T.C. KOCAELİ ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
YABANCI DİLLER EĞİTİMİ ANABİLİM DALI
İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI

ATTITUDES OF ELT STUDENTS AND IN-SERVICE TEACHERS TOWARDS USING MOBILE ASSISTED LANGUAGE LEARNING

YÜKSEK LİSANS TEZİ

Recep GÜVEN

Kocaeli, 2019

T.C. KOCAELİ ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
YABANCI DİLLER EĞİTİMİ ANABİLİM DALI
İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI

ATTITUDES OF ELT STUDENTS AND IN-SERVICE TEACHERS TOWARDS USING MOBILE ASSISTED LANGUAGE LEARNING

YÜKSEK LİSANS TEZİ

Recep GÜVEN

Doç. Dr. Doğan YÜKSEL

Kocaeli, 2019

T.C. KOCAELİ ÜNİVERSİTESİ

SOSYAL BİLİMLER ENSTİTÜSÜ

YABANCI DİLLER EĞİTİMİ ANABİLİM DALI

İNGİLİZ DİLİ EĞİTİMİ BİLİM DALI

ATTITUDES OF ELT STUDENTS AND IN-SERVICE TEACHERS TOWARDS USING MOBILE ASSISTED LANGUAGE LEARNING

YÜKSEK LİSANS TEZİ

Tezi Hazırlayan: Recep GÜVEN

Tezin Kabul Edildiği Enstitü Yönetim Kurulu Karar ve No: 26/06/2019 - 18

Jüri Başkanı: Doç. Dr. Doğan YÜKSEL

Jüri Üyesi: Dr. Öğr. Üyesi Mehmet ALTAY

Jüri Üyesi: Dr. Öğr. Üyesi Orhan KOCAMAN

Kocaeli, 2019

ACKNOWLEDGEMENTS

It was one of the hardest projects that I had to fulfill throughout my whole life. No matter how hard it was, I have managed to complete it with invaluable help and great guidance of my supervisor Assoc. Prof. Dr. Doğan Yüksel who never hesitated to provide me with his wide range of knowledge and has always been more than a supervisor to me and I cannot thank him enough.

Furthermore, I would like to thank all of the participants who took part in this research. I would not be able to carry out research without their contribution and valuable inputs as well. Their inputs motivated me to carry on with the project and reach to a conclusion.

I also send my sincere gratitude to my friends; Velat, Sinan, İsmail, Duygu, Derya, Alper, Özgür, Volkan and Özge, who were always there to help me throughout those writing and course times and in my worst days I have ever had as well.

Finally, it would be even harder without the love and support of my beloved family, my father, my mother, my sisters and my brothers and my tiny little nieces and nephews no matter how many times I say thank you to them it would not be enough and my lovely wife, Fato, I send you my sincere love for the emotional support you gave me and the patience you showed me for the times, days and nights when I could not be able to watch movies and Turkish series with you. I hope the best be with us for the rest of our life together. Last but not least;

..Thank you my brother Zek..

Recep Güven

Kocaeli, 2019

ABSTRACT

Mobile Assisted Language Learning is a relatively new approach which has been started to apply to educational settings not long ago. This research explored the attitudes of ELT students and teachers towards using mobile assisted language learning (MALL) for teaching and learning purposes.

100 ELT students and teachers took part in the research. Through a questionnaire quantitative data has been collected and the obtained data has been analyzed using SPSS version 22. There were four different sections included in the questionnaire. The first section deals with the participants' attitudes towards using mobile assisted language learning for teaching and learning. The second section explores participants' perspectives on the challenges to the use of mobile assisted language learning for language learning and teaching. The third section investigates participants' perceptions of their current use of mobile devices for their EFL courses. Finally, the last section aims to find out participants' perceptions of their ability to use/develop MALL activities and software.

The results of the research suggest that participants mentioned above mostly have a positive attitude towards using mobile assisted language learning for language teaching and learning. Additionally, it is obvious from the results obtained from the research is that technology awareness and mobile learning awareness of teachers and ELT students are low.

Keywords: smartphones, mobile assisted language learning, attitudes, and ubiquitous learning

ÖZET

Mobil Destekli Dil Öğretimi görece yeni bir yaklaşımdır ve eğitimde uygulanmasına başlanmasından bu yana çok uzun süre geçmemiştir. Bu çalışma İngiliz Dili Eğitimi öğrencilerinin ve öğretmenlerinin mobil destekli dil öğretiminin dil eğitimi için kullanması hakkındaki görüşlerini araştırmaktadır.

Çalışmaya 100 farklı İngiliz Dili Eğitimi öğrencisi ve öğretmeni katılmıştır. İstatistiki veri bir anket aracılığıyla toplanmış ve SPSS versiyon 22 kullanılarak elde edilen bu veri analiz edilmiştir. Ankette dört farklı bölüm bulunmaktadır. Birinci bölüm katılımcıların genel olarak mobil destekli dil öğretiminin dil eğitiminde kullanılması hakkındaki görüşleri incelenmektedir. İkinci bölüm ise katılımcıların görüşlerine göre mobil destekli dil öğretiminin eğitim ortamlarında kullanılmasının önündeki zorlukları araştırmaktadır. Üçüncü bölüm ise katılımcıların sahip oldukları mobil cihazları sınıf içerisinde kendileri ve öğrencileri tarafından yabancı dil öğretimi için kullanımları hakkındaki görüşlerini incelemektedir. Son olarak, dördüncü bölüm ise katılımcıların mobil destekli dil öğretimi için aktiviteler ve yazılım geliştirme becerileri hakkındaki fikirlerini sorgulamaktadır.

Çalışmanın sonucuna göre, katılımcılar çoğunlukla, dil öğretiminde mobil destekli cihazlar kullanılması konusunda olumlu görüşler taşımaktadır. Ek olarak, sonuçlardan da görüleceği üzere öğretmenlerin ve İngiliz Dili Eğitimi öğrencilerinin teknoloji ve mobil öğrenme farkındalıkları düşüktür.

Anahtar Kelimeler: cep telefonları, mobil destekli dil öğretimi, görüşler ve her yerde eğitim

LIST OF ABBREVIATIONS

EFL: English as a Foreign Language

TEFL: Teaching as a Foreign Language

E-Learning: Electronic Learning

MLearning or ML: Mobile Learning

CALL: Computer Assisted Language Learning

MALL: Mobile Assisted Language Learning

ICT: Information Communication Technology

PDA: Personal Digital Assistant

PC: Personal Computer

LIST OF TABLES

TABLE OF CONTENTS

CHAPTER 1

1. INTRODUCTION TO THE RESEARCH

Technology has become an indispensable part of human lives starting from the early 2000s. And thus, this inevitably has led to the use of a concept that takes up a large space in people's daily lives for educational purposes. The implementation of technology into the field of education has gained pace with the arrival of a new generation whose contact with that concept of technology, especially mobile one, is much deeper compared to the previous or current generation of learners. Technology appeared in education in various ways that is true for language teaching as well. One of the ways through which teachers make the most of the learning process is computer-assisted language learning or CALL in a short way. In which learners are expected to carry out specific computer-based tasks to fulfill the requirements of the course or the learning material. As portable devices, namely smartphones, tablets and as a relatively new technology smartwatch have gained popularity among youngsters and adults. So, researchers have become more interested in adopting those devices in teaching processes, particularly in language teaching. One another way of using technology in the language teaching process is mobile assisted language learning so-called MALL. Concept of mobile assisted language learning based on learning using portable devices and also this idea fits with one of the principles taking place under Basic Principles of Turkish National Education that reads "Education everywhere."

This research will investigate perceptions of Turkish ELT students' and in-service teachers' on using mobile assisted language learning as teaching material in their courses and the perceived challenges toward the application of it throughout the learning process based on the advantages and disadvantages of the concept.

1.1. Background of the Research

The world is in constant change. Education is just one of the concepts that are affected by that change. This change could be either in a slow manner or could just be fast. Rapid changes occur in technology thus technologically speaking what is new today could be old tomorrow or sooner. Since the technology has a big part in our lives, researchers, in order to make the most of it in terms of the personal development and education, has started to look for ways to implement it in the educational field. Eventually, the idea of Computer Assisted Language Learning (CALL), which depends on technology, has been brought up. As the technology continued to develop and learning tools became more portable in another word easy-to-carry like smartphones, personal digital assistants (PDA) or other handheld devices namely smartwatches. CALL, as technology has been developed and easily accessed, started to evolve into MALL which is obviously Mobile Assisted Language Learning.

Computer-assisted language learning has different definitions suggested by different researchers. Computer-assisted language learning has been defined by Levy (1997) as "*the search for and research of applications of the computer in language teaching and learning*" (Levy, 1997). Another definition by Beatty (2003) is "any process in which a learner uses a computer and, as a result, improves his or her language" (Beatty, 2003). Both definitions emphasize that computers would play a role in language teaching or learning processes. Moreover, in another definition by Egbert (2005) CALL has been defined as "*learners learning a language in any context with, through and around computer technologies*" (Egbert, 2005). Trying to apply or adapt the technology to the learning environment is not something recent. In the mid-20th century, computers were attempted to use as a tool for not only for language teaching but also for teaching other subjects, namely for physics education, under the name of Computer Assisted Instruction (CAI) (Tafazoli & Golshan, 2014). Richard Atkinson and Patrick Suppes are the names behind the best-known early Computer Assisted Language Learning project that was carried out at Stanford University. Moreover, IBM, a computer-producing brand, was one of the partners of researchers during the project (Atkinson, 1972). Although it was related to mathematical teaching or learning, not the language it evidently inspired researchers

looking for more on implementing technology into the educational field. In the early stages of CALL, the role of the computer was merely considered as a vehicle which conveys the educational material to the learners (Taylor, 1980). As the concept has continued to develop computers started to have different roles in the learning and teaching processes. The name of CALL itself suggests that fostering language learning using computers but this does not mean that learning is the only object to deal with. Thus, behind the scene CALL includes many different aspects of language teaching and learning such as material development, teacher training and language testing (Prandheep Singh, 2015).

Thanks to the development of the technology and relatively reduced sizes of the handheld devices in the recent years Mobile Assisted Language Learning (MALL) as a branch taking place under Computer Assisted Language Learning (CALL) has gained popularity amongst researchers. Not only the sizes and development of the devices inspired researchers to implement mobile technology into the language learning field but also becoming fast-paced spread of mobile devices amongst young-learner groups lead using portable devices for educational purposes. So that, MALL as a sub-area under the field of mLearning has attracted researchers' attention (Viberg & Grönlund 2012). The main characteristics of MALL have also played a role in its road to becoming an important notion in an educational field. Ogata & Yano (2005) state that permanency, accessibility, immediacy, interactivity, situating of instructional activities is some of the main characteristics of mobile learning. Throughout the learning or teaching processes "interaction" especially for language learning is a must which MALL provides. Mobile assisted language learning includes fun factor. Learning takes place and at the same time learners have fun, in the end, this inevitably results in permanency. On the point of the defining mobile assisted language learning there is not only one definition. Researchers, firstly, try to identify the term "mobile". In the MALL context both the educational material and the learners who are taught can be mobile. For example, in the modern and technology literature mLearning defined as a kind of "*e-learning through mobile computational device*s" (Quinn, 2000). However, this technology focused definition narrows down the concept of mobile learning and makes it appear limited (Tétard, Patokorpi, & Carlsson, 2008). In a more learner-centered definition mLearning is defined

as "*any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies*" (O'Malley et al, 2005). In this definition Sharples et al. (2007) defines mLearning as "*process of coming to know through conversations across multiple contexts among people and personal interactive technologies*" (Sharples et al., 2007). Some researchers have limited the technology or technological devices used in MALL. For example, Ogata (2010) claims that lightweight devices namely smartphones, personal digital assistants (PDA) and tablets, which includes computer specifications but lighter and portable, might be used in mobile learning (Ogata, 2010). Moreover, it is obvious that from this categorization, personal computers such as laptops are not considered as one of the mobile devices to be used.

In the literature, there are two dominant approaches in MALL which defined by Kukulska-Hulme and Shield in a seminal overview in 2008 which are content-related and design-related approaches (Kukulska-Hulme & Shield, 2008). Kukulska-Hulme and Shield (2008) claim that studies use one of the approaches above mentioned either content-related or design-related. Studies using design related approach mostly deal with creating and developing learning activities and materials. On the other hand, studies based on content-related approach generally tend to develop a content that focuses on formal contexts linked with the course program instead of creating independent language learning opportunities (Kukulska-Hulme & Shield, 2008). Although these two approaches dominate the mobile learning field; in studies, if the case is creating social and authentic learning environments design-related approach is one step ahead and used more frequently. (Wong & Looi, 2011). With the help of the above-mentioned approaches, researchers have proposed and still proposing a number of ways for the effective use of MALL within the learning and teaching processes. SMS Learning is one of the developments that mobile learning has to enable teachers to help their learners. Via sending text messages learners are able to make the most of their instructors' experiences and thus their exposure to language increases without any location or time limitation (Kukulska-Hulme, 2009).

Briefly, it is clear that language education or education as a general concept is open to new additions in order to meet the requirements of the participants and the current era. Eventually, these additions, obviously, need adaptation to the field. Teachers, who are the ones playing the most important role in terms of learning and teaching, will lead the way to effective implementation and adaptation of technology to language classes via their beliefs, knowledge, and experiences. To accomplish this transition process, it is highly important to know the teacher's attitudes towards technology which is considered to be applied. Having teachers' attitudes and suggestions is known about MALL will definitely help researchers to offer suggestions in order to create a successful implementation of MALL into classes and will give ideas to authorities about how to improve the use of technology in the educational field. For that reason, the main motivation behind this research is to elicit views of language teachers related to using smartphones through their language courses and get recommendations to improve this technological adaptation.

1.2. Statement of the Problem

In the modern world, education is one of the important areas that was affected and is still being affected by technological developments. So, it has been a must to adapt it to the technology itself or integrate the technology into it. Inspired by one of the basic elements of the Turkish education system which reads "Education for everyone and everywhere." mobile learning particularly mobile assisted language learning is a concept about to be implemented into the field. Since the idea is relatively new it is not widely known by the teachers and learners. However, regarding the time learners and teachers spend with smartphones or other portable devices namely tablets or personal digital assistants (PDAs) it becomes vital to make most of the mobile learning for educational purposes. In Turkey, wide-range integration of technological developments in language education has been initiated by Turkish Ministry of National Education (MONE) with software named after "DynEd", that stands for Dynamic Education, in which learners are expected to carry out computerized tests to evaluate their language proficiency. In the years 2007 – 2008 MoNE selected pilot schools to rate the success of the software and of course the effectiveness of Computer Assisted Language Learning. Ostensibly, DynEd was a computer-based application and is a research topic for CALL. In recent years, the

view of MoNE towards the integration of technology into education has been moved "upper sectors" with the advancement of technology. By distributing tablets, a handheld device which can be moved around easily, MoNE has been trying to lay the foundations of Mobile Learning which enables learners to learn without any time or location restrictions. Government-distributed-tablets, via a specialized application, allow teachers to control and observe what learners are busy with during the session when they are used. For this reason, mobile learning knowledge and perceptions, in a way "mobile learning competence" of teachers carry essential importance. What's more, identifying perceptions and thoughts on using mobile technologies in their courses or throughout learning session not only create or increase a technological awareness but also it gives teachers a chance to evaluate their technological competence on Mobile Assisted Language Learning.

Consequently, being relatively a new research area in the English Language Teaching literature Mobile Assisted Language Learning has a bright future ahead since the technology, particularly mobile technologies gain more and more important in people's daily lives. Identifying the needs of teachers and learners and help them to recognize their deficiencies linked with the concept and enlighten them as being the end-users in order to make progress in the implementation of mobile assisted learning in accordance with the feedback and thoughts they provide.

1.3. Research Questions

The main purpose lying behind this research is to determine the perceptions of ELT students and in-service English language teachers towards MALL in Turkish EFL context. This research addresses the following research questions:

1. What is the general attitude of ELT students and in-service EFL teachers towards mobile assisted language learning as a teaching or learning material in Turkish EFL context?

2. What are the perceived challenges of using mobile assisted language learning during learning or teaching processes in Turkish EFL context?

3. What are Turkish ELT students and in-service EFL teachers' perceptions of the current use of mobile devices for their EFL courses?

4. What are Turkish ELT students and in-service EFL teachers' perceptions of their ability to use/develop MALL activities and software?

5. Do attitudes of ELT students and in-service teachers towards using mobile assisted language learning differ significantly?

1.4. Significance of the Research

This research aims to identify the general attitude of learners and teachers towards mobile assisted language learning. Furthermore, it also seeks to define the concept of mLearning and its reflections amongst learners and teachers. Additionally, finding out the possible and actual challenges learners and teachers might encounter and encounter during the integration phase and during the use of mLearning. However, this does not mean that problems constitute an obstacle to use mobile technology inside the classroom. Teachers may find different ways to overcome existing problems and reach successful implementation. Together with the goals mentioned above, mLearning as being one of its kind to break the chains of the traditional learning notions and with its modern learning and teaching ideology, it creates a path to set sail to novel learning opportunities. Providing some guidelines for teachers and learners for better and successful implementation of mobile learning into language field. Last but not least, the results of this research will give learners and teachers a better understanding of how efficient mobile assisted language learning is informal education and help them become aware capabilities of it.

1.5. Definitions of Key Concepts

Software

A program that instructs the computer to perform a specific job (Sharp, 2002).

Online learning

Khan (1997) defines online learning as a novel approach which aims to deliver learning material to learning through the channel of world wide web. (Khan, 1997).

Handheld device:

"A piece of computing equipment that can be used in the hand, such as a smartphone or a tablet PC."

Smartphone:

"A mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access, and an operating system capable of running downloaded apps."

Tablet PC:

"A tablet PC is a portable PC with a touch screen and internal virtual keyboard that is a hybrid between a personal digital assistant (PDA) and a notebook PC."

1.6. Conclusion

In the previous pages, the significance of integrating technology, exclusively mobile technology, into the educational field has been mentioned. As it is stated before mobile assisted language learning is a concept that has been started to be investigated by researchers recently and it addresses the use of various kinds of mobile devices for educational purposes. The main motivation lying behind this is the widespread use of mobile or handheld devices all around the world. Additionally, its ability to enable learners to learn a language either within a context-bounded or context-free situation and formally or informally as well. However, this does not mean that mobile technologies are in perfect conditions. As they are in their infancy there could be some issues to deal with in the future developmental stages. Nevertheless, it is undeniable that mobile technologies might be considered as a good start to support and enhance learning and teaching environments.

After mentioning the general focus of the research on the attitudes of Turkish ELT students and in-service EFL teachers toward the use of Mobile Assisted Language Learning, the next chapter will be about relevant literature of the research itself.

CHAPTER 2

2. REVIEW OF THE RELATED LITERATURE

2.1. Introduction

English, thanks to its important features namely being a lingua franca, has been taking place in many of the school curriculums around the world and for many decades, the situation does not differ in Turkey as well. As a consequence of this, teachers and researchers have been looking for a way to improve the overall quality of teaching English and enable learners to benefit from teaching and learning situations. This chapter aims to give a brief review of the literature related to Mobile Assisted Language Learning. The chapter starts with Brief History and Current Status of English Language Teaching in Turkey. Then it continues with technology use in EFL context with sub-categories of CALL, MALL, and their advantages and disadvantages. The third topic to deal with under this chapter is Technology use in EFL teaching in Turkey and some examples of it. Up next, MALL use in EFL teaching is mentioned with the particular areas of language such as grammar, vocabulary, listening, and pronunciation. Finally, the literature review concludes with MALL use in EFL teaching in Turkey and discussion of particular MALL-related studies carried out in Turkey.

2.2. History and Current Status of EFL teaching in Turkey

Beginning with the early years of foundation of Turkish Republic in 1923 due to an established relationship with Europe particularly with France ended up with a giving particular importance on French as a foreign language on those days (İnceçay, 2012). However, traces of English in the Turkish education system could be found in *Tanzimat Period* which defines second-half of the eighteenth century and those were the times when modernization and westernization movements took place (Kırkgöz, 2005). Prior to the year 1997 Turkish education system had consisted of five years of primary school education three years of middle school education and lastly, three years of high school education. In Turkey, schools are categorized into two state schools and private schools.

Amongst all of the state high schools, Anatolian high schools were considered better schools to research when compared to other high schools. For that reason, researching at an Anatolian High School was achieved through a nation-wide exam which all the candidates, who wanted to research, took. It was a four-year-long education, this was one of the ways how they differed from other high schools, and in the very first year, the main focus was only on English language education and later on particular courses such as mathematics or science were taught in English. Doğançay-Aktuna (1998) states that the first phase of the spread of English initiated in the 1950s and it continued up until 1970s (Doğançay-Aktuna, 1998). Furthermore, Kırkgöz (2005) states that in 1955 the first Anatolian High School was inaugurated and compared to other state high schools, alumni of Anatolian High Schools were more proficient in English although other private and state high schools had compulsory English language courses in their curriculum lack of quality resulted in relatively poor proficiency (Kırkgöz, 2005). By many researchers, namely Kırkgöz (2007), the 1980s was considered as the beginning of the second phase which marks the spread of English. Those were the days when globalization forces influenced Turkey (Grossman et al. 2007) and the number of operating English-medium schools increased (Kırkgöz, 2007). According to MONE records between the years 1987 and 1988, around 193 –consisting of 103 private and 90 state– English-medium schools were opened (MEB, 2006). In the year 1994 with new legislation on the education policy Foreign Language Intensive High Schools were opened they were also known as Super High Schools in Turkey. Those intensive foreign language high schools were accepting student according to their primary school graduation grades students who had diploma grade 4.0 out of 5.0 were able to apply to research in those institutions and they had one-year compulsory English preparation classes and in that prep year curriculum included 30 hours of English courses weekly and 10 hours of other subjects such as Turkish, Music and Physical Education. On higher education side the very first state institute using English as a medium of teaching was Middle East Technical University (METU) established in 1956. (Kırkgöz, 2007). Furthermore, in the case of private universities Bilkent was, the first private university to accommodate English as a medium of learning and teaching in the courses, started up in 1983 (Kırkgöz, 2007) and currently there are 72 private universities and 5 two-year private vocational higher schools and most of them

use English as a main language throughout the education process. (YÖK, 2019). What is more, universities using Turkish as a medium of instruction have to include English as a compulsory course to offer their learners (Kırkgöz, 2009).

English, as a foreign language, has been taught "actively" for over two decades in Turkey. Starting with the educational policy renovation in 1997 through an act 4306 by Ministