be developed by learning the lexical items. Therefore, being a language learner requires recognizing the importance of vocabulary in L2 learning. The study of Meara (1980) reveals that language learners face significant problems with vocabulary even when they upgrade from a beginning level of acquiring a second language to a much more advanced level. Language instructors also have reached a high degree of consensus related with the importance of vocabulary (Lai, 2005). In this sense, Macaro's survey (2003) points out that foreign language teachers view vocabulary as a topic they most need research to conduct on so as to enhance teaching and learning in their classrooms. Hence, it is essential that the role of vocabulary in L2 learning should be recognized. In addition, implications for teaching from substantial research should be in great demand.

Teachers observe that students come across some problems due to the lack of lexical knowledge while reading, speaking, listening and writing in the target language. They frequently cannot understand an English passage well or someone talking to them in English clearly. This is because of the fact that their vocabulary knowledge is insufficient. In the same manner, they sometimes cannot express themselves effectively simply as they do not know the necessary vocabulary items for successful communication (Tokaç, 2005).

The study of Krashen (1989) lays emphasis on the importance of vocabulary in a language since most of the meaning is provided by words. He claims that this is why people prefer to take their dictionaries with them rather than grammar books when they visit a foreign country (Tokaç, 2005). Similarly, Read (2000) points out that words in a given language are the most fundamental units of meaning, and users of the language form phrases, sentences and larger units of meaning by using words (Tokaç, 2005).

It is a fact that reading comprehension primarily requires vocabulary knowledge. The relationship between reading and vocabulary size can be viewed from two different aspects: The effect of vocabulary size on reading comprehension and the effect of reading on vocabulary size. In terms of the effects of English vocabulary size on reading comprehension, the study of Nation and Waring (2001) points out that the most frequent 2000 words comprise 80 % of all words in a given English text. Nation and Waring (2001) also emphasize that a vocabulary size of the 2000 most frequent words enables learners to have "a good degree of comprehension of a text" (Tokaç, 2005). As for the effect of reading on vocabulary**,** Krashen (1989) and Nation (2001) argue that learners need to read extensively in the second language so as to enlarge their vocabulary size (Tokaç, 2005). Learners encounter the most frequent words repeatedly in meaningful contexts by reading extensively.

Last but not least, lexical knowledge is also essential for understanding the grammar of the target language. In this respect, Ellis (1995) claims that knowing the words in a text can have a facilitative effect on learning grammatical rules as learners understand the discourse functions better (Tokaç, 2005). Therefore, it can be concluded that learners may easily understand the meaning of grammatical functions through a large vocabulary size (Tokaç, 2005).

2.4. Computer Assisted Vocabulary Instruction (CAVI)

Teaching and learning vocabulary has always been a popular subject in CALL applications since the early stages of CALL (Khodareza & Tabar, 2012). Computer Assisted Vocabulary Instruction (CAVI) has been one of the most common applications of CALL up to this time. It involves the use of computers for the purposes of teaching and learning vocabulary.

Several CAVI investigations have been carried out in the field of foreign language learning in order to facilitate the complex process of L2 vocabulary learning. Some research studies were merely conducted so as to investigate the effectiveness of a CALL program in vocabulary learning. To be specific, the study of Goodfellow and Laurillard (1994) focused on promoting the learning of vocabulary through the use of a CALL program. To give another example, Siribodhi (1995) examined the effects of three interactive multimedia CALL programs on elementary level EFL students' vocabulary acquisition. However, many studies have compared teacher-led instruction and computer instruction in terms of vocabulary achievement (Khodareza & Tabar, 2012). According to Goodfellow and Laurillard (1994), Liu (1998) and Jafer (2003), CAVI is not more effective than teacher-led instruction. Conversely, Chun and Plass (1996), Duquette, Laurier and Renie (1998), Cobb (1999) and Al-Seghayer (2001) point

out that students achieve and retain more vocabulary through the use of CAVI programs in comparison with the teacher-led instruction (Khodareza & Tabar, 2012).

Teaching vocabulary is usually limited to presenting new items as they appear in any activity without preparing the learners such as activating their prior knowledge or helping them regularly review the previously learned vocabulary items (Kılıçkaya & Krajka, 2010). Hence, computer and internet have been put into use in the foreign language instruction in order to eliminate this limitation and to provide better opportunities for both learners and teachers. There have been rapid advances in the application of instructional and educational technology thanks to the current development in information technologies. One teaching method involving technology that has become quite popular among many researchers is to introduce new vocabulary items with computer vocabulary teaching programs or softwares (Lu, 2010).

2.5. What Is a Tablet PC?

In general terms, a tablet PC is a notebook computer with a display screen on which users can write. It allows users to input information on a digitizer with a pen, or stylus. The computer's operating system allows digital "ink" to be written or drawn on the computer screen by using a special pen. This process is called "digital inking," and hand-drawn items can be saved like any other computer document. Handwritten text can also be saved "as written," or it can be translated into typed text (Berque, Evans, Hammond, Mantgem, Mock, Payton, & Sweeney, 2008).

The term "tablet PC" was coined by Microsoft when it released its Windows XP Tablet PC operating system. Consequently, an official Microsoft Tablet PC is essentially a notebook computer with a touch- or pen-enabled screen (digitizer) running Windows XP Tablet PC Edition or Windows Vista (Berque, Evans, Hammond, Mantgem, Mock, Payton, & Sweeney, 2008).

The tablet PC is unlike any other computing device that has come before it. A tablet PC combines the computing power and versatility of a traditional notebook computer with the portability, inking ability and ease of use offered by a pad of paper. It is small enough to carry anywhere, yet large enough to replace a desktop computer, filing cabinet and a small library, essentially allowing a user to take the classroom on the road (Berque, Evans, Hammond, Mantgem, Mock, Payton, & Sweeney, 2008).

2.6. A Brief History of the Tablet PC

The tablet PC is a familiar device in the form of a convertible laptop with a swiveling screen or a slate (screen with no keyboard). It has its roots in both laptops and handheld devices such as personal digital assistants (PDAs). Microsoft Windows for Pen Computing, which released in 1992, indicated the beginnings of the more familiar uses of a pen or stylus as the primary input for a computerized interface. In 2002, Microsoft reintroduced the current generation of tablet PCs (Garret, 2007).

Some unique features of a tablet PC include increased mobility, flexibility in input methods and the use of "digital ink". This ink can be used for "e-mail, sketching, instant messaging, games… highlighting, program control… annotation, ink chat, creative work, note-taking, traditional text entry, music creation - and even more" (as cited in Miller, 2008).

2.7. The Use of the Tablet Computers in Education

Most of the literature put emphasis on the use of tablet PCs in classrooms and the methods of their application. The implementation of tablet PCs in K-12 education and higher education is available in many reports. However, research studies are limited in this field. One study conducted by Mirliss, Wachsmuth and Weitz (2006) at Seton

Hall University examined both faculty attitudes toward integrating tablet PCs into education and the common uses of tablet PCs in classrooms.

The uses of a tablet PC explained in the reports are various. To be specific, it replaces teachers' chalkboard, overheads and students' notebooks. It also enables the posting of course materials on the net and annotates documents in class. Furthermore, it saves the course slides as enhanced notes. That is, it facilitates the collection of classroom data. In this respect, Miller (2008) states his views as follows:

> In the classroom, some of the most novel uses for the tablet PC discussed in the literature involve in-class collaboration between the teacher or presenter and all the students in the classroom. These scenarios involve all participants using networked tablet PCs. In examples presented by Roschelle et al. (2007) and Anderson et al. (2007), software such as Classroom Presenter and Group Scribbles has been used to coordinate this classroom-wide use. (p. 129)

2.8. Tablet PCs and Pedagogy

Not much research has been done on the pedagogical assumptions of the tablet PCs or their implementation in classrooms so far. Therefore, the investigations regarding interactive whiteboards were examined. Schroeder (2007) and Higgins, Miller, Smith and Wall (2005) consider that interactive whiteboards highly affect learning in some fundamental areas such as learners' feelings, attitudes and motivation. As Schroeder (2007) states, ''The affective domain focuses on learners' motivations, their attention to and emotional response to learning, and the value they attach to learning'' (p. 66). In short, the technological innovations such as inteactive whiteboards, tablet PCs, etc. deal with these factors.

Much of the literature focuses on the ability of the tablet PCs to create innovations in the classroom such as making contributions to standard power point presentations with the help of the ink annotation. In this sense, Anderson et. al. (2007) assert, "Slide-based pedagogy relies on fixed, linear content and is geared toward one-to-many communication with limited feedback from the audience" (p. 56). Simply put, tablet PCs gave opportunities for interaction in the traditional education system.

It seems that tablet PCs contributed a lot to the interactions between students in classrooms as long as they are used in collaborative activities. However, whether the interaction quality has been enhanced or not is still a question according to the study of Smith et al. (2005). In this regard, further studies need to be done to answer this question. The arrangement of lessons is mentioned in many pedagogical issues, and the issues are the same if a tablet PC or other technology is used in lessons or not. A teacher-centered lesson does not exclude active or group learning, and in the same way a student-centered lesson does not neglect the teacher's talking and controlling the classroom and activities completely. Hence, if tablet PCs are used in a well-organized lesson, they will affect all the teaching techniques and methods positively.

2.9. The Contribution of Tablet PCs to Learning School Subjects

According to the research study of Twining et al. (2005), students used tablet PCs in a range of ways. Most of them used the tablet PC to take notes in class. They also could take it anywhere they go such as the classroom or the sports hall thanks to its mobility. Students used software specifically designed for the tablet PC so as to arrange their subjects in order, write notes or do worksheets. Thanks to the facilities of the tablet PC, some of the students were able to record a video through a web cam and then put it into the OneNote file. These files could then be saved and looked broadly over at some

time in the future (Cicchino & Mirliss, 2004). As a result, students had the chance of reducing the number of books that they had to carry with them.

Software such as the Microsoft Office suite with inking capabilities was used and many students used Microsoft Word to take notes or annotate typed work. Similarly, Microsoft PowerPoint is another type of software that was prevalently used to create evaluation tasks (Twining et al., 2005).

Thanks to the technology, students have the chance to pick and choose how and for what they use the tablet PC. It is definitely much easier than that of the traditional pen and paper. Twining et al. (2005) implied that students can be settled for their different learning styles quickly and easily. As informed by Galligan, Loch, McDonald and Taylor (2010), "The handwriting was 'most helpful' in problems that involved diagrams and angles" (p. 45). As the tablet PC functioned as a pen and a paper, students could quickly explain their ideas such as designing and drawing complex shapes or writing Math equations easily.

A large number of case studies revealed that it was an excellent way for students to save and keep their books and notes; everything in one place. Accordingly, the students didn't forget to bring a pen or something to write on. Ifenthaler and Schweinbenz (2013) and Kosheleva et al. (2006) both pointed out that the tablet PC acted like a portable classroom where students always had their books, assignments, notes and study resources. As a consequence, the whole students could have the required tools for learning.

According to a report from British Educational Communications and Technology Agency (BECTA) (2004), it was revealed that learning was more fun and enjoyable for the students than before, and their motivation to learn increased (Stewart, 2013). The attention spans of the students enhanced in the classroom, and also their interaction with other students increased. Besides, the use of the tablet PCs improved

the motor control skills of almost all the students. As the tablet PCs were easy for students to use, they were motivated to learn by using them. Teachers considered this motivation as a significant impact of tablet PCs on student academic success. It was also found that the tablet PCs improved students' behaviour, self-esteem and collaborative learning among each other. Students declared that the tablet PC encouraged them to use it and increased the amount of time they spent working as it was easy to fold flat and to carry. According to Reboli (2007) and Enriquez (2010), using tablet PCs increased students' motivation and affected learning outcomes positively. Moreover, it made students more independent, collaborative, confident and interactive with other students. The tablet PCs also increased their knowledge retention. Lastly, it was reported that the school was more enjoyable for the students thanks to having the tablet PCs and supporting software.

2.10. The Contribution of Tablet PCs to Teaching School Subjects

The introduction of tablet computers in education has been mainly limited to middle and senior high school students (Chen & Couse, 2010). Among the research studies done on this topic, Barton and Collura (2003) sought to embrace change with a revolutionary computer known as ''Tablet PC''. The study proved tablet PCs to be indispensable devices both inside and outside of the classroom. Thanks to the mobility, the versatility and the convenient access of the tablet PC, note-taking became more interesting for the students than before. They were willing to take more notes as handwritten notes could be converted to typed texts through the tablet PC. On the whole, the use of the tablet PC improved the writing and organizational skills of high school students in the courses. Another study conducted by Schroeder (2004) revealed that the tablet computers empowered the high school students to participate in the school subjects actively. Furthermore, the case study conducted by Borse and Sloan

(2005) focused on the fourth and eighth grade students' use of stylus-interfaced technology. It was acknowledged that student interaction and homework completion were high. As a consequence of this, there were fewer absences in terms of attending lessons.

The integration of stylus-interfaced technology into education has also been reported for early elementary students (Chen & Couse, 2010). In this regard, Mouza (2005) investigated the impact of technology integration on students' learning. The findings of the study revealed that integrating technology into the school curriculum made second grade kindergarten students motivated towards math, reading and writing. Furthermore, the use of technology in the school curriculum promoted the increased motivation of the students gradually, enhanced learning in school subjects and improved social interaction.

The tablet PC was also used as a note-taking tool instead of the whiteboard. Teachers connected the tablet PC to a data projector and wrote notes on the tablet PC by using a software like Windows Journal or Microsoft OneNote. This contributed to teaching and learning a lot in the classroom. The teacher could look at the students while writing the notes instead of having their back to the classroom. Anderson et al. (2005) claim that, "It gave the ability to facilitate interaction between students and instructor" (p. 4). Besides, Cicchino and Mirliss (2004) state that teachers were also able to record the notes shown on the board for students to obtain later.

Additionally, tablet PCs have an impact on teaching practice by making new ways of working available. The use of tablet PCs both enhances the pace of lessons and leads to the need for more classroom support. It was strongly felt in the schools that tablet PCs were able to enhance learning, and that this went beyond what was possible with other technologies. Twining et al. (2005) state as follows:

It was clear that tablet PCs had a very positive impact in this regard (only

diminished when there were technical problems). Students appeared to relate to tablet PCs differently from the way in which they related to other computers. This may have been due to the more "natural" way in which they could physically interact with the tablet PCs, in terms of variety of position (on their knee or held in one arm, for instance) and also the immediacy and intuitive nature of using a pen on the screen. There is significant potential for the development of software that makes use of these features of tablet PCs. (p. 22)

It is indubitably apparent that tablet PCs started new ways of working. Most especially, they had the potential to encourage different teaching styles and to support different learning styles. On the one hand, it was claimed by teachers that the tablet PC brought out new and exciting approaches to teaching. On the other hand, students could now see, hear and touch their work as it progressed, and they were completely absorbed and fascinated in the results of their own actions (Twining et al., 2005). Teachers changed their teaching techniques for each topic, and they were able to concentrate on teaching the concepts, not just copying large slabs of text out of a book and onto a whiteboard, as suggested by a member of staff at Torrey Pines High School (Microsoft Corporation, 2007).

Mobility around the classroom has become possible thanks to the portability of the technology. As a consequence of this, it is also possible to take the classroom out onto sporting fields such as field trips, excursions or camps. In addition, employees can now walk around a classroom with the tablet PC in their hand via the use of wireless data projectors. In this respect, BECTA (2004) and Mock (2004) implied that the teacher did not always need to be at the front of the classroom thanks to the tablet PC connected wirelessly to a data projector. In terms of another dimension to the lesson, it was also claimed that students could easily take parts in class discussions without

leaving their seats. Students and teachers thought that the tablet PC was much more intuitive to use. Navigating the tablet PC with a pen had students feel better than the mouse or touch pad.

2.11. Advantages of the Tablet PC

Because the tablet PC screen can be folded flat, it is less intrusive in the classroom; teachers can easily see the students' faces and what they are doing (Stewart, 2013). BECTA (2004) reported that the use of tablet PCs in classrooms does not create a barrier between the teacher and the student unlike the use of conventional laptop computers as long as the screen of tablet PCs is in the flat slate position. Moreover, the tablet PC can be used in several situations and circumstances such as by standing up or by carrying it in the crook of an arm by adults and older children. The integrated wireless connectivity of tablet PCs also provides great freedom of use. Besides, tablet PCs can motivate students and adapt to individual learning styles as especially younger students find the pen interface more natural than traditional keyboards and mice. In this sense, the report of Microsoft Corporation (2005) informed that the use of the pen is a lot quieter than the use of the keyboard and that when students start using the pen instead of the keyboard, the noise level drops and the dynamics of the classroom changes. In addition, the study of Sheehy et al. (2005) claimed that handwriting technology can be used to help students with problems or disabilities in using a conventional notebook.

The report by BECTA (2004) informs that tablet PCs allow handwriting, drawings, equations and diagrams to be integrated into the documents that are stored. In addition, teachers can annotate the useful documents via tablet PCs. Wirelessly linking a tablet PC to a projector provides an alternative to an interactive whiteboard, and the device can be passed around the classroom. All in all, tablet PCs provide collaboration

among students, data collection, interactive presentations and display. They are found to be useful as both a learner device and for teachers to organise their work. Thanks to the mobility, ease of use and pen input of tablet PCs, their use has been encouraged in education and integrated into the school curriculum. All of these attributes have made tablet PCs successful in schools and colleges that have adopted them.

Among the several advantages of tablet PCs, the study of Cicchino and Mirliss (2004) focused on the use of the "inking" capabilities so as to mark students' work. Firstly, students submit their work electronically to their teacher, and then the teacher is able to mark the works of the students on the tablet PC using the ''inking'' capabilities. They can also annotate students' drafts. Next, they send the work back to the student. In the end, the students make the changes and remove the inked comments (Stewart, 2013).

The use of software programs like Microsoft OneNote enable students to involve in online discussion. The computers of all the students are linked up to the teacher's computer so that the students can see the teacher's screen on their own screen. Then, they are able to add to the discussion by writing on the screen and by using the pen. All students can see what each other is writing (Stewart, 2013). In this respect, the study of Cicchino and Mirliss (2004) informed that the tablet PC gives teachers the ability to create interactive presentations that include student comments and observations, which can be saved and distributed to the class. It allows them to brainstorm, collaborate with students, elicit their input and share this information. Furthermore, the report by Microsoft Corporation (2012) stated that students started to use the tablet PC as a digital book; they could use the pen, write notes, draw diagrams and work through equations.

2.12. Disadvantages of the Tablet PC

The study of Smith et al. (2005) indicates a variety of problems and issues related to interactive whiteboards, many of which are also transferable to the tablet PC. The most frequent problems are the need for adequate training and support and technical difficulties such as networking problems and faulty connections. Other common problems are delayed screen changes and crashes. On the other hand, Weitz et al. (2006) conducted a research study declaring some of the main difficulties in relation to the tablet PC. They were screen orientation, the lack of an internal digital versatile disc (DVD) drive and an oversensitive mouse or touchpad.

There are several disadvantages pointed out in the literature as regard to the use of tablet PCs in school curriculum. Among the challenges of tablet PCs, Savaş (2013) in her research study categorized the challenges of the use of the tablet PCs under four main groups: instructional, technological, motivational and functional. The findings of the study revealed that the instructional challenges were classroom management problems, distraction in the concentration of learners and time management problems. The study pointed out that there were also challenges in relation to the function of tablet PCs as they were difficult to use, time-consuming and eliminated traditional ways of learning with hard copies. When it comes to the motivational challenges, tablet PCs may demotivate students, because students may insist on old learning habits. In this respect, Lim (2011) points out that "individual differences seem to influence the process of technology adoption at least in the early stage of infusion" (p. 603). As the technological challenges of tablet PCs were high in number, the most common ones were the lack of technology proficiency for using tablet PCs, the Internet connection, the breaking down of tablet PCs. In relation to the technological challenges, Ertmer et al. (2012) state "the most cited reason for lack of implementation of new technology is

lack of professional development" (p. 425). To mention the other problems of tablet PCs, Savaş (2013) states as follows:

> Tingerthal (2011) stated that problems associated by tablet PCs are generally technical in nature such as loss of network connectivity, battery power or display connectivity, or pc hardware or software malfunction. Tingerthal (2011) also suggests that these issues become less problematic in time as the instructors get used to using tablet PCs and it becomes a part of their regular teaching routines. In order to help instructors or teachers to get used to tablet PCs, pre-service teacher education programs need to incorporate the training and use of tablet PCs. (p. 603)

2.13. The Fatih Project

Following implementation of the ''Movement of Enhancing Opportunities and Improving Technology'', known as the Fatih Project, in the second semester of the 2011-2012 school year, students now receive education in classrooms equipped with smart boards, as well as tablet computers. The tablet computers distributed to students within the scope of the project are supplied by Sentim. The Fatih Project that started in 2010 attempts to offer students the benefits of the information technology and to enable them to use the technology more efficiently. Therefore, the classrooms are equipped with high technology (Sentim Bilişim, n.d.).

The Ministry of Education in Turkey has initiated the Fatih Project so as to enable equal opportunities in education and to improve technology in the preschool education, the primary education and the secondary education through providing tablet PCs and LCD Interactive Boards. Since 2012, in-service trainings for teachers have been held in order to provide effective usage of the ICT equipment in the classrooms in the learning-teaching process (MEB, 2012).

The Fatih Project aims to equip the classrooms in all schools in Turkey with smart boards, wireless Internet access and infrastructure cabling. Besides, it intends to distribute tablet computers to each student for a modern educational environment. Planned to be completed within 4 years, the project commenced at a ceremony, which was participated in by the former Turkish Prime Minister Recep Tayyip Erdogan, held at Sebahattin Zaim Anatolian Teacher High School on February 6, and Samsung-brand tablet computers were distributed to students at 52 schools in 17 provinces in Turkey within the scope of the pilot stage of the Fatih Project (Sentim Bilişim, n.d.).

The tablet computers distributed to students come pre-installed with textbooks enriched with animations, audio, video files, photos, maps, graphics, etc. They conform to the respective curricula. However, those distributed to teachers are equipped with features enabling them to monitor what students do on their own tablet computers, all contributing to the motivation, attention and comprehension skills of students. Being capable of taking notes, marking important sections on their tablet computers, students will no longer have to carry heavy bags filled with hardcopy textbooks, reference books and notebooks (Sentim Bilişim, n.d.).

The Fatih Project will provide the students, the teachers and the government with a variety of opportunities and advantages. The students will acquire knowledge using more sensory organs, participate and take responsibility more due to self-confidence from knowledge acquisition and shape his/her future based on his/her own purpose. On the other hand, the teachers will have access to the latest teaching techniques. Hence, they will help students gain different points of view. They will also be innovative and create information. Moreover, they will prepare the future generation from today. Lastly, with the Fatih Project, the government will identify the skills and match them with the future needs, be able to provide equal opportunity for its people and determine strategies to invest in people who can create information (MEB, 2012).

2.14. Previous Research Studies in the Field

Tom Cobb (1999) investigated computer assisted vocabulary teaching in a one-year study. He examined the effectiveness of using concordance software on teaching and learning vocabulary. In his research design, the experimental group used concordance to learn the new vocabulary items from the course readings. The control group used dictionary and word lists in order to learn the necessary vocabulary items. Thereafter, the vocabulary achievement of the two groups was compared. The findings and the results showed that concordance software could help students improve their vocabulary gains faster and increase their functional reading within a discipline. Because of this, concordance appears to be a practicable way of teaching vocabulary without depending on teachers. Using concordance software to learn vocabulary involves reading sentences all of which contain a given target word. In addition, the sentences containing the word are revealed along with the texts they appear. One can reach the whole text just by clicking the mouse. Learning vocabulary by using concordancers provides learners with exploratory vocabulary learning. That is to say, it is believed that learners will achieve a profound level of lexical arrangements. Consequently, language learners will be able to retain vocabulary successfully (Cobb, 1999; Nation, 2001). Simply put, the research study has generally supported the idea that computer assisted vocabulary learning programs facilitate foreign language vocabulary learning (Chun & Plass, 1996; Cobb, 1999; Ellis, 1995; Goodfellow, 1994; Groot, 2000; Swanepoel & Van de Poel, 2003).

Computers have important roles in terms of their usage in education. Thus far, researchers have described and evaluated the roles of the computers in their study differentially so as to help understanding computers use in teaching and learning activities. Warschauer (2002) discusses that computers take a role as a tool in education.

That is, they provide word processing and written, audio and visual materials for learners to study a foreign language. Furthermore, they enable learners to use online dictionaries, encyclopedias, grammar checkers and concordancers. Similarly, Kern (2006) points out that CALL initially had a tutor role such as providing instruction, giving feedback, evaluating students' responses and testing in grammar, vocabulary and writing. However, he states that CALL has had a tool role recently. Hubbard and Siskin (2004), on the contrary, state that although CALL is isolated from the field of education, CALL's role as a tutor is dynamic and contradicts with the common views. They assert that CALL has a crucial role in improving learners' listening, reading comprehension, and pronunciation (Hubbard & Siskin, 2004; Kern, 2006; Levy, 1997; Warschauer, 2002).

Computers have a part as a tool and tutor in language learning and teaching, and they also play a great role in language testing and assessment, which is far from new. The IBM 805 automatic scoring machine was launched commercially in 1935. Since then, computers have been functioning in test construction, item banking, test administration, scoring, data analysis, report generating, research and the dissemination of research (Fulcher, 2001a).

The research study of Hines and Silverman (2009) aimed to investigate the use of multimedia to improve readalouds and vocabulary teaching for English language learners (ELL) and for English speaking students. The interventions in the study were grouped into two categories: one with multimedia and the other without. The instructors followed a lesson plan on habitats by using both narrative and informational texts in both of the interventions. The study took place over four three-week cycles. The books were introduced to the students in the same order, and eight words per book were determined as the target words. The intervention with the multimedia involved four

videos. After the reading activities, students were shown videos to have students bring back all of the words they learnt. The findings of the study revealed that the use of multimedia provided no statistically significant difference for English speaking students. Nonetheless, the use of multimedia for ELL was significant. On the whole, it is indicated that the gap between English learning and English speaking students was narrowed both for the targeted vocabulary items and for general vocabulary knowledge (Khodareza & Tabar, 2012).

Another research study conducted by Olibie (2010) compared Computer-Assisted Language Learning (CALL) and Conversational English Language Instruction (CELI) in terms of their contributions to students' achievement in English grammar. This study had four research questions and four intact classes of junior secondary III students. It was a quasi-experimental study and lasted for 8 weeks. Two of the classes were randomly selected for the experimental group while the other two were randomly selected for the control group. Grammar proficiency tests were conducted in order to collect data. The students in the experimental group used computers while the students in the control group used printed texts. Mean and standard deviation scores were used to analyze data. The findings of the study revealed that CALL had an overall positive effect on students' achievement in English grammar more than CELI.

Apart from the studies mentioned above, there are also some research studies conducted on Computer Assisted Vocabulary Instruction (CAVI), which is a subfield of CALL. In this sense, Başöz and Çubukçu (2014) state their views as follows:

Computer Assisted Vocabulary Instruction (CAVI) has been considered to be one of the most common applications of CALL. It consists of practices involving the use of computers for vocabulary learning and instruction purposes. Vocabulary learning/teaching has been a highly popular subject matter in

computer assisted language learning applications since the early history of CALL. (p. 45)

There have been a small number of studies investigating the effectiveness of CAVI in teaching and learning vocabulary items so far. Some studies (Coady & Tozcu, 2004; Eşit, 2007; Fehr et al., 2012; Gorjian et al., 2011; Kayaoğlu et al., 2011; Kılıçkaya & Krajka, 2010; Lin et al., 2011; Nakata, 2008) have investigated the effectiveness of CAVI programs so as to determine if it is beneficial for learning vocabulary or not. Other studies (Cellat, 2008; Koçak, 1997; Özdemir, 2001; Tokaç, 2005) have compared the traditional instruction by using a text book in a classroom and computer assisted vocabulary instruction by using a computer program in a computer lab. Among these studies, Koçak (1997) examined the effectiveness of CALL on teaching and learning vocabulary. The study was conducted to focus on some efficient and effective ways of learning vocabulary through the use of CALL programs. The findings of the study indicated that the software materials motivated the students more positively than the usual textbook, and the vocabulary development of the experimental group was significantly better than that of the control group. Another study conducted by Özdemir (2001) investigated the effects of online media tools on helping or discouraging young learners. The results of the study revealed that the students liked to learn vocabulary through the use of online media tools more than through traditional classroom instruction. In addition, online media tools enhanced students' motivation to learn vocabulary, and the students studied individually at their own pace while using the online tool. Hence, the CAVI group did better in the production test than the other group. Similarly, the study of Cellat (2008) compared the computer assisted vocabulary instruction with the teacher-led vocabulary instruction. According to the findings of the

study, the students in the CAVI group were more successful in both immediate and delayed tests than the students in the teacher-led instruction group.

Aside from the studies mentioned above, there are also some other studies which have investigated the effectiveness of CALL to find out whether using computers in teaching and learning vocabulary is efficient or not. To be specific, Coady and Tozcu (2004) tried to identify the effects of learning vocabulary through the use of CALL facilities on vocabulary acquisition, reading comprehension and speed of word recognition. The results showed that the students in the experimental group performed better in vocabulary achievements than the control group students. Likewise, the study conducted by Eşit (2007) examined whether CALL was effective on Turkish learners' vocabulary learning. According to the results, learners' vocabulary development was positively affected by the Intelligent CALL Program, and the learners were also keen on using the CALL applications in the classroom. Similarly, another study carried out by Kılıçkaya and Krajka (2010) was applied to EFL learners in Turkey. They compared the effectiveness of online vocabulary instruction and traditional vocabulary instruction on learners' vocabulary achievement. The findings of the study indicated that the experimental group learned and retained more vocabulary than the control group. Then, Chan, Hsiao and Lin (2011) attempted to research the effectiveness of a CAVI program on learning vocabulary. According to the results of the research, it was revealed that learners studying vocabulary collaboratively through the use of computers were not successful in the vocabulary tests. However, they retained more vocabulary than the others and outperformed them in the delayed post-test. Finally, the study of Davison, Fehr, Graves, Seipel, Sekhran-Sharma and Sles (2012) aimed to research whether an individualized, online vocabulary program is effective on picture vocabulary test scores.

As a result, it was indicated that the experimental group students outperformed the control group students in post-test scores.

Actually, the number of studies conducted to investigate the effectiveness of tablet PCs in different fields of education is limited. Although there has been an increasing interest in MALL as defined by Heffernan and Wang (2009), the number of studies conducted in this field is not growing as fast as the developments in technology. To begin with, Chen (2013) carried out an action research project, which sought to investigate how students used tablet computers to learn English in informal settings outside of class and how to foster more effective usage of the tablet PCs for independent language learning. The findings of the study indicated that tablet computers are excellent tools for creating an interactive and collaborative environment for language learning, provided that the technological affordances of the device have been fully explored with the students. This investigation also revealed that students' attitudes towards the usability, effectiveness and satisfaction of tablet computers were quite positive. Another study conducted by Liang, Long and Yu (2013) aimed to investigate the application of tablet PCs, user's perspectives and requirements among K-12 students, teachers and educational administrators in developed areas in China. The results of the study revealed that K-12 students, teachers and educational administrators still need deeper understanding of the new technology's application in K-12 education. They prefer the old technology in teaching and learning owing to their superficial perspectives on the new technology. Lastly, the study of Akçayır and Dündar (2012) compared tablet PCs and printed books in terms of the reading speed and reading comprehension skills of the 5th grade primary school students. The students in the control group read ordinary printed books, and the students in the treatment group read the same text on an electronic tablet PC display. According to the findings of the study,

no statistically significant difference was found between the two groups of students in either reading speed or reading comprehension. However, students had a generally favorable attitude towards the use of tablet PCs. They found the use of tablet PCs effective, enjoyable and ergonomic.

Thus far, there have been few studies that selected English as a Foreign Language (EFL) discipline in order to investigate the effectiveness of tablet PCs in language learning and teaching. Among the limited investigations in this discipline, Savaş (2014) attempted to find out the perceptions of 40 pre-service EFL teachers on the effectiveness of tablet PCs as instructional tools in EFL classes. The data collection took place mainly via two surveys: the pre-tablet PC use survey and the post-tablet PC use survey. The results of the study revealed that the majority of the participants regarded tablet PCs as effective and useful instructional tools in teaching and learning English, and their attitude towards the use of tablet PCs in relation to EFL was quite positive after they had gained experience in using tablet PCs.

The number of the studies conducted to investigate the effectiveness of tablet PCs related to taking prospective foreign language teachers' perceptions into account is nearly non-existent. However, Durukan and Kamacı (2012) conducted a qualitative study on research assistants' views about using tablet PCs in education in Trabzon, Turkey. According to the results, most of the research assistants think that using tablet computers will improve student achievement. Tablet computers are thought as a useful tool as they will enable students to get much faster and easier access to information.

To sum up, experimental research studies, both qualitative and quantitative, have provided us with some practical and theoretical knowledge and perceptions so as to have an understanding of the effectiveness of using tablet computers in education, yet more research should be done to provide learners and teachers with a plenty of efficient and effective vocabulary learning and teaching experiences in a tablet-based

environment. In other words, educators and researchers need to do more research to understand the nature of the use of technology and tablet PCs particularly in different fields of education.

2.15. Conclusion

The tablet PC has definite possibilities for developing student interaction, active learning and motivation in information literacy classrooms. Whether used to enliven a lecture or incorporated into a classroom activity, the tablet PC has great benefits for language learning. While "cool technology" used for its own sake is not necessarily effective, combined with quality instructional design and preparation, the tablet PC can bring a new dimension to the information literacy classroom experience (Miller, 2008).

The present study is different from the previous ones in terms of the comparison of teaching vocabulary through CALL method supported with tablet computers in the classroom and teaching vocabulary through traditional instructions based on textbooks in the classroom under the instruction of the researcher. Furthermore, this research focuses on teaching vocabulary to Turkish EFL teeanage students who attend a high school and finding out the effectiveness of tablet PCs in learning new vocabulary items in the target language.

CHAPTER 3: METHODOLOGY

3.1. Introduction

This chapter includes the methodology of the study. The participants, the setting, group size and selection, data collection tools, data collection procedures, data analysis procedures and the pilot study done prior to the actual study are explained in detail.

3.2. Design of the Study

In this study, an experimental group and a control group were used in order to find the difference between the students who were taught with the Computer Assisted Language Learning (CALL) method supported with tablet computers and the students who were taught by traditional language teaching methods based on textbooks. The study was conducted in 2000 Evler Anatolian High School, Nevşehir, Turkey. There are some reasons why 2000 Evler Anatolian High School was chosen and preferred for this study. One of the reasons is that the students in this school have been using the tablet PCs for more than one year, and 2000 Evler Anatolian High School is the first pilot school in Nevşehir for using the tablet PCs within the concept of the Fatih Project.

The teaching points of vocabulary or topic are ''Feelings and Emotions''. The aims of the lesson are to teach the vocabulary items related to ''Feelings and Emotions'' and to draw the students' attention to the topic. The control group learned ''Feelings and Emotions'' through having traditional instruction based on textbooks in the classroom under the instruction of the researcher. The experimental group learned

''Feelings and Emotions'' through CALL method supported with tablet computers wearing headphones and watching a video in which a native speaker of English taught ''Feelings and Emotions'', reading a text about ''Feelings and Emotions'', answering the comprehension questions, playing games about ''Feelings and Emotions''and doing a multiple choice test on the topic. The teacher was a facilitator or a guide for the students during the course. She visited all of the students using their tablet PCs and offered help when the students needed it. She also helped the students with technical problems.

Below are the 25 vocabulary items related to ''Feelings and Emotions'' which were taught to the EFL teenage students for eight hours in four sessions:

- ✓ depressed
- ✓ busy
- ✓ frustrated
- ✓ bored
- ✓ hungry
- ✓ ecstatic
- ✓ loving
- ✓ nervous
- ✓ excited
- ✓ cold
- ✓ disappointed
- ✓ proud
- ✓ amazed

- ✓ worried
- ✓ surprised
- ✓ lonely
- ✓ hurt
- ✓ relaxed
- ✓ embarrassed
- ✓ exhausted
- ✓ thirsty
- ✓ motivated
- ✓ optimistic
- ✓ puzzled
- ✓ hopeful

The day following the pre-test, the students received a forty-minute instructional treatment addressing the targeted structures of the study. After teaching the 25 vocabulary items above to both of the groups in four sessions, a post-test was conducted to examine the progress that the participants made during the treatment sessions that lasted for eight hours. After the post-test, an attitude questionnaire with two sections was given to the learners for feedback on their attitudes towards using tablet computers as part of their courses. Below is the research design of the study.

Table 1. The Research Design

	Pre-test	Experiment	Post-test	Questionnaire and Interview
Experimental Group	1st week	2 weeks	4th week	5th week
Control Group	1st week	2 weeks	4th week	5th week

In questionnaire design, it is important to be sure of the reliability and validity of the instrument. For this aim, a pilot study was administered with this questionnaire (For the details of the pilot study, please see Chapter 4). And it is also crucial to motivate the subjects for increasing response rates. In favour of this, the participants of the study were informed about the aim of the study. This refers to the idea that by responding to the survey, respondents will be compensated in return in a way that meets some of their needs (Dillman, 2000).

Commonly, questionnaires are designed in two styles: Open structure and closed structure. In open structures, attendants are free to answer as they wish. In closed structures, conversely, attendants are supposed to choose the closest answer to their ideas. On one hand, open formats may lead to some basic problems, as they are independently answered, for instance, time management, elimination of the answers or subjectivity on interpretation of the data. On the other hand, closed formats deliver

advantages of saving on time, neutrality of calculating percentages of the data and categorization of the answers.

In the questionnaire designed for this study, closed formed questions were chosen and a likert scale ranging from 1- Totally Disagree, 2- Disagree, 3- Neutral, 4- Agree and 5- Totally Agree was adopted. The questionnaire was also designed in Turkish to avoid language misunderstandings. In order to reach content reliability, the items were also discussed with professors of English Language Teaching. The outline format of the questionnaire was given to the same two professors in the English Department. They were requested to evaluate the suitability of the items and clarity of rubrics. Their comments and suggestions were taken into attention. (Please see Appendix 6 for the Turkish version of the questionnaire.)

3.3. Setting and Participants

Participants, who are Turkish native speakers in the present study, are EFL teenage students with an age span of 14 to 16 years old. They are the students of Grade 9 and of 2000 Evler Anatolian High School. The number of participants is 30 students in the control group (Class 9-C) and 30 students in the experimental group (Class 9-D); a total of two classes as the samples for this research. The students are equal in number in the two groups. In the control group, there are 18 females and 12 males out of 30 participants. In the experimental group, there are 16 females and 14 males out of 30 participants in this study. All of the participants were given consent forms before the study began, and only the volunteer participants took part in the study.

3.4. Data Collection Tools

Once the purpose and the focus of the research have been identified, it is necessary to consider what data will be used to validate the research and how this can be attained. Thus, the following data sources were used and collected in this research to answer the research questions.

3.4.1. Pre-Tests and Post-Tests

The learners were given a pre-test and a post-test which are the same as having been mentioned above in Chapter 3. The aim was to avoid any inequality between them. All the pre-test and post-test questions were 100, and each question was worth 1 point. There were two parts in the test on ''Feelings and Emotions'' containing the 25 target words that had been chosen according to the level of the 9th grade students before the research study. In part A, students were supposed to choose the correct option. There were totally 20 questions in this part. In part B, students were supposed to do the six exercises about ''Feelings and Emotions'' according to the instructions given for each exercise.

The duration of the tests was 40 minutes. It was determined as a result of the pilot study conducted before the research study. The students' understanding and progress from these tasks were assessed to come to a certain result in the research. The quantitative data collected from the pre-test and the post-test were analysed by using SPSS 20.0 (Statistical Package for the Social Sciences) Software. In order to answer the research questions, descriptive statistics and independent t-tests were used for the analysis of the quantitative data.

3.4.2. Questionnaire

A Likert scale attitude questionnaire was given to the students in the experimental group after the post-test for feedback on their attitudes towards using tablet computers as part of their courses. The questionnaire was prepared in English, but it was translated into Turkish and applied to the students in Turkish in terms of its reliability. The aim of the questionnaire was to find out the preferences of the experimental group on the effectiveness of using tablet PCs in the classroom for learning vocabulary.

The questionnaire consisted of two sections. The first section consisting of 9 items aimed at having information about the background of the participants. The second section consisting of 20 likert scale statements aimed at detecting the attitudes of the students towards teaching and learning vocabulary through tablet computers. It also aimed at discovering the specific weaknesses and strengths of using tablet computers for learning English vocabulary items. The scoring for the statements in the second section of the questionnaire was as follows: Totally agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Totally disagree = 1. The results of the data analysis from the questionnaire were presented by using figures and tables displaying mean scores, standard deviations, frequencies and percentages.

3.4.3. Semi-Structured Interview

A group of 15 voluntary students were interviewed about the effectiveness of using tablet PCs in teaching and learning vocabulary. The semi-structured interview included a pre-determined set of open-ended questions that investigated the suggestions and the ideas of the voluntary participants. The purpose was to obtain specific

qualitative information from the students and to gain a range of insights on tablet PCs. The semi-structured interview consisted of 5 open-ended questions, which were asked to the 15 voluntary students in the experimental group to elicit their thoughts and comments on using tablet PCs in the classroom. It was administered after the participants had been using the tablets for two weeks.

Each student was asked the target question one by one. After all the students had answered the target question, the next question was asked to them. Recording their responses was done through taking notes. It was not done through audio-recording as the respondents could not have felt at ease answering questions. Taking notes was seen as less threatening, and it also kept the interviewer involved in the process. In order to analyze the data collected from the semi-structured interview, the responses of the participants were coded into three variables: positive, neutral and negative. The coded data of each question were analyzed seperately. Furthermore, adding the quotes from the respondents item by item supported the analysis in the part 4.5.2.

3.5. Data Collection Procedure

In this study, the research data were collected during the second semester of the academic year 2013-2014. It was conducted in Nevşehir, Turkey. The students both in the control group and in the experimental group were in the same school, 2000 Evler Anatolian High School, because the social environment of the participants of both groups should be the same for an equal comparison. Both of the groups followed the same aim and the scope of the course, and they were taught by the same instructor.

Before administrating the pre-test, the post-test, the questionnaire and the semi-structured interview, a face-to-face meeting had been held with the executive director of

2000 Evler Anatolian High School. Permission for data collection for the study had been requested. After the approval, the English teachers at the school had been briefed about the data collection tools.

To measure the achievement of the two groups and their ability to recognize the target words, two tests featuring the same test items were carried out in this study: a pre-test one day before starting to teach the vocabulary items and a post-test after the vocabulary items were practiced in isolation and in context over a four session, eight-hour treatment period. In other words, pre-test / post-test quasi-experimental design with a control group was used in the study. In addition to these, a likert scale attitude questionnaire was given to the learners of the experimental group after the post-test for feedback on what they have learnt during the process. The questionnaire allowed the learners to comment on the lessons, on the materials and on the methods used during the course. Besides, it measured their attitudes towards using tablet computers as part of their courses.

3.6. Data Analysis Procedure

The data collected for this quasi-experimental study were analyzed through a statistical programme, SPSS (Statistical Package for Social Sciences) for Windows 20.0. The quantitative data obtained from the questionnaire, the pre-test and the post-test were analyzed through this programme. The data gathered from the semi-structured interview conducted to support the quantitative data were analyzed through content analysis.

The pre-test and the post-test were conducted in order to find out whether any

meaningful difference occurred before and after the training. Students in the study received one point for each of their correct answer in the pre-test and post-test. Scores of the students ranged from 0 to 100. In order to answer research questions, descriptive statistics, independent and dependent t-tests were used for the analysis of quantitative data. The questionnaire results were provided in response frequencies and percentages. Statistical Package for Social Sciences (SPSS) version 20 was used to analyze questionnaire data. After transcribing the semi-structured interviews involving fifteen voluntary students in the experimental group, a content analysis for the collected data was carried out in order to identify the use of tablet computers for English vocabulary learning.

3.7. Pilot Study

In order for the tests to be both valid and reliable, the tests were piloted on May 7th in 2014 with a random class of English learners whose ages varied from fifteen to sixteen in 2000 Evler Anatolian High School. This piloting aimed at timing the test and checking the validity and reliability of the data gathering instrument of this study.

Prior to the administration of the vocabulary test and the questionnaire, a face-to-face meeting was held with the executive director of the school. Permission for data collection for the study was requested. After the approval, the English teachers of the institution were briefed about the vocabulary test and the questionnaire. They were asked to distribute them seperately on two different lesson durations on May 7th. Below is given the information about setting and participants, aims and analysis of the pilot study.

3.7.1. Setting and Participants

This phase of survey comprises 30 students from a different class in the same school, who are thought to represent the target group. The students participated were the ones studying at the 9th grade. The reason for selecting the 9th grade students from a different class was to ensure that the samples chosen for the piloting represent the whole population for the study. They were given information about the aim of the study and they were told that their sincerity in answering the question is of influential importance.

The pilot study of both the vocabulary test and the questionnaire was performed on the students in seperate hours of the same day. The participants took the pre-and post-test during 40 minutes in a lesson duration. After that, they fulfilled the attitude questionnaire during 40 minutes in another lesson duration. The questionnaire was administrated in Turkish to avoid any language drawbacks and/or misunderstanding and for saving time. Some methodological terms were also given in English in brackets, though.

3.7.2. Aims of the Pilot Study

The aims of the pilot study are different from the main study. Explicitly, the aims are stated below:

1. To observe how long it takes to complete the vocabulary test and the questionnaire.

2. To check if questions or items have no uncertainty or ambiguity in terms of language.

3. To get a constructive feedback from the students about the concepts and terms used in the tests and in the questionnaire.

4. To do Cronbach's Alpha analysis for the internal consistency of the questionnaire in order to determine whether the items in the questionnaire all reliably measure the same topic.

3.7.3. Analysis and Evaluation of the Pilot Study

The piloting process was observed and the questions of students were noted down. The constructive feedback from the students was taken into consideration. Some concepts and terms were modified in order to make them clear to the participants. In addition, the timing of the pre-and post-test and of the questionnaire was appropriate. That is to say, it was neither too short nor too long, one lesson duration which lasted 40 minutes was enough for them.

There were some unfamiliar words for the students such as ''rate, proficiency, tool, novice, overall, accomplish''. For instance; the term ''feedback'' was unfamiliar to the participants, so an explanation was added in parenthesis saying that it means the advice or criticism teachers give to students on their mistakes.

The questionnaire was administered and the data was processed by using SPSS 20. In keeping with Cronbach's Alpha analysis, the scores are interpreted based on the explanation below:

➢ If $0.00 \leq \alpha < 0.40$, the questionnaire is not reliable.

➢ If $0.40 \leq \alpha < 0.60$, the questionnaire has low reliability.

➢ If $0.60 \leq \alpha < 0.80$, the questionnaire is reliable.

➢ If $0.80 \leq \alpha < 1.00$, the questionnaire has high reliability.

Consequently, the findings regarding 20 likert type questions in the questionnaire are given below:

Table 2. Reliability Coefficients of Pilot Study

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.879	.891	20

As seen above, Cronbach's Alpha is **0.879**, which indicates a high level of internal consistency for the items in the questionnaire. Therefore, no questions were needed to be excluded from the questionnaire and no alterations were made.

3.8. Conclusion

This chapter introduced the methodology of the study organized to find answers to the research questions. It also provided information about the setting and the participants, the instruments and the data collection methods used (pre-tests, post-tests, questionnaires and semi-structured interviews). This was followed by how the data were analysed. The next chapter will provide information on the results of the data analysis using the above-mentioned statistical methods.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION

4.1. Introduction

This chapter of the research study presents the analysis of the data and findings gathered from the pre-test and the post-test, the attitude questionnaire and the semi-structured interview. This chapter covers the type of research design and the quantitative and attitude data analyses involved in the study. Before presenting the results of quantitative and attitude analyses of the data, the data analysis methods will be presented. Later, the actual data will be analyzed statistically.

In this part of the data analysis chapter, both quantitative and attitude data analysis techniques used in the study are illustrated, interpreted and discussed. In the remaining sections of the chapter, tables and results will be presented to display the analyses of quantitative and attitude data. The data in this study were processed from beginning to end via Statistical Package for the Social Sciences (SPSS) 20.0 and scores of the results are given in SPSS layout.

4.2. Data Analysis Methods

Since the present study aimed at finding out the effectiveness of tablet PCs in learning new vocabulary items compared to traditional language teaching methods based on textbooks, data was collected through vocabulary tests. Besides, two medium

of instruction were compared in terms of vocabulary achievement. Therefore, the independent variable of the study was two different medium of instruction. Vocabulary test scores were dependent variables.

As the experimental and control groups were independent from each other, an *Independent-Sample T-Test* was conducted for the analyses in order to compare the tablet group with the textbook group. Before the administration of the treatments, both groups sat for a pre-test. Then, after the administration of the treatments, both groups sat for a post-test. The very same statistical procedure was applied here as well. An Independent-Sample T-Test was conducted to compare the means of the tablet group (the experimental group) with that of the textbook group (the control group). The students in the study received one point for each of their correct answer in the pre-test and post-test. Scores of the students ranged from 0 to 100 in the pre-and post-test.

In this study, the attitude data was gathered through a questionnaire and a semi-structured interview. They were conducted with the students in the experimental group. The data analysis procedures for the background section of the questionnaire started with a calculation of the frequencies and percentages for each item, and they were displayed in the figures in part 4.5.1 below. Similarly, in the second section of the questionnaire, the frequencies and percentages of all the items were calculated and displayed in the tables in part 4.5.1. Then, descriptive statistics (mean scores and standard deviations) were computed for the data collected from the likert scale items by means of SPSS, 20.0 for Windows.

During the semi-structured interview, five open-ended questions were asked to the 15 voluntary students one by one, and their responses were noted down and indicated below in part 4.5.2. Analysis of the data collected from the semi-structured interview began with the classification of the responses of the participants according to

three variables: positive, neutral and negative. The coded data of each question were analyzed seperately.

4.3. Analysis of the Quantitative Data

The quantitative data collected from the vocabulary achievement test were analysed by using SPSS 20.0 (Statistical Package for the Social Sciences) Software. Before running t-test, both normality and homogeneity of variances assumptions were satisfied. Normality of variances assumptions of t-test were satisfied through One-Sample Kolmogorov-Smirnov Test (p>.05) whereas homogeneity of variances assumptions were satisfied through Levene's test (p>.05).

Firstly, the scores of pre-and post-tests were compared for each group. Then, the results of post-tests for both groups were compared through t-test. In order to find out the difference in success levels between male and female students, independent samples t-test was conducted.

4.3.1. Analysis and Interpretation of the Pre-test and Post-test

First of all, the convenience of data for a normal distribution was checked out by using One-Sample Kolmogorov-Smirnov Test (p>.05). That the scores shown in the Assymp. Sig. (Significance) line of the Table 3 below are higher than .05 indicates that the distributions of the factors investigated are normal. Therefore, the parametric test methods were used to analyze the data in this research study. In contrast, if these scores were not higher than .05, non-parametric test methods would be used instead.

Table 3. One-Sample Kolmogorov-Smirnov Test

		Control (pre-test)	Control (post-test)	Experimental (pre-test)	Experimental (post-test)
Number (N)		30	30	30	30
Normal Parameters (a,b)	Mean	63,1000	66,7000	63,0000	75,6333
	Std. Deviation	9,97013	16,74587	11,75614	9,84880
Most Extreme Differences	Absolute	,122	,126	,133	,115
	Positive	,086	,109	,133	,060
	Negative	-,122	-,126	-,115	-,115
Kolmogorov-Smirnov Z		,669	,691	,726	,629
Asymp. Sig. (2-tailed)		**,762**	**,725**	**,667**	**,824**

a Test distribution is Normal.

b Calculated from data.

Secondly, Levene's test (p>.05) was used to determine whether the variances were homogeneous or not. Below are the two tables that show the test of homogeneity of variances for both the control group and the experimental group. That the scores shown in the Assymp. Sig. (Significance) column of the Table 4 and 5 below are higher than .05 indicates that the distributions of the factors investigated are homogeneous. As a result, the parametric test methods were used to analyze the data in this research study. The matched-pair t-test (paired samples t-test) was applied for comparing the pre-and post-test scores since the variances were homogeneous.

Table 4. Test of Homogeneity of Variances for the Control Group

	Levene Statistic	df1	df2	Sig.
Pre-test	,014	1	28	**,907**
Post-test	,773	1	28	**,387**

Table 5. Test of Homogeneity of Variances for the Experimental Group

	Levene Statistic	df1	df2	Sig.
Pre-test	,250	1	28	**,621**
Pos-test	,132	1	28	**,719**

The Findings of the Pre-test

In order to answer research questions, descriptive statistics and independent t-tests were used for the analysis of the quantitative data. Firstly, the pre-test was applied to both the control group and the experimental group before the treatment. The students in the study received one point for each of their correct answer in the pre-test and post-test, and the scores of the students ranged from 0 to 100. Table 6 shows the results of the pre-test for both groups. As the groups are independent and different from each other, the t-test technique was used for the analysis of the data. The close mean scores (63.10 and 63.00) between the two groups indicated that the participants' target vocabulary knowledge was almost the same before the intervention. Statistical analysis showed no statistically significant difference between the groups according to the results of pre-test (p=.972>.05) which is higher than .05. In this sense, both of the groups appeared to be comparable for this experiment, and this research study would be meaningful as the groups had almost the same level of knowledge in English vocabulary at the beginning.

Table 6. The Comparison of the Pre-test Scores of the Two Groups

Groups	N	$\overline{X}$	SD	t
Control Group Pre-Test Results	30	63.10	9.97	0,972
Experimental Group Pre-Test Results	30	63.00	11.76	

p>0,05

This study was also aimed at discovering whether gender played a role in the vocabulary achievement of the control group. In order to find out the difference in success levels between male and female students, Mann-Whitney U test was conducted. As the number of the males and the females in both of the groups was lower than 30, this test was preferred and used.

The pre-test results of the control group were evaluated in terms of gender. Although the mean scores of the female students are higher than those of the male students, no statistically significant difference has been found between the males and the females. This illustrates that the male and female participants' target vocabulary knowledge were almost the same in the control group before the intervention as shown in Table 7 below.

Table 7. The Pre-test Gender Statistics of the Control Group

	Gender	N	Mean Rank	Sum of Ranks	U	p
Pre-test	1,00	12	12,71	152,50	74,50	.155
	2,00	18	17,36	312,50		

p>0,05

The pre-test results of the experimental group were evaluated in terms of gender, too. Although the mean scores of the female students are higher than those of the male students, no statistically significant difference has been found between the males and the females (Mann-Whitney U test). This illustrates that the male and female participants' target vocabulary knowledge were almost the same in the experimental group before the intervention as shown in Table 8 below.

Table 8. The Pre-test Gender Statistics of the Experimental Group

	Gender	N	Mean Rank	Sum of Ranks	U	p
Pre-test	1,00	14	14,75	206,50	101,500	.662
	2,00	16	16,16	258,50		

p>0,05

The Findings of the Post-test

After the intervention, the students in the control and experimental groups were given the same vocabulary achievement test distributed at the beginning. They answered the questions in the test, and the results were as shown in Table 9 below.

Table 9. The Comparison of the Post-test Scores of the Two Groups

Groups	N	$\overline{X}$	SD	t
Control Group Post -Test Results	30	66.70	16.75	0.015
Experimental Group Post -Test Results	30	75.63	9.85	0.015

The post-test results of the control group were evaluated in terms of gender. According to the results of the Mann-Whitney U test, a significant difference was noticed between the female participants and the male participants in terms of vocabulary knowledge level. It was on the level of $p<0,001$. It was concluded that the female students had been more successful than the male students according to the mean ranks as shown in Table 10. That is to say, gender had a significant impact on the vocabulary achievement of the students in the control group.

Table 10. The Post-test Gender Statistics of the Control Group

	Gender	N	Mean Rank	Sum of Ranks	U	p
Post-test	1,00	12	8,42	101,00	23,00*	.000
	2,00	18	20,22	364,00		

The post-test results of the experimental group were evaluated in terms of gender, too. According to the results of the Mann-Whitney U test, a significant difference was noticed between the female participants and the male participants in terms of vocabulary knowledge level. It was on the level of $p<0,05$. It was concluded that the female students had been more successful than the male students according to the mean ranks as shown in Table 11. That is to say, gender had a significant impact on the vocabulary achievement of the students in the experimental group.

Table 11. The Post-test Gender Statistics of the Experimental Group

	Gender	N	Mean Rank	Sum of Ranks	U	p
Post-test	1,00	14	11,43	160,00	55,000*	.018
	2,00	16	19,06	305,00		

The Findings Regarding the Comparison of Pre- and Post-test Scores

The pre-test and post-test results of the experimental and control groups were compared through paired-samples t-test. Firstly, in order to discover whether the control group's target vocabulary knowledge increased after the intervention, the pre- and post-test scores of the control group were compared (see Table 12). As seen below, the mean scores of the control group was calculated as 63.10 for pre-test, and as 66.70 for post-test. The result of the analysis indicated that there wasn't a significant difference between the pre- and post-test scores of the control group ($p>.05$) in terms of their target vocabulary knowledge. That is to say, having traditional instruction using textbooks didn't help the students to develop their vocabulary knowledge.

Table 12. The Comparison of Pre- and Post-test Scores of the Control Group

TEST TYPE	N	$\overline{X}$	SD	t
Pre-test	30	63.10	9.97	0.289
Post-test	30	66.70	16.75	

The statistical findings regarding the experimental group are presented as follows (see Table 13). The paired-samples t-test analysis of the pre- and post-test for the experimental group was computed as .000 at the .05 level of significance. This

shows that there was a significant difference before and after the intervention in the experimental group (p<.05). In other words, the group's vocabulary knowledge increased after the intervention when we consider the mean scores.

Table 13. The Comparison of Pre- and Post-test Scores of the Experimental Group

TEST TYPE	N	$\overline{X}$	SD	t
Pre-test	30	63.00	11.76	.000
Post-test	30	75.63	9.85	

*p<.001

The Findings Regarding the Comparison of the Post-test Scores

In order to find out whether the experimental group learned more vocabulary than the control group, both groups were compared according to their post-test scores. This comparison was done through independent samples t-test. Table 14 shows the results of the post-tests for both groups. The mean of the control group post-test scores is $\overline{X}$=66.70, and the standard deviation is SD=16.75 as shown in the table below. The mean of the experimental group post-test scores is $\overline{X}$=75.63, and the standard deviation is SD=9.85. The value of .015 (p<.05) showed that there was a significant difference between the post-test scores of the experimental and control groups. This finding indicates that the groups, which were similar in terms of the pre-test scores, have differentiated from each other in terms of the post-test scores. In other words, teaching vocabulary through tablet computers is more effective than teaching vocabulary through textbooks in terms of the achievement of learners. Therefore, it is obviously concluded that the use of tablet computers in this English course had a positive impact on student success in learning vocabulary.

Table 14. The Comparison of Post-test Results of Both Groups

Groups	N	$\overline{X}$	SD	t
Control Group Post-test Results	30	66.70	16.75	0.015
Experimental Group Post-test Results	30	75.63	9.85	

4.4. Analysis of the Attitude Data

In this study, the attitude data was collected through an attitude questionnaire and a semi-structured interview conducted with the students in the experimental group. The attitude data analysis is given two sub-sections: (1) analysis and interpretation of the questionnaire, (2) students' ideas and suggestions for tablet computers.

4.4.1. Analysis and Interpretation of the Questionnaire

The attitude questionnaire aimed at finding out the preferences of the experimental group on the effectiveness of using tablet PCs in the classroom. It consisted of two sections. The first section consisted of 9 items on information relating to the subjects' computer and language learning experiences prior to the current study. That is, it gives information about the background of the participants. The second section consisted of 20 likert scale statements. The aim of the section was to reveal if students had positive feelings about teaching and learning vocabulary through tablet computers. Another aim of the second section was to discover the specific weaknesses and strengths of using tablet computers for learning English vocabulary items.

The questionnaire was conducted to the 30 studens in the experimental group. 83 % of the students are at the age of 15, and 17% of them are at the age of 16. The proportion of the females in the sample is 53 (n=16), and the proportion of the males is 47 (n=14). This, indeed, gives a balanced distribution in terms of gender. It can be seen from the results that the majority of the participants (73 %) have studied English via any Computer-Assisted Language Learning (CALL) tool before while 27 % of them have not studied English via any CALL tool before. Of all the participants, 60 % of them have been studying English through Notebook, 30 % of them have been using E-book, 7 % of them have been using Podcast, 10 % of them have been using Ipad, 47 % of them have been using Tablet PC, 67 % of them have been using Smart Phone, 70 % of them have been using Interactive Board, 50 % of them have been using Mobile Phone, and 3 % of them have been using Personal Digital Assistant. None of the students chose the option ''Other''. The number of users of various CALL tools are presented below in detail:
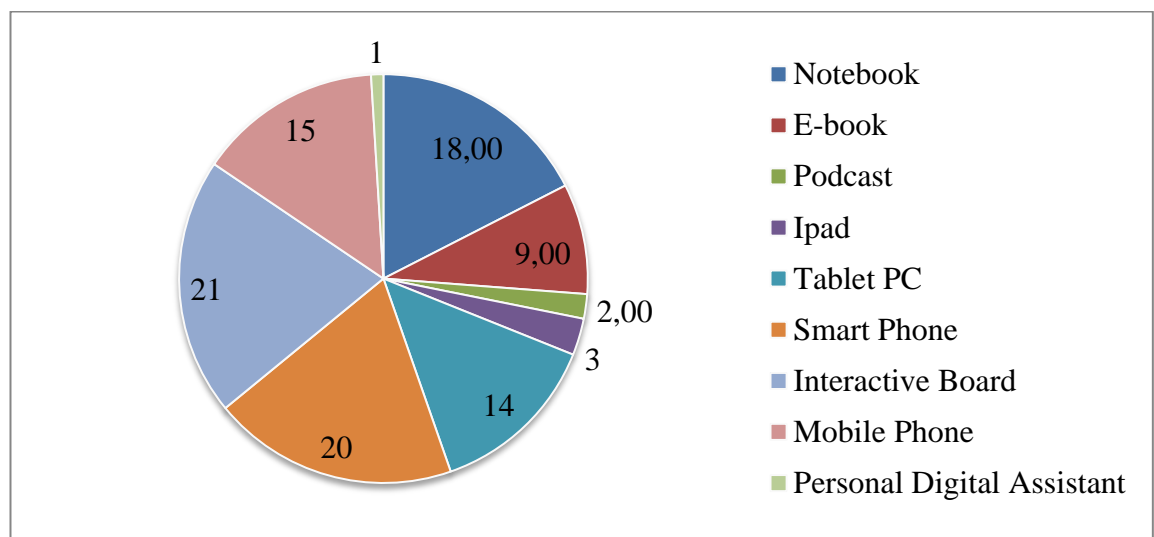
Figure 1. CALL Tools

All of the students own a tablet computer. The frequency they use it is indicated in Figure 2 below:
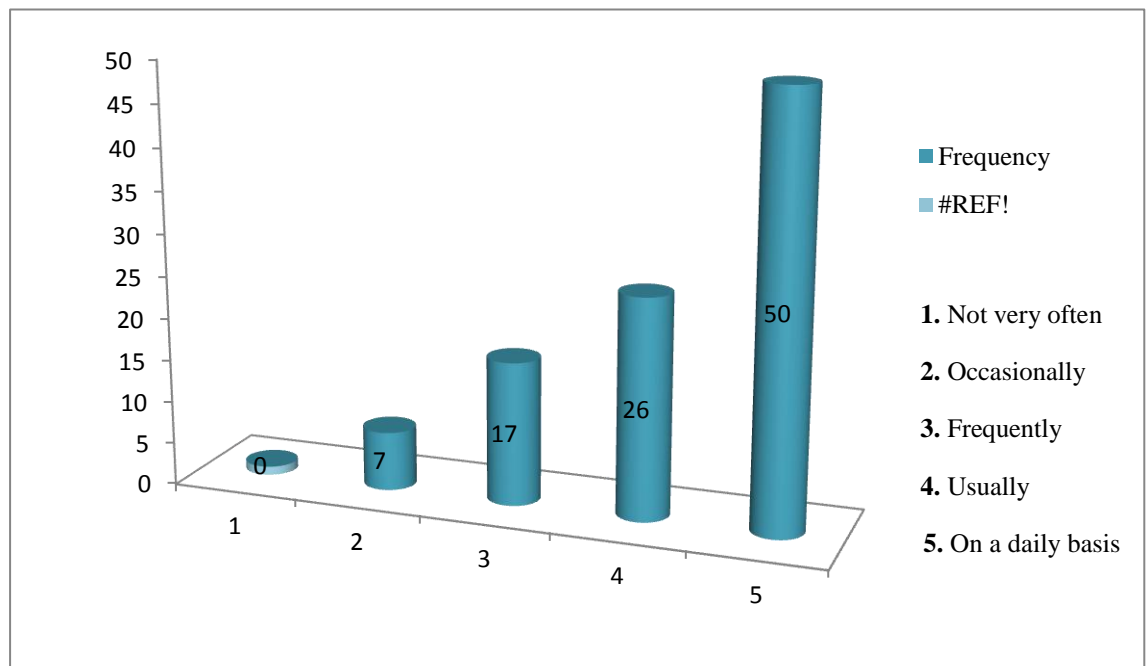
Figure 2. The Frequency of Using Tablet Computers

Of all the students, 47 % of them have used a tablet computer to learn English vocabulary items, and 53 % of them have not. Besides, the students rated their tablet computer skills from ''novice'' to ''expert'' in item 8. The rates are shown in Figure 3 below:
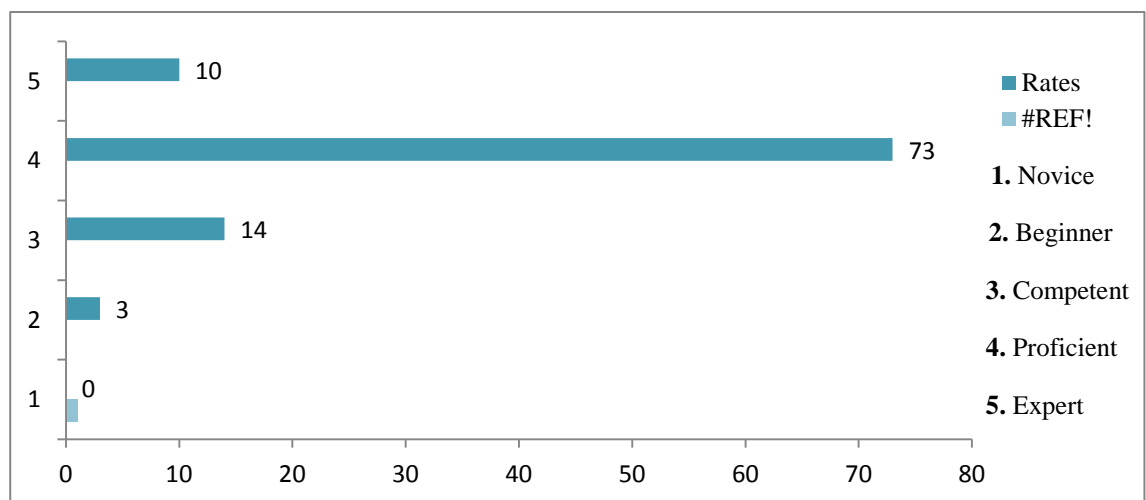
Figure 3. Students' Tablet Computer Skills

Finally, the students rated their overall English vocabulary proficiency in the first section of the questionnaire as shown in Figure 4 below:
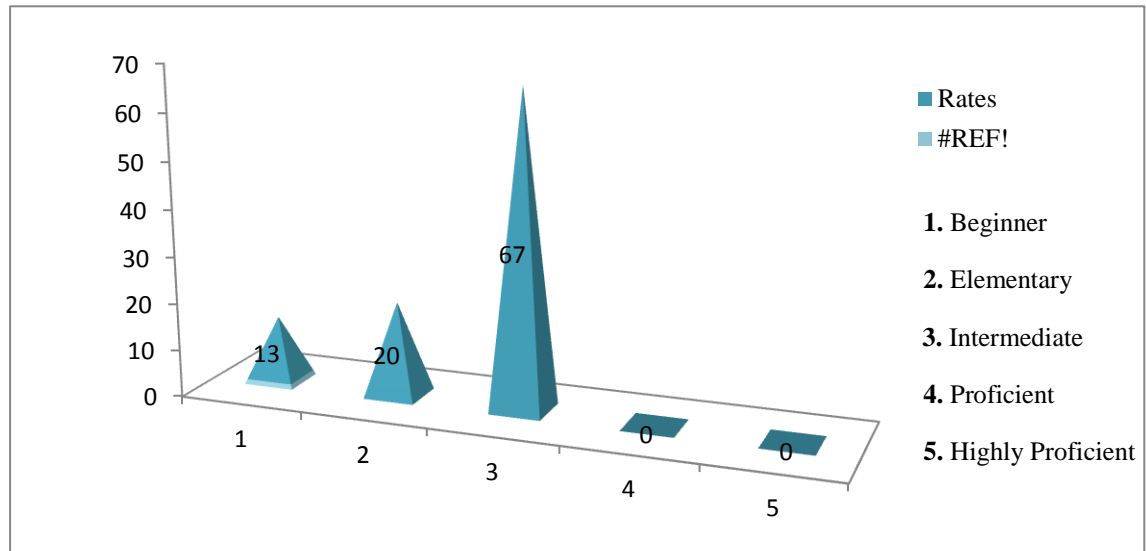
Figure 4. Students' English Vocabulary Proficiency

The items in the second section are about students' attitude towards using tablet computers in learning English vocabulary. This section included a series of 20 items (See Appendix 5 and 6). The results suggest that the students' attitude was quite positive toward tablet computers. As can be seen in Table 15 below, the overall mean for all the items included in this section was 4.1195 on a five-point likert scale, which means that students who have been recently exposed to tablet computers in their vocabulary learning experience have a general positive attitude toward their new experience in general.

Certain items in the second section of the attitude questionnaire had lower and higher means when compared with the general student attitude mean. For example, Item 11 'I benefit more from the group/pair work while using tablet computers.' had the lowest mean score (1.8). For this item, only 6.7 % of the students 'totally' agreed. Similarly, Item 10 'I do not have technical problems in using tablet computers during English classes.', Item 6 'Tablet PCs make me feel comfortable enough to share my

ideas in English.' and Item 7 'Using the tablet PC makes me a better problem-solver while learning English words.' had lower means compared to other items on the questionnaire (2.26, 3.8 and 3.83), respectively. There were also some items which had noticeably higher means than the general mean. Item 20 'I am willing to continue using tablet computers for learning English vocabulary.' had the highest mean score (4.70). This was followed by Item 14 'Using the tablet PC enables me to access extra information more easily during the course.' and Item 19 'Learning vocabulary via tablet PCs provides me a lot of opportunities.' (4.66 both). The percentages and frequency of the answers are presented in Table 15 below:

Table 15. Learners' Attitude Towards Tablet Computers

ITEMS	Totally Agree		Agree		Neutral		Disagree		Totally Disagree		Mean	SD
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
01	10	33.3	14	46.7	4	13.3	2	6.7	0	-	4.06	0.87
02	16	53.4	10	33.3	3	10	1	3.3	0	-	4.36	0.81
03	13	43.3	14	46.7	2	6.7	1	3.3	0	-	4.3	0.75
04	18	60	10	33.4	1	3.3	1	3.3	0	-	4.5	0.73
05	17	56.7	10	33.3	0	-	2	6.7	1	3.3	4.33	1.03
06	10	33.3	9	30	8	26.7	1	3.3	2	6.7	3.8	1.16
07	12	40	8	26.7	5	16.6	3	10	2	6.7	3.83	1.26
08	18	60	10	33.4	1	3.3	1	3.3	0	-	4.5	0.73
09	15	50	12	40	2	6.7	1	3.3	0	-	4.36	0.76
10	5	16.7	3	10	1	3.3	7	23.3	14	46.7	2.26	1.55
11	2	6.7	2	6.6	2	6.7	6	20	18	60	1.8	1.24
12	17	56.7	10	33.4	1	3.3	1	3.4	1	3.3	4.36	0.96
13	16	53.4	12	40	0	-	1	3.3	1	3.3	4.36	0.93
14	20	66.7	10	33.3	0	-	0	-	0	-	4.66	0.48
15	18	60	10	33.4	1	3.3	1	3.3	0	-	4.5	0.73
16	15	50	11	36.7	1	3.3	2	6.7	1	3.3	4.23	1.04
17	16	53.4	9	30	3	10	1	3.3	1	3.3	4.26	1.01
18	19	63.3	9	30	2	6.7	0	-	0	-	4.56	0.63
19	20	66.7	10	33.3	0	-	0	-	0	-	4.66	0.48
20	22	73.4	7	23.3	1	3.3	0	-	0	-	4.7	0.53

Table 16 and Table 17 demonstrate the gender factor in students' attitude towards the use of tablet computers in learning vocabulary. For both tablet computer

proficiency and tablet computer integration, the results between the males and the females did not reveal significant differences. The results of the questionnaire show that the males and the females have positive attitudes toward the use of tablet computers in learning vocabulary. It is implied that both the male and female students are in favour of using tablet computers for learning English vocabulary and agree that tablet computer-based vocabulary learning is a stress-free environment for them. Furthermore, they are willing to continue using tablet computers for learning English vocabulary.

Table 16. Male Learners' Attitude Towards Tablet Computers

ITEMS	Totally Agree		Agree		Neutral		Disagree		Totally Disagree		Mean	SD
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
01	7	50	4	28.6	2	14.3	1	7.1	0	-	4.21	0.97
02	5	35.7	5	35.7	3	21.5	1	7.1	0	-	4.00	0.96
03	6	42.9	5	35.7	2	14.3	1	7.1	0	-	4.14	0.95
04	8	57.2	5	35.7	0	-	1	7.1	0	-	4.43	0.85
05	9	64.3	4	28.6	0	-	0	-	1	7.1	4.43	1.09
06	5	35.6	6	42.9	3	21.5	0	-	0	-	4.14	0.77
07	8	57.2	3	21.4	0	-	1	7.1	2	14.3	4.00	1.52
08	7	50	5	35.8	1	7.1	1	7.1	0	-	4.29	0.91
09	6	42.9	7	50	1	7.1	0	-	0	-	4.36	0.63
10	2	14.3	1	7.1	1	7.1	3	21.5	7	50	2.14	1.51
11	0	-	1	7.1	0	-	3	21.5	10	71.4	1.43	0.85
12	7	50	4	28.7	1	7.1	1	7.1	1	7.1	4.07	1.27
13	8	57.2	5	35.7	0	-	1	7.1	0	-	4.36	1.08
14	9	64.3	5	35.7	0	-	0	-	0	-	4.64	0.50
15	7	50	6	42.9	1	7.1	0	-	0	-	4.29	0.67
16	8	57.2	4	28.6	0	-	1	7.1	1	7.1	4.21	1.25
17	7	50	5	35.8	1	7.1	0	-	1	7.1	4.21	1.21
18	9	64.3	4	28.6	1	7.1	0	-	0	-	4.43	1.09
19	10	71.4	4	28.6	0	-	0	-	0	-	4.71	0.47
20	11	78.6	3	21.4	0	-	0	-	0	-	4.79	0.43

Table 17. Female Learners' Attitude Towards Tablet Computers

ITEMS	Totally Agree		Agree		Neutral		Disagree		Totally Disagree		Mean	SD
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
01	3	18.8	10	62.5	2	12.5	1	6.2	0	-	3.94	0.77
02	11	68.8	5	31.2	0	-	0	-	0	-	4.69	0.48
03	7	43.8	9	56.2	0	-	0	-	0	-	4.44	0.51
04	10	62.5	5	31.2	0	-	1	6.3	0	-	4.5	0.82
05	8	50	6	37.5	0	-	2	12.5	0	-	4.25	1
06	5	31.2	3	18.8	5	31.2	1	6.3	2	12.5	3.5	1.37
07	4	25	5	31.2	5	31.2	2	12.6	0	-	3.69	1.01
08	11	68.8	5	31.2	0	-	0	-	0	-	4.69	0.48
09	9	56.3	5	31.3	1	6.2	1	6.2	0	-	4.38	0.89
10	3	18.8	2	12.5	0	-	4	25	7	43.7	2.38	1.63
11	2	12.5	1	6.2	2	12.5	3	18.8	8	50	2.13	1.45
12	10	62.5	6	37.5	0	-	0	-	0	-	4.63	0.50
13	8	50	7	43.7	0	-	0	-	1	6.3	4.31	1.03
14	11	68.8	5	31.2	0	-	0	-	0	-	4.69	0.48
15	11	68.8	4	25	0	-	1	6.2	0	-	4.5	1.03
16	7	43.8	7	43.8	1	6.2	1	6.2	0	-	4.25	0.86
17	9	56.3	4	25	2	12.5	1	6.2	0	-	4.31	0.95
18	10	62.5	5	31.3	1	6.2	0	-	0	-	4.56	0.63
19	10	62.5	6	37.5	0	-	0	-	0	-	4.63	0.5
20	11	68.8	4	25	1	6.2	0	-	0	-	4.63	0.62

Based on the results of this attitude questionnaire and the support gained from literature, it can be inferred that students in general have a positive attitude towards the effectiveness of using tablet computers in learning vocabulary in English classes where they are exposed to tablet computers for all the language skills, subskills and other school subjects. In conclusion, it can be claimed that most of the experience with learning vocabulary via tablet computers is distinctive, and its results depend on so many contextual and even personal factors. It is impossible to exclude tablet PCs from the field of language learning as they play such an important role in human life in so many ways. A further step may include comparing tablet computer classes and traditional classes for specific language skills and even for specific activities to identify what works better in which environment.

4.4.2. Students' Ideas and Suggestions for Tablet Computers

Understanding whether tablet-based vocabulary learning is effective or not for language learners is not complete without assessing students' ideas and suggestions for this technology. The study of Sharples (2009) stated that a useful way to approach the evaluation of MALL technology is to address its usability (Will it work?), effectiveness (Is it enhancing learning?) and satisfaction (Is it liked?). Following Sharples's suggestions, a semi-structured interview (Appendix 7 and 8) was conducted to assess experimental group students' perceptions of the usability, effectiveness and satisfaction with tablet PCs for vocabulary learning. The interview, which consisted of 5 questions eliciting student opinions on the use of tablet PCs was administered after the participants had been using the tablets for two weeks. A group of 15 voluntary students in the experimental group was interviewed about the effectiveness of using tablet PCs in teaching and learning vocabulary for ''The Movement of Enhancing Opportunities and Improving Technology'', Project Fatih.

The semi-structured interview included five open-ended questions that investigated the suggestions and the ideas of the voluntary participants. The purpose was to obtain specific qualitative information from the students and to gain a range of insights on tablet PCs.

The participants' thoughts and comments on using tablet PCs in the classroom are indicated in the following paragraphs. The first question of the interview was *''What do you think about the vocabulary applications and the programs available in tablet PCs?''*. The answers of the 15 voluntary students are given in detail below:

- There are useful vocabulary game programs to make practices. They are enjoyable and exciting for me. (S1)

- The vocabulary programs make me motivated toward learning new English vocabulary items. (S2)

- They are fun, interesting and enjoyable. (S3)

- They are informative and interactive. (S4)

- They are generally helpful and practical for learning vocabulary in many topics. (S5)

- In my opinion, the applications and the programs are sufficient for practicing new vocabularies. (S6)

- All of them are very fast and magnificent. (S7)

- I think using the applications and the programs for learning new vocabulary items is quite functional and useful. (S8)

- The vocabulary applications and the programs are on the students' level. (S9)

- All the vocabulary programs are very fast and splendid. (S10)

- The vocabulary applications are available in all topics, and I am pleased of learning new words via those applications. (S11)

- Some vocabulary programmes such as PEVOCA, Kep Kelime and Esay Words are so useful and necessary for me to learn new words. (S12)

- They are very useful, but I usually don't have time to use the vocabulary programs available in my tablet PC. (S13)

- I think the vocabulary programs available in tablet PCs depends on the use of them effectively, but I find them quite beneficial. (S14)

- The vocabulary applications and the programs are on the students' level. (S15)

In order to analyze the data collected from the semi-structured interview, the responses of the participants were coded into three variables: positive, neutral and negative. The coded data of each question were analyzed seperately. Table 18 indicates the coded data of the first question below according to the quotes from the respondents:

Table 18. The Coded Data of the First Question

VARIABLES	Frequency	Percentages
Positive	15	%100
Neutral	0	0
Negative	0	0

As shown in Table 18 above, all of the participants have positive thoughts and comments on the vocabulary applications and the programs available in tablet PCs. According to their responses, the vocabulary programs are motivating, enjoyable, useful, practical, functional and informative for them to practice new English vocabulary items. Besides, they find the vocabulary applications and the programs available in all topics and suitable for their level.

The second question of the interview was *''What are the features of the tablet PCs that you like in terms of learning English vocabulary items?''*. The answers of the 15 voluntary students are given in detail below:

- I can play a variety of enjoyable vocabulary games via my tablet PC. (S1)

- The improved handwriting recognition features and the tablet pen help me write the new words easily. (S2)

- The tablet PC runs vocabulary programs and performs on-screen tasks quickly most of the time. (S3)

- The screen of the tablet PC is colourful and 10 inch, and it works without a plug. (S4)

- It is portable, and I can do my English vocabulary homework easily thanks to this feature. (S5)

- Its size is appropriate for me, and it is portable. It has got many beneficial features in terms of instructing English vocabulary. (S6)

- The tablet PC is touch-operated, and it works well. (S7)

- It is a quite useful technology for us to learn vocabulary. Using tablet PCs in English classes is motivating. (S8)

- I don't carry heavy coursebooks anymore thanks to the portability of tablet PCs. (S9)

- Its memory is high, so I can record and save many important and necessary vocabulary knowledge. (S10)

- The tablet PC is convenient, easy to use for learning English vocabulary items, practical and durable. (S11)

- Being able to learn how to pronounce a new word is a great feature for me. (S12)

- It is very fast, and all the time it can connect the internet quickly without any difficulty. (S13)

- I can do my English vocabulary homework on my tablet PC quickly instead of spending a lot of time on the desk at home. (S14)

- All the coursebooks are now loaded in tablet PCs in the format of PDF, and the tablet PC is easily portable. (S15)

Table 19 indicates the coded data of the second question below according to the quotes from the respondents:

Table 19. The Coded Data of the Second Question

VARIABLES	Frequency	Percentages
Positive	15	%100
Neutral	0	0
Negative	0	0

As the second question is about the features of the tablet PCs that the students like in terms of learning English vocabulary items, all of the participants have positive responses for this question. According to the participants there are many beneficial features of the tablet PCs in terms of learning English vocabulary items. To be specific, the tablet PCs are convenient, practical, durable, portable and easy to use for learning vocabulary. Their screen is colourful and 10 inch, so they work without a plug. Furthermore, the students can record and save many important and necessary vocabulary knowledge as the memory of the tablet PCs is high. The students do not need to carry heavy coursebooks since all the coursebooks are loaded in tablet PCs in the format of PDF. Last of all, the students learn how to pronounce a new word thanks to the tablet PCs.

The third question of the interview was *''What are the features of the tablet PCs that you don't like in terms of learning English vocabulary items?''*. The answers of the 15 voluntary students are given in detail below:

- There are no features of tablet PCs that I don't like in terms of learning English vocabulary items. (S1)

- Tablet PCs can cause the eye to eye fatigue, especially when used in a long time. (S2)

- When compared with notebooks/netbooks, tablet PC features in the vocabulary application are not complete as in a notebook/netbook. (S3)

- It is easy to damage a tablet computer, and it becomes out of warranty. (S4)

- The weaker video capabilities of tablet PCs make me annoyed while watching a video about the vocabulary learnt before. (S5)

- Its screen freezes most of the time while learning vocabulary. (S6)

- As the tablet PC has got a weak sound system, I sometimes cannot listen to the words in a video or in a game clearly. (S7)

- Tablet computers are prone to problems like cracks, dead pixels, blown back-light bulbs and bad sensors. (S8)

- The tablet PC freezes most of the time, and its battery runs out in a short time. (S9)

- Most of the tablet PCs do not come with optical drives for use with CDs or DVDs while learning vocabulary. (S10)

- As it sometimes freezes, the vocabulary programs don't work easily. (S11)

- The traditional keyboards are much more comfortable than the touch screens; as a result it may be sometimes difficult to write the words. (S12)

- The screen size is too small in comparison with a laptop, so I may sometimes have eyeache while learning vocabulary. (S13)

- The tablet PC has got a weak sound system, and it may freeze immediately while learning vocabulary. (S14)

- There are no features of tablet PCs that I don't like in terms of learning English vocabulary items. (S15)

Table 20 indicates the coded data of the third question below according to the quotes from the respondents:

Table 20. The Coded Data of the Third Question

VARIABLES	Frequency	Percentages
Positive	2	%13.3
Neutral	0	0
Negative	13	%86.7

As the third question is about the features of the tablet PCs that the students do not like in terms of learning English vocabulary items, most of the participants have negative responses for this question. Only two participants have the same and positive responses for the third questions. According to them, there are no features of tablet PCs that they do not like in terms of learning English vocabulary items. As seen above, the features that are not liked by the 13 students are usually related with physical and technical problems of tablet PCs. The weaker video capabilities, the touch screen, the screen size, freezing and the weak sound system are the problems for the students while learning vocabulary.

The fourth question of the interview was *''What do you think about the use of the tablet PCs in learning English vocabulary items?''*. The answers of the 15 voluntary students are given in detail below:

- It is very practical, realistic and applicable. (S1)

- The use of tablet PCs in learning English vocabulary items should be voluntary but not compulsory. (S2)

- A training on how to use tablet PCs in learning vocabulary should be given by specialists and experienced professionals. (S3)

- There should be more of examples and practical solutions for learning English vocabulary items. (S4)

- It is motivating for me to play vocabulary games and to practice them on my tablet PC after I learn new words. (S5)

- Learning vocabulary via tablet PCs should be done by users genuinely but not superficially. (S6)

- I think the use of tablet PCs in learning vocabulary is beneficial, but it is not sometimes effective and efficient. (S7)

- The use of tablet PCs is helpful in enhancing English vocabulary knowledge or learning unknown words easily. (S8)

- I don't know. (S9)

- It is useful as it contains a dictionary program and some enjoyable vocabulary game applications. (S10)

- I haven't learnt English vocabulary items on a tablet PC before, but now I am so affected by the use of it. (S11)

- Playing vocabulary games in English classes contributes my vocabulary learning a lot. (S12)

- The use of tablet PCs allows for richer interactions both with learners and the instructor. (S13)

- In my opinion, it actually saves time and gives immediate and individualized feedback while learning vocabulary. (S14)

- The use of tablet PCs enhances my engagement in English lessons and enables active learning. (S15)

Table 21 indicates the coded data of the fourth question below according to the quotes from the respondents:

Table 21. The Coded Data of the Fourth Question

VARIABLES	Frequency	Percentages
Positive	9	%60
Neutral	6	%40
Negative	0	0

As shown in Table 21 above, 9 out of 15 participants have positive thoughts and comments on the use of the tablet PCs in learning English vocabulary items while 6 out of 15 participants are neutral about it. According to the positive responses of the students, it is concluded that the tablet PCs are practical, applicable and motivating for them to play vocabulary games and to enhance English vocabulary knowledge or to learn unknown words easily. In addition, the tablet PCs save time and give immediate and individualized feedback to the students while learning vocabulary. According to the neutral responses of the participants, there are some suggestions about the use of the tablet PCs in learning vocabulary. They claim that a training on how to use tablet PCs in learning vocabulary should be given by specialists and experienced professionals. Equally important, the use of tablet PCs in learning English vocabulary items should be

voluntary but not compulsory. Moreover, learning vocabulary via tablet PCs should be done by users genuinely but not superficially.

The fifth question of the interview was *''In what ways does the use of the tablet PCs affect your motivation, attitudes and learning processes and outcomes while learning English words?''*. The answers of the 15 voluntary students are given in detail below:

- My English marks have been high since I started to use the tablet PC in order to learn vocabulary and other language skills on it. (S1)

- Playing vocabulary games via the tablet PC is entertaining and motivating for me. (S2)

- It affected my vocabulary learning process in a positive way in terms of enhancing vocabulary knowledge and practicing new words. (S3)

- It has got both positive and negative impacts on my motivation, attitudes and learning process as it depends on the purpose of using it. (S4)

- Vocabulary games, videos, songs and exercises in the tablet PC have influenced me in a positive and rather educational manner. (S5)

- When I don't use my tablet PC appropriate with the aims of learning English vocabulary, my interest and expectations reduce over time. (S6)

- One of the positive outcomes is the increase of communication and collaboration between teachers and students. (S7)

- I experienced a more joyful and audio-visual lessons as one of the most important constructive consequences of using tablet PCs. (S8)

- Accessing to online resources via tablet PCs plays a key role in the progress of learning vocabulary. (S9)

- Telling my partners about my current vocabulary activities and also discussing coursework increase my motivation in English classes. (S10)

- Having a lack of necessary knowledge and experience for the use of my tablet PC affects my motivation and learning outcome badly. (S11)

- The tablet PC gave me opportunities to take responsibility for my learning vocabulary outside of the classroom. (S12)

- As I take control of my learning experiences, I usually develop my own learning strategies as a consequence of using the tablet PC. (S13)

- By using the tablet PC, I learned how to design vocabulary activities myself. (S14)

- Using the tablet PC improved my vocabulary learning performance, and now I am willing to carry out more vocabulary tasks on it. (S15)

Table 22 indicates the coded data of the fifth question below according to the quotes from the respondents:

Table 22. The Coded Data of the Fifth Question

VARIABLES	Frequency	Percentages
Positive	12	%80
Neutral	1	%6.6
Negative	2	%13.4

As shown in Table 22 above, 12 out of 15 voluntary participants have positive attitudes towards the effects of the use of the tablet PCs on their motivation, learning processes and outcomes while learning English words. They emphasize that they have the opportunities to take responsibility for their learning vocabulary outside of the

classroom thanks to using the tablet PCs. As they take control of their learning experiences, they usually develop their own learning strategies as a consequence of using the tablet PCs. Using the tablet PCs affected their English marks, motivation, vocabulary learning process, communication and collaboration with their teachers and friends in a positive way in terms of enhancing vocabulary knowledge and practicing new words. One participant has a neutral response for the fifth question while the other 2 participants have negative responses for it. Having a lack of necessary knowledge and experience for the use of the tablet PCs affects their motivation, learning processes and outcomes badly. Besides, when they do not use the tablet PCs appropriate with the aims of learning English vocabulary, their interest and expectations reduce over time.

According to the results of the semi-structured interview above, the majority of the participating students were positive in general about learning English vocabulary items via tablet PCs in their schools and classrooms. The participants thought that tablet computers were easy to use, effective for language learning, and they were quite satisfied with the tablet PC technology to enhance their vocabulary learning and performance. These results demonstrate that tablet computers are a potentially promising tool for vocabulary learning.

Although the learners had faced several technical and some other problems with tablet PCs, the students clearly stated that they use tablet PCs in the classroom for different purposes in learning vocabulary at various times as much as possible. In addition, some suggestions may be drawn based on the findings of this interview which aimed at the evaluation of the effectiveness of using tablet PCs in learning vocabulary for the FATİH Project. According to the 15 voluntary students who participated in the semi-structured interview, there is a need to:

✓ Remove the technical obstacles of tablet PCs,

✓ Have data exchange and communication between teachers and students via tablet PCs,

✓ Have the personnel and resources ready on site for technical and pedagogical support to the students using the tablet PCs,

✓ Organize training programs for students with different backgrounds (technological abilities, attitudes towards the integration of tablet PCs in education, age and subject areas),

✓ Plan and conduct long-term studies about the effects of the tablet computers on student vocabulary achievement.

Finally, it is stated that the students' attitudes towards the usability, effectiveness and satisfaction of tablet computers were quite positive. This is a good sign for language teachers and tablet PC practitioners. It indicates that language learners are willing to make use of tablet PCs for their vocabulary learning.

4.5. Conclusion

This study investigated the effectiveness of tablet PCs in learning new vocabulary items compared to traditional language teaching methods based on textbooks and the attitudes of students towards using tablet PCs in learning vocabulary. The results revealed that the achievement scores of the students using tablet computers showed a constant increase whereas those of the control group students did not show such a constant increase. Similarly, the students in the experimental group did better than the students in the control group in the post-tests given during the study. Furthermore, the responses to the questionnaire and the semi-structured interview revealed positive attitudes towards the use of tablet PCs in language learning.

In the next chapter, the findings of this study will be summarized and also discussed in relation to the findings of the previous research. In addition to this, pedagogical implications of the study, limitations of the study and suggestions for further research will be provided in the following chapter.

CHAPTER 5: CONCLUSION

5.1. Introduction

In this chapter, the final section of the study is explained. This part includes the summary of the results, the discussion of the findings, the implications of the study, the limitations of the study, the suggestions for further research as well as the conclusion of the study.

This chapter also presents the assessment of the findings of this study according to the research questions (see Chapter 1). The findings are discussed separately for each research question. Then, the assessment of the study and implications for teaching and learning vocabulary through tablet computers and suggested future studies are presented.

5.2. Summary of the Results

The intention of this study was to compare the effectiveness of using tablet computers in teaching vocabulary to Turkish EFL teenage students with teacher-led vocabulary instruction based on textbooks. Additionally, the study explored how the experimental group students perceived the tablet-assisted vocabulary instruction classes, what they felt about the effectiveness of these classes, and the strengths and weaknesses of using the tablet PC in learning vocabulary.

The results obtained from the findings of this research can be summarised in the following way:

- No significant difference was found in the pre-test scores of the control and experimental groups.

- The students in the control group were taught by traditional language teaching methods based on textbooks. Yet, no significant difference could be found in the pre-and post-test scores of the control group in favour of the post-test.

- There was a significant difference between the pre-test scores and the post-test scores of the experimental group in favour of the post-test. This difference is higher than that of the control group.

- A significant difference was found between the experimental and control groups' post-test scores in favour of the experimental group.

In regards to assessing the findings of this study according to the research questions, the first research question investigated whether there was a difference between the vocabulary learning level of the students using tablet computers before and after the study. The paired-samples t-test analysis of the pre- and post-test for the experimental group indicated that the mean scores were calculated as 63.00 for pre-test, and as 75.63 for post-test. This means that there was a significant difference before and after the intervention in the experimental group ($p<.05$). In other words, the group's vocabulary knowledge increased after the intervention when we consider the mean scores.

The second research question investigated whether there was a difference between the vocabulary learning level of the students using textbooks before and after

the study. Therefore, in order to discover whether the control group's target vocabulary knowledge increased after the intervention, the pre- and post-test scores of the control group were compared (see Table 12). The mean scores of the control group was calculated as 63.10 for pre-test, and as 66.70 for post-test. It was concluded that there wasn't a significant difference between the pre- and post-test scores of the control group (p>.05). Namely, having traditional instruction using textbooks didn't help the control group students to develop their vocabulary knowledge.

The third research question investigated whether there was a difference between the gain scores of the students who used the tablet computers and the gain scores of the students who used the textbooks. The result of the independent sample t-test has shown that pre-test score of the experimental group (M=63.00) is statistically as high as the pre-test score of the control group (M=63.10) (p>.05). That is to say, the participants' target vocabulary knowledge were almost the same before the intervention. Statistical analysis showed no statistically significant difference between the groups according to the results of pre-test (p=.972>.05) which is higher than .05. However, when both groups were compared according to their post-test scores, the results showed that the mean of the control group post-test scores is 66.70, and the standard deviation is 16.75. On the other hand, the mean of the experimental group post-test scores is 75.63, and the standard deviation is 9.85. The value of .015 (p<.05) showed that there was a significant difference between the post-test scores of the experimental and control groups. As a consequence of this, it is agreed that teaching vocabulary through tablet computers is more effective than teaching vocabulary through textbooks in terms of the achievement of learners. Furthermore, the use of tablet computers in English courses affects students' success positively.

The fourth research question investigated whether gender affects students' scores in the pre-and post-test. For this reason, the pre-and post-test results of both groups were evaluated in terms of gender. The male and female participants' target vocabulary knowledge were almost the same in the control group before the intervention. However, after the treatment it was concluded that gender had a significant impact on the vocabulary achievement of the students in the control group. On the other hand, the male and female participants' target vocabulary knowledge were almost the same in the experimental group before the intervention. After the intervention, it was found out that gender had a significant impact on the vocabulary achievement of the students in the experimental group.

The fifth research question investigated the general attitude of the students towards using tablet computers in learning vocabulary. Hence, a likert scale attitude questionnaire with two sections was conducted on the experimental group students after the post-test. The results indicated that the participants thought that tablet computers were easy to use, effective for language learning, and they were quite satisfied with the tablet PC technology to enhance their vocabulary learning and performance. The students' attitudes towards the usability, effectiveness, and satisfaction of tablet computers were quite positive.

The sixth research question investigated whether gender affects the general attitude of the students towards using tablet computers in learning vocabulary. The results of the questionnaire showed that the males and the females had positive attitudes toward the use of tablet computers in learning vocabulary. There were no significant differences between the males and the females. It is implied that both the male and female students like tablet computers, and they are willing to continue using tablet computers for learning English vocabulary.

The last research question investigated the experiences of the students using tablet computers as a vocabulary learning tool. Thus, a semi-structured interview consisting of five open-ended questions was conducted on the 15 voluntary students from the experimental group after the questionnaire. According to the results of the semi-structured interview, the majority of the participants were positive in general about learning English vocabulary items via tablet PCs in their schools and classrooms. The participants thought that tablet computers were easy to use, effective for language learning, and they were quite satisfied with the tablet PC technology to enhance their vocabulary learning and performance. These results demonstrate that tablet computers are a potentially promising tool for vocabulary learning.

All things considered, it is inferred that effectiveness, availability and entertaining use of tablet computers have made them a preferred mean for English vocabulary learning in compared to the textbooks used in English courses.

5.3. Discussion of the Findings

This investigation aimed at finding out the effectiveness of tablet PCs in learning new vocabulary items compared to traditional language teaching methods based on textbooks. The students in the experimental group used tablet computers to learn the 25 target vocabulary items in a tablet-enabled interactive and collaborative environment while the students in the control group used textbooks to learn the target words in a traditional classroom atmosphere. The results of the study revealed that tablet computers, as well as other mobile technologies, are ideal tools to improve learner autonomy and enhance their own learning strategies. Similarly, many studies have compared computer instruction and teacher-led instruction in terms of vocabulary achievement (Khodareza & Tabar, 2012). The findings of this quasi-experimental study

were parallel with the findings of the previous research studies conducted by Chun and Plass (1996), Duquette, Laurier and Renie (1998), Cobb (1999) and Al-Seghayer (2001). They point out that students achieve and retain more vocabulary through the use of CAVI programs in comparison with the teacher-led instruction. However, the studies of Goodfellow and Laurillard (1994), Liu (1998) and Jafer (2003) emphasize that CAVI is not more effective than teacher-led instruction.

The students using the tablet PCs to learn the target vocabulary items were much more successful in the post test than in the pre-test. That is to say, the group's vocabulary knowledge increased after the treatment when their mean scores in the post-test are examined. Yet, the studies of Chan, Hsiao and Lin (2011) who attempted to research the effectiveness of a CAVI program on learning vocabulary revealed that learners studying vocabulary collaboratively through the use of computers were not successful in the vocabulary tests. Nevertheless, they retained more vocabulary than the others and outperformed them in the delayed post-test.

The participants of the present study were only the EFL teenage students of Grade 9 in a public high school. Based on the results of the study, it was concluded that the students using tablet PCs had a positive attitude towards the effectiveness of using tablet computers in learning vocabulary in English classes. However, the participants of the research study conducted by Liang, Long and Yu (2013) were K-12 students, teachers and educational administrators in developed areas in China. Moreover, the results of the study revealed that K-12 students, teachers and educational administrators still need deeper understanding of the new technology's application in K-12 education. They prefer the old technology in teaching and learning owing to their superficial perspectives on the new technology.

This quasi-experimental study compared tablet PCs and textbooks in terms of teaching and learning English vocabulary items in a high school. The findings suggested that the students using the tablet PCs outperformed the students using their textbooks in the post-test scores. In other words, the comparison of both group scores indicated that the students in the tablet PC group could learn and retain more vocabulary than the students in the textbook group. In the same way, the study of Akçayır and Dündar (2012) compared tablet PCs and printed books in terms of the reading speed and reading comprehension skills of the 5th grade primary school students. The students in the control group read ordinary printed books while the students in the treatment group read the same text on an electronic tablet PC display. However, unlike the findings of the present study, this research study found no statistically significant difference between the two groups of students in either reading speed or reading comprehension. Nonetheless, students had a generally favorable attitude towards the use of tablet PCs. They found the use of tablet PCs effective, enjoyable and ergonomic.

In this research study, one of the research questions investigated the gender factor in students' attitude towards the use of the tablet computers in learning vocabulary. As indicated in Table 15 and in Table 16 in the previous chapter, the results between the males and the females did not reveal significant differences in terms of using tablet computers in learning vocabulary. According to the results of the questionnaire, it is concluded that both the male and female students are willing to use tablet computers in learning new English vocabulary items and agree that tablet computer-based vocabulary learning is a stress-free environment for them. However, several studies investigated gender factor and the gender differences in the use of computers. The research studies revealed that males tend to be more interested in

computers than females and that males use computers much more than females (Adam & Bruce, 1993; Collis 1985a; Collis 1985b; Fetler 1985; Fisher 1984; Murray 1993).

Finally, this study found that the attitudes of the students in the experimental group towards the usability, effectiveness and satisfaction of tablet computers as a tool were quite positive, which is similar to the action research project carried out by Chen (2013). The findings of this action research project also indicated that tablet computers are excellent tools for creating an interactive and collaborative environment for language learning, provided that the technological affordances of the device have been fully explored with the students. This is a good sign for language teachers and tablet assisted language learning practitioners. It indicates that language learners are willing to make use of tablet PC technologies for their studies, opening a whole new world of possibilities for language teaching and learning. Tablet PCs, as well as other mobile technologies await our further exploration to better serve both language teachers and students. In this respect, the technological affordances of tablet PCs should be carefully studied and clearly manifested to student users, who usually have a positive attitude towards the usability, effectiveness and satisfaction of tablet PC technologies as language learning tools.

5.4. Implications of the Study

This study provided an evidence for the effectiveness of tablet PCs on the Turkish EFL teenage students' vocabulary learning. Therefore, language teachers may use vocabulary learning programs in tablet PCs to enhance learners' vocabulary. The students learn new vocabulary items through the vocabulary programs such as PEVOCA, Kep Kelime, Net Support School, Learn to Speak English and Easy Words

available in tablet PCs. For this reason, teachers do not need to waste their time in finding and preparing materials for vocabulary instruction.

In the present study, individualized learning, instant feedbacks and animations of the program might be considered the basic features of tablet PCs for the Turkish EFL teenage students' vocabulary learning. The individualized learning promotes autonomy as learners can control over their learning process and learn at their own pace. Hence, they have a responsibility of their own vocabulary learning through the tablet PC. Because of this, the tablet computer can be an integral part of foreign language learning. In addition to using the programs available in tablet PCs for vocabulary instruction in language classes, such kind of programs can be also used by students in their free time outside of the classroom. Thus, students take responsibility for their own learning, and teachers may allow time for other language units and skills.

The programs available in tablet PCs can also be used to improve students' vocabulary pronunciation. In EFL environment, students are rarely exposed to foreign language input out of classroom, and their only exposure to the target language's oral form is their teachers' way of speaking the language in the class. Therefore, these programs expose students to native pronunciation, and as a result this will help to eliminate teachers' pronunciation errors. From this point of view, the use of tablet computers provides a valuable opportunity to EFL learners.

Briefly, tablet computers have become so widespread that their uses have expanded dramatically. The results of this research study suggest that tablet-assisted vocabulary learning may be one type of supplement to the regular curriculum in teaching and learning vocabulary. However, before integrating tablet computers into the curriculum, teachers should be trained on how to use tablet PCs in English language courses efficiently. The teachers should also know the content of the software and

confirm its appropriateness for their students. In addition, financial barriers, availability of software, technical knowledge and acceptance of technology are most common restrictions to use tablet PC programs for English courses so that teachers should be encouraged to use software materials by organizing a training course for tablet PC applications.

5.5. Limitations of the Study

Despite the contributions of this study to learning and teaching vocabulary through tablet computers, it is not free from limitations. One of the limitations of the study is its possible lack of generalizability. It is not expected that findings will be generalizable to other research fields. Although the results were revealing and of practical value to the researcher in this study, cautions must be taken when the results are to be generalized to other settings.

The research was carried out in the light of the findings obtained from a public high school selected as a school for using tablet computers distributed to Turkish EFL teenage students within the scope of the Fatih Project in the 2013–2014 academic year. The study addressed a specific group of 60 students in Nevşehir, Turkey. The number of the participants may be too limited for general assumptions as the investigation was carried out with only 60 participants. That is to say, this research study only reflects the unique results of a specific group's attitude towards using tablet PCs in learning vocabulary. Therefore, more generalizable results could be attained if the study was conducted with more participants in more than one setting.

Furthermore, the research investigates the practical problems related to a specific language learning issue within a local context. Therefore, other language learning issues

or language skills and subskills can be investigated, and a different local context can be chosen.

Last of all, the treatment period of the study, which was comprised of a four-session and eight-hour of instruction within two weeks, was too short to definitely find out the effects of tablet PCs on students' vocabulary learning. A longer time could have been allocated to explore the impact of tablet PCs on learners' vocabulary achievement. Moreover, a delayed post-test would have provided more data on the vocabulary retention level of the two groups.

5.6. Suggestions for Further Research

Recently, the tablet computer continues to expand its sphere of influence through various applications and projects in the field of education. The Fatih Project is one of those projects designed for tablet PCs. It plans to distribute tablet PCs to all students, and it is believed that the effectiveness of tablet PCs will increase in educational environments. In addition, there has already been a significant increase in the preference for tablet computers not only for education but also for personal and professional development.

The rapid evolution of tablet computers has challenged learning and teaching a foreign language as expected, and for this reason new means of instruction are demanded. In language teaching, new approaches, methods, methodologies, strategies and tools should be examined and integrated into the curriculums in a well-organized way. One way for teachers to integrate information technology into their classrooms is through the use of tablet-assisted language learning through software programs, websites or blogs. However, students' attitudes play a great role in the success of materials adapted, developed and integrated into the curriculum.

Another phase of this study could be performed to examine teachers' attitudes toward tablet PCs and their level of utilization and application. Applications of tablet PCs for students can also be examined based on the opinions of teachers.

This research was conducted on the Turkish EFL teenage students within the Fatih Project. A study on different age groups and proficiency levels can be conducted to see whether the use of tablet PCs in teaching and learning English vocabulary has different effects on them. In addition, the fact that both of the groups were not selected randomly is one of the constraints of the study. Hence, further works with randomly chosen groups should be conducted to make findings more generalizable.

In this study, some target words consisted of abstract words. However, future research may examine the effect of using tablet computers on concrete words. They may obtain different results in different word classes. In this research, learners' vocabulary was examined with multiple-choice completion, matching, searching words in a puzzle and putting the letters in the correct order, etc. Further research can also administer listening and speaking tests to examine vocabulary learning.

This study investigated students' vocabulary achievement after they had received four sessions of instruction. A study that examines students' vocabulary learning in a longer period of time may provide more reasonable results.

Once and for all, the present study investigated tablet-based instruction on vocabulary learning. Further studies could examine tablet-based instruction on different language skills such as reading and writing. Therefore, more generalized results may be obtained about tablet-based instruction on foreign language learning.

5.7. Conclusion

This research study aimed at investigating the effectiveness of tablet PCs in learning new vocabulary items compared to traditional language teaching methods based on textbooks. The comparison of both group scores revealed that the students in the tablet PC group could learn and retain more vocabulary than the students in the textbook group. This shows that the tablet PC makes excellent teaching tool, especially in teaching vocabularies. Moreover, it offers language learners major advantages. The use of tablet computers in teaching and learning vocabulary enhances the motivation level of students. They are useful in group activities as well as in imparting individualized instruction, which is rarely possible in a traditional classroom. There are no limitations with regard to practice sessions or time. Students can have as many practice sessions as they wish, repeat the vocabulary tasks any number of times to acquire mastery in vocabulary knowledge and select the material according to their individual requirements. Thus, teaching vocabulary through tablet computers is an efficient learner-centered method.

Tablet PCs provide the information requested in a very short time, almost instantaneously while learning vocabulary. By using tablet computers, students will not only learn more number of words, but also the usage of those words as well. The advantage of using tablet PCs is that students can do the activities at their own pace and time using their own learning styles and strategies. The students think the tablet PC is efficient in developing, in the order of students' preferences, vocabulary acquisition, listening, reading and grammar.

The participants have faith in tablet-based exercises. Considering the fact that in the near future they may have to take placement tests on tablet computers and TOEFL, GRE, GIMAT, they need some practice beforehand. Moreover, tests taken on the tablet

PC actually save time. They are more accurate. They can give immediate and individualized feedback.

To conclude, tablet computers have much to offer when they are integrated into the curriculum with a well- organized fashion. Students have positive attitudes towards it in general. As students have positive attitudes towards the use of tablet PCs during vocabulary learning, they will be more motivated and they more likely to perform better and achieve higher levels of vocabulary acquisition. Finally, teachers should keep in mind that students would need to be proficient both in tablet computers and language in terms of preparing students for the future for their higher education and work. They need to research, write reports, present them and communicate in English via tablet computers. Therefore, it is not only the question of technology for learning English, but also the urge to assist them in developing both life skills.

All in all, it is clear that foreign language teachers will certainly benefit from this study as it may provide useful insights about the strengths and weaknesses of using tablet computers. Furthermore, this study may provide useful guidelines for tablet PC material design by teachers.

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APPENDICES

Appendix 1. A Consent Form

Dear Student,

My name is Fitnat TAVACI GELİR, and I am M.A. student at Erciyes University. I am researching the effectiveness of using tablet computers in teaching vocabulary to Turkish EFL teenage students as a part of the Fatih Project, so I will be studying some efficient and effective ways of vocabulary acquisition that can be part of the instructional program through the use of tablet computers.

This research, which will contribute to a body of knowledge about the effectiveness of CALL through using tablet computers versus textbook based approaches to vocabulary teaching and learning. If you would prefer not to take part, or you would like to withdraw at any time, your class teacher will arrange for you to do some other work. You will not lose any credit, and there will be no penalty.

Any data I collect from pre-tests, post-tests or questionnaires will be treated in strict confidence. To ensure anonymity, no names will be used when I write about the study.

Your consent:

Put √

(……) I agree to take part in the study and that the data to be used.

(……) I do not agree to take part in the study and that the data to be used.

Thanks, in advance, for being willing to consider participation in this study.

Sincerely yours,

Fitnat TAVACI GELİR

Appendix 2. The Report of the Thesis Administration Process

FATİH PROJESİ KAPSAMINDA KULLANILAN TABLET BİLGİSAYARLARIN TÜRK

ÖĞRENCİLERE İNGİLİZCE KELİME ÖĞRETİMİNDEKİ ETKİLİLİĞİ

<u>*TEZ UYGULAMA SÜRECİ RAPORU*</u>

ARAŞTIRMA SAHİBİNİN	
Adı Soyadı	Fitnat TAVACI GELİR
Kurumu/Üniversitesi	Erciyes Üniversitesi
Araştırma Yapılan İl	Nevşehir
Araştırma Yapılan Eğitim Kurumu ve Kademesi	Nevşehir Merkez 2000 Evler Anadolu Lisesi – 9. Sınıflar
Araştırma Konusu	Tez Çalışması (Fatih Projesi Kapsamında Dağıtılan Tablet Bilgisayarların Türk Öğrencilere İngilizce Kelime Öğretimindeki Etkililiği)
Uygulanan Veri Toplama Araçları	Ön test, son test, anket, röportaj
Üniversite/Kurum Onayı	Var (**X**) Yok ( )
Görüş İstenilen Birim/Birimler	9. Sınıf Öğrencileri (9/C ve 9/D)

Yukarıdaki bilgiler doğrultusunda Nevşehir 2000 Evler Anadolu Lisesi'nde gerçekleştirmiş olduğum araştırma uygulaması süreci aşağıdaki gibidir;

1) 12-16 Mayıs tarihleri arasında 9/C ve 9/D sınıflarına **ön test** uygulanmıştır.

2) 19-30 Mayıs tarihleri arasında 9/C ve 9/D sınıflarına **öğretim** yapılmıştır.

3) 02-06 Haziran tarihleri arasında 9/C ve 9/D sınıflarına **son test** uygulanmıştır.

4) 09-13 Haziran tarihleri arasında 9/D sınıfı öğrencilerine **anket ve röportaj** yapılmıştır.

13/06/2014

Fitnat TAVACI GELİR

Araştırmacı / Yüksek Lisans Öğrencisi

Faruk ÇAMCI
Okul Müdürü

Appendix 3. The Work Schedule of the Research Administration Process

ARAŞTIRMA UYGULAMA SÜRECİ ÇALIŞMA TAKVİMİ

Nevşehir 2000 Evler Anadolu Lisesi'nde gerçekleştirilen araştırma uygulaması sürecine ait zaman çizelgesi aşağıdaki tabloda gösterilmektedir:

ZAMAN ÇİZELGESİ ETKİNLİKLERİ (Uygulama Adımları)	12 Mayıs 2014 – 13 Haziran 2014
ÖN TEST (9/C ve 9/D Sınıfı Öğrencileri)	12-16 Mayıs 2014
ÖĞRETİM (9/C ve 9/D Sınıfı Öğrencileri)	19-30 Mayıs 2014
SON TEST (9/C ve 9/D Sınıfı Öğrencileri)	02-06 Haziran 2014
ANKET VE RÖPORTAJ (9/D Sınıfı Öğrencileri)	09-13 Haziran 2014

13/06/2014

Fitnat TAVACI GELİR

Araştırmacı / Yüksek Lisans Öğrencisi

Faruk ÇAMCI
Okul Müdürü

Appendix 4. Pre and Post Tests

NEVŞEHİR 2000 EVLER ANATOLIAN HIGH SCHOOL

A PRE-TEST FOR A THESIS CALLED

''TEACHING VOCABULARY THROUGH TABLET COMPUTERS''

Name   :

Surname :

Class   :

Number :

Date: …./…./2014

*There are two parts in this test on ''Feelings and Emotions''. Do the test**

according to the instructions.

✓ **In Part A, you are supposed to choose the correct option.**

Each question is 1 point.

✓ **In Part B, you are supposed to do the six exercises about ''Feelings and**

Emotions'' according to the instructions given for each exercise.

Each question is 1 point.

GOOD LUCK!

TOTAL POINTS: 100   **Fitnat TAVACI GELİR**

DURATION: 40'   **English Teacher**
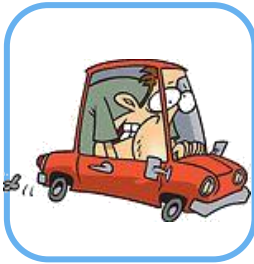
PART A

FEELINGS & EMOTIONS
Choose the correct option.

a) puzzled
b) depressed
c) optimistic

a) proud
b) busy
c) ecstatic

a) frustrated
b) exhausted
c) amazed

a) thirsty
b) loving
c) bored

a) cold
b) hurt
c) hungry

a) ecstatic
b) exhausted
c) embarrassed

a) lonely
b) loving
c) relaxed

a) busy
b) puzzled
c) nervous

a) excited
b) exhausted
c) lonely

a) bored
b) surprised
c) cold

a) disappointed
b) surprised
c) hopeful

a) puzzled
b) optimistic
c) proud

a) amazed
b) worried
c) disappointed

a) motivated
b) relaxed
c) worried

a) frustrated
b) surprised
c) thirsty

a) hungry
b) embarrassed
c) lonely

a) ecstatic
b) hurt
c) busy

a) exhausted
b) relaxed
c) excited

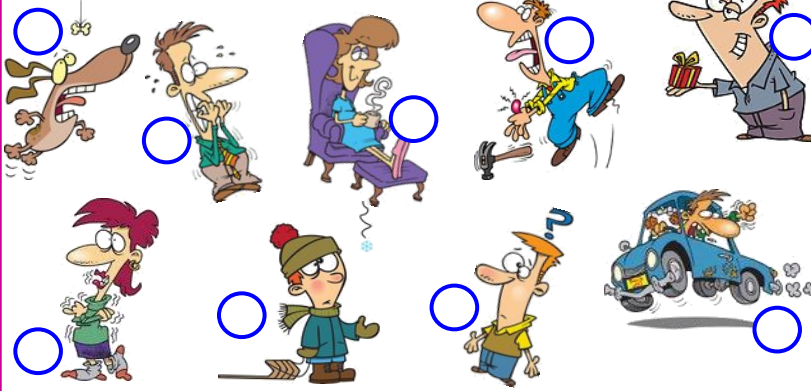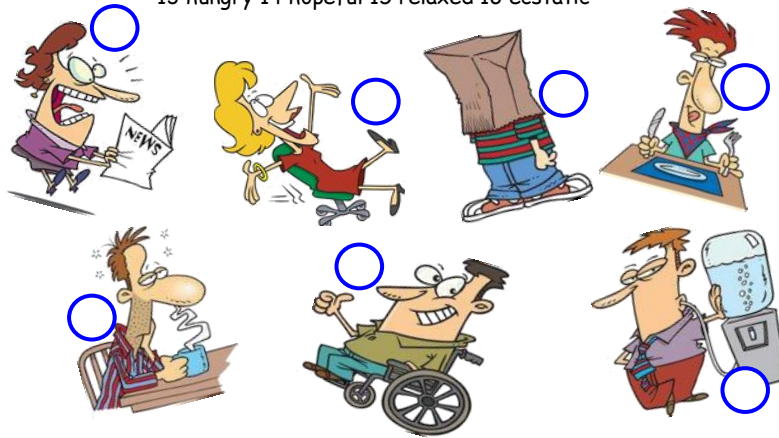a) nervous
b) embarrassed
c) motivated

a) exhausted
b) excited
c) ecstatic

PART B

1. Match the words and the pictures below.

1 thirsty 2 frustrated 3 loving 4 hurt 5 cold 6 exhausted 7 motivated
8 optimistic 9 surprised 10 embarrassed 11 puzzled 12 nervous
13 hungry 14 hopeful 15 relaxed 16 ecstatic

2. Write the feelings and emotions in the correct column.

Positive	Negative

depressed, amazed, worried, ecstatic, proud, frustrated, motivated, loving, lonely, relaxed, nervous, cold, optimistic, bored, disappointed, hurt, embarrassed, hopeful, surprised, excited

3. What feelings are they?

depressed nervous exhausted ecstatic frustrated embarrassed lonely amazed busy bored

1 Unhappy and without hope: _____
2 Feeling annoyed or less confident because you cannot achieve what you want: _____
3 Very tired: _____
4 Not interested, unhappy because you have nothing interesting to do: _____
5 If you feel extremely happy: _____
6 Not able to talk easily to people you don't know: _____
7 If you feel unhappy because you are not with other people: _____
8 With a lot of things that you must do, working or not free: _____
9 You feel extremely surprised: _____
10 You feel worried and anxious: _____

4. Find nine feelings in the word search.

B	O	R	E	D	P	A	H
H	J	K	C	H	R	M	O
L	B	U	S	Y	O	A	P
L	O	T	T	M	U	Z	E
U	G	I	A	T	D	E	F
H	U	R	T	F	W	D	U
L	O	V	I	N	G	A	L

5. Write the Turkish meanings of the words below.

1. embarrassed:
2. frustrated:
3. lonely:
4. excited:
5. proud:
6. worried:
7. amazed:
8. surprised:
9. ecstatic:
10. bored:
11. nervous:
12. exhausted:
13. thirsty:
14. disappointed:
15. optimistic:

6. Put the letters in the correct order.

1 exlader: _____
2 iecedxt: _____
3 vnlgoi: _____
4 ugyrhn: _____
5 adeazm: _____
6 srnevuo: _____
7 opdru: _____
8 rrwidoe: _____
9 spsrudire: _____
10 yeolln: _____

FEELINGS & EMOTIONS

Appendix 5. Questionnaire (ENGLISH)

LEARNERS' ATTITUDE TOWARDS TABLET COMPUTERS

DEAR PARTICIPANT

Please respond to the questionnaire that comprises two sections below. Your preferences on using Tablet PCs in the classroom will give us an idea about the effectiveness of using them in teaching vocabulary to Turkish EFL teenage students for The Movement of Enhancing Opportunities and Improving Technology, Project F@tih.

Thank you for your participation.

Fitnat TAVACI GELİR

English Language Teacher

Erciyes University Postgraduate Student

SECTION I: PARTICIPANT BACKGROUND SURVEY

*Please tick (√) the appropriate choices and provide the necessary information below.

Age: 13 ❏   14 ❏   15 ❏   16 ❏   17 ❏   18 ❏

Gender: Male ❏   Female ❏

Have you studied English via any Computer-Assisted Language Learning (CALL) tool before? Yes ❏   No ❏

If yes, which of the followings have you used?

Notebook ❏	Ipad ❏	Interactive Board ❏
E-book ❏	Tablet PC ❏	Mobile Phone ❏
Podcast ❏	Smart Phone ❏	Personal Digital Assistant ❏

Other _____

Do you own a tablet computer? Yes ❏   No ❏

If so, how often do you use it?

1 ❏   2 ❏   3 ❏   4 ❏   5 ❏   (1=not very often; 5=on a daily basis)

Have you used a tablet computer before to learn English vocabulary items? Yes ❏   No ❏

How would you rate your tablet computer skills?

1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   (1=novice; 5=expert)

How would you rate your overall English vocabulary proficiency?

1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   (1=beginner; 5=highly proficient)

SECTION II: PARTICIPANTS' ATTITUDE TOWARDS TABLET COMPUTERS

People who learn a foreign language assisted by tablet computers have different attitudes towards that learning process. Through this questionnaire, I would like to know how your attitude is towards tablet computers. Please read each statement carefully and indicate the extent to which you agree with the following statements. Please mark your response by circling the number to the right of each statement ranging from 1 (totally disagree) to 5 (totally agree).

ITEMS	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1- It takes less time to learn English words through the use of tablet computers.	1	2	3	4	5
2- Tablet computer-based vocabulary learning is a stress-free environment for me.	1	2	3	4	5
3- Tablet PCs let me work at my own speed independently while learning English words.	1	2	3	4	5
4- Learning vocabulary through tablet PCs provides more feedback in English classes.	1	2	3	4	5
5- It is easy for me to remember how to perform tasks when using the tablet PC.	1	2	3	4	5
6- Tablet PCs make me feel comfortable enough to share my ideas in English.	1	2	3	4	5
7- Using the tablet PC makes me a better problem-solver while learning English words.	1	2	3	4	5
8- The feedback provided by tablet computers is clear.	1	2	3	4	5
9- Tablet computers enable me to accomplish learning vocabulary tasks more quickly.	1	2	3	4	5
10- I do not have technical problems in using tablet computers during English classes.	1	2	3	4	5

11- I benefit more from the group/pair work while using tablet computers.	**1**	**2**	**3**	**4**	**5**
12- Using the tablet PC enables me to practice my vocabulary skills in English classes.	**1**	**2**	**3**	**4**	**5**
13- After taking English courses, I know how to benefit from my tablet PC to improve my vocabulary.	**1**	**2**	**3**	**4**	**5**
14- Using the tablet PC enables me to access extra information more easily during the course.	**1**	**2**	**3**	**4**	**5**
15- Language learning through tablet PCs develops my vocabulary knowledge.	**1**	**2**	**3**	**4**	**5**
16- Teacher's attitude towards tablet PCs largely defines my own attitude.	**1**	**2**	**3**	**4**	**5**
17- Tablet computers can help me with my learning English vocabulary better than other devices.	**1**	**2**	**3**	**4**	**5**
18- Learning vocabulary via tablet PCs is more interesting when supported with visual information.	**1**	**2**	**3**	**4**	**5**
19- Learning vocabulary via tablet PCs provides me a lot of opportunities.	**1**	**2**	**3**	**4**	**5**
20- I am willing to continue using tablet computers for learning English vocabulary.	**1**	**2**	**3**	**4**	**5**

Thank You!

Appendix 6. Questionnaire (TURKISH)

<div style="border:1px dashed">

ÖĞRENCİLERİN TABLET BİLGİSAYARLARA YÖNELİK GÖRÜŞÜ

</div>

DEĞERLİ KATILIMCI

Lütfen aşağıdaki iki bölümden oluşan anketi cevaplayınız. Tablet bilgisayarların sınıfta kullanımı ile ilgili tercihleriniz, FATİH Projesi (Eğitimde Fırsatları Arttırma ve Teknolojiyi İyileştirme Hareketi Projesi) kapsamında lise çağı Türk öğrencilerine İngilizce kelime öğretiminde tablet bilgisayarların kullanılmasının etkililiği hakkında bize fikir verecektir.

Katılımınız için teşekkür ederim.

Fitnat TAVACI GELİR

İngilizce Öğretmeni

Erciyes Üniversitesi Yükseklisans Öğrencisi

BÖLÜM I: KATILIMCI GENEL BİLGİ ANKETİ

Lütfen aşağıdaki seçeneklerden sizin için uygun olanını işaretleyiniz ve gerekli bilgileri yazınız.

Yaş: 13 ☐   14 ☐   15 ☐   16 ☐   17 ☐   18 ☐

Cinsiyet: Erkek ☐   Kız ☐

Daha önce herhangi bir Bilgisayar Destekli Dil Öğrenim aracı ile İngilizce çalıştınız mı?

Evet ☐   Hayır ☐

Cevabınız EVET ise, aşağıdakilerden hangilerini kullandınız?

Dizüstü Bilgisayar ☐	Ipad ☐	Akıllı Tahta ☐
E-kitap ☐	Tablet Bilgisayar ☐	Cep Telefonu ☐
Podcast ☐	Akıllı Telefon ☐	Cep Bilgisayarı ☐

Diğer _____

Tablet bilgisayarınız var mı?   Evet ☐   Hayır ☐

Cevabınız EVET ise, tablet bilgisayarınızı ne sıklıkta kullanırsınız?

1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   (1=nadiren; 5=her zaman)

Daha önce İngilizce kelime öğrenmek için bir tablet bilgisayar kullandınız mı? Evet ☐   Hayır ☐

Tablet bilgisayar becerilerinizi nasıl değerlendiriyorsunuz?

1 ☐   2 ☐   3 ☐   4 ☐   5 ☐   (1=acemi; 5=uzman)

Genel olarak İngilizce kelime yeterliliğinizi nasıl değerlendiriyorsunuz?

1☐   2☐   3☐   4☐   5☐   (1=başlangıç; 5=çok yetkin)

BÖLÜM II: KATILIMCILARIN TABLET BİLGİSAYARLARA YÖNELİK GÖRÜŞLERİ

Yabancı bir dili tablet bilgisayar yardımıyla öğrenen insanlar, bu öğrenme sürecine karşı farklı tutumlara sahiptirler. Bu anket yoluyla, tablet bilgisayarlara yönelik tutumlarınızın nasıl olduğu hakkında bilgi sahibi olunacaktır. Lütfen her bir maddeyi dikkatlice okuyunuz ve aşağıdaki ifadelere ne derecede katıldığınızı belirtiniz. Lütfen 1 (hiç katılmıyorum) den başlayarak 5 (tamamen katılıyorum) e kadar sıralanan her bir ifadenin sağındaki numarayı yuvarlak içine alarak cevabınızı belirtiniz.

MADDELER	*Hiç Katılmıyorum*	*Katılmıyorum*	*Tarafsızım*	*Katılıyorum*	*Tamamen Katılıyorum*
1- Tablet bilgisayar kullanımı yoluyla İngilizce kelime öğrenmek daha az zaman alır.	1	2	3	4	5
2- Tablet bilgisayar temelli kelime öğrenimi benim için stressiz bir ortam oluşturur.	1	2	3	4	5
3- Tablet bilgisayarlar İngilizce kelime öğrenirken kendi hızımda bağımsız olarak çalışmamı sağlar.	1	2	3	4	5
4- Tablet bilgisayar yoluyla kelime öğrenimi İngilizce sınıflarında daha fazla dönüt sağlar.	1	2	3	4	5
5- Tablet bilgisayar kullanırken ödevlerin nasıl yapılacağını hatırlamak benim için kolaydır.	1	2	3	4	5
6- Tablet bilgisayarlar fikirlerimi İngilizce olarak paylaşmamda yeterince rahat hissettirir.	1	2	3	4	5
7- İngilizce kelime öğrenirken tablet bilgisayar kullanmak beni daha iyi bir problem çözücü yapar.	1	2	3	4	5
8- Tablet bilgisayarlar aracılığıyla sağlanan geri dönütler nettir.	1	2	3	4	5
9- Tablet bilgisayarlar kelime görevlerini daha hızlı bir şekilde öğrenmeyi başarmamı sağlar.	1	2	3	4	5
10- İngilizce dersi boyunca tablet bilgisayar kullanırken teknik problemler oluşmaz.	1	2	3	4	5
11- Tablet bilgisayar kullanırken grup ve ikili çalışmadan daha çok yararlanırım.	1	2	3	4	5

12- Tablet bilgisayar kullanımı İngilizce dersinde kelime becerilerimi uygulamama yardım eder.	1	2	3	4	5
13- İngilizce dersinden sonra kelime bilgimi geliştirmek için tablet bilgisayardan nasıl yararlanacağımı bilirim.	1	2	3	4	5
14- Tablet bilgisayar kullanımı ders boyunca ekstra bilgiye daha kolay bir şekilde ulaşmamı sağlar.	1	2	3	4	5
15- Tablet bilgisayar yoluyla dil öğrenmek kelime bilgimi geliştirir.	1	2	3	4	5
16- Öğretmenlerin tablet bilgisayara karşı tutumu büyük ölçüde benim kendi tutumumu da etkiler.	1	2	3	4	5
17- Tablet bilgisayarlar, İngilizce kelime öğrenmeme diğer teknolojik aletlerden daha çok yardım eder.	1	2	3	4	5
18- Tablet bilgisayar yoluyla kelime öğrenmek görsel bilgi ile desteklendiğinde daha ilgi çekicidir.	1	2	3	4	5
19- Tablet bilgisayar yoluyla İngilizce kelime öğrenmek bana çok çeşitli fırsatlar sunar.	1	2	3	4	5
20- İngilizce kelime öğrenmek için tablet bilgisayarları kullanmaya devam etmeyi istiyorum.	1	2	3	4	5

Teşekkürler!

Appendix 7. A Semi-Structured Interview (ENGLISH)

A SEMI-STRUCTURED INTERVIEW ON TABLET COMPUTERS

Dear Participant,

Please answer the questions below. Your thoughts and comments on using Tablet PCs in the classroom will give us an idea about the effectiveness of using them in teaching vocabulary to Turkish EFL teenage students for The Movement of Enhancing Opportunities and Improving Technology, Project F@tih.

Thank you for your participation.

Fitnat TAVACI GELİR

English Language Teacher

Erciyes University Postgraduate Student

1. **What do you think about the vocabulary applications and the programs available in tablet PCs?**

2. **What are the features of the tablet PCs that you like in terms of learning English vocabulary items?**

3. **What are the features of the tablet PCs that you don't like in terms of learning English vocabulary items?**

4. **What do you think about the use of the tablet PCs in learning English vocabulary items?**

5. **In what ways does the use of the tablet PCs affect your motivation, attitudes and learning processes and outcomes while learning English words?**

Appendix 8. A Semi-Structured Interview (TURKISH)

TABLET BİLGİSAYARLAR ÜZERİNE YARI YAPILANDIRILMIŞ MÜLAKAT

Değerli Katılımcı,

Lütfen aşağıdaki soruları cevaplayınız. Sınıfta tablet bilgisayar kullanımı ile ilgili düşünceleriniz ve yorumlarınız F@tih Projesi (Fırsatları Artırma ve Teknolojiyi İyileştirme Hareketi Projesi) kapsamında lise çağı Türk öğrencilerine İngilizce kelime öğretiminde tablet bilgisayarların kullanılmasının etkililiği hakkında bize fikir verecektir.

Katılımınız için teşekkür ederim.

<div align="right">

Fitnat TAVACI GELİR
İngilizce Öğretmeni
Erciyes Üniversitesi Yükseklisans Öğrencisi

</div>

1. **Tablet bilgisayarlarda yer alan kelime programları ve uygulamaları hakkında ne düşünüyorsunuz?**

2. **Tablet bilgisayarların İngilizce kelime öğrenme açısından beğendiğiniz özellikleri nelerdir?**

3. **Tablet bilgisayarların İngilizce kelime öğrenme açısından beğenmediğiniz özellikleri nelerdir?**

4. **Tablet bilgisayarların İngilizce kelime öğrenmedeki kullanımı hakkında ne düşünüyorsunuz?**

5. **İngilizce kelime öğrenirken tablet bilgisayarların kullanımı motivasyonunuzu, tutumlarınızı, öğrenme süreci ve sonuçlarını hangi yönlerden etkilemektedir?**

Appendix 9. Official Permission Document for Administrating the Questionnaire

<div align="center">

T.C.
NEVŞEHİR VALİLİĞİ
İl Millî Eğitim Müdürlüğü

</div>

Sayı : 49405861/44/1917475   14/05/2014
Konu: Anket İzni.

<div align="center">

VALİLİK MAKAMINA

</div>

İlgi : Erciyes Üniversitesi Rektörlüğü, Öğrenci İşleri Daire Başkanlığı'nın 06.05.2014 tarihli ve 14065294-044/6662 sayılı yazısı.

Erciyes Üniversitesi, Sosyal Bilimler Enstitüsü İngiliz Dili ve Edebiyatı Anabilim Dalı İngiliz Dili ve Edebiyatı Bilim Dalı tezli yüksek lisans programı öğrencisi Fitnat TAVACI "The Effectiveness of Using Tablet Computers in Teaching Vocabulary to Turkish EFL Teenage Students Within the Fatih Protect (Fatih Projesi Kapsamında Dağıtılan Tablet Bilgisayarların Türk Öğrencilere İngilizce Kelime Öğretimindeki Etkililiği) " konulu ekte sunulan anketi; İlimiz Merkez 2000 Evler Anadolu Lisesi öğrencilerine uygulamayı talep etmektedir.

Anılan anketin 2013-2014 Eğitim-Öğretim yılında, eğitim-öğretimi aksatmamak şartıyla Okul Müdürlüğünün muvafakatinde yapılması Müdürlüğümüzce uygun görülmektedir.

Makamınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

<div align="right">

Durhan ALIÇ
Il Milli Eğitim Müdür V.

</div>

<div align="center">

OLUR
14/05/2014

Mustafa ATSIZ
Vali a.
Vali Yardımcısı

</div>

CURRICULUM VITAE

Name : Fitnat TAVACI GELİR

Place and Date of Birth : Nevşehir / TURKEY, 22.10.1987

Nationality : Turkish

Gender : Female

E-mail : fitnattavaci@hotmail.com

Educational Background :

2012-2015 (MA) : Erciyes University, Institute of Social Sciences

  English Language and Literature Department

2005-2009 (BA) : Gazi University, Faculty of Education,

  English Language Teaching Department

2001-2005 : Nevşehir 2000 Evler Anatolian High School

1994-2001 : Nevşehir Cumhuriyet Primary and Secondary School

Work Experience :

2014-… : Nevşehir 30 Ağustos Primary School (English Teacher)

2013-2014 : Nevşehir Boğaz Primary School (English Teacher)

2011-2013 : Niğde Şehit Mustafa Memiş Secondary School

2010-2011 : Niğde Ovalıbağ Hasan Süleyman Filibeli Secondary School

2009-2010 : Direzione Didattica Statale ''P.P. Lambert'', Oulx, Turin,

  ITALY (The Comenius Assistant)

Academic Honours   :

Gazi University, The 1st International ELT Conference

November 2013, Ankara, TURKEY

Nevşehir Hacı Bektaş Veli University,

The 1st International Symposium on Language Education & Teaching

May 2015, Nevşehir, TURKEY

Languages   :

Turkish (Native)

English (Advanced) (KPDS Score: 93)

German (Elementary)

French (Elementary)

Italian (Elementary)

Research Interest   :

Teaching vocabulary through CALL

Teaching language skills

Teaching culture

Teaching foreign language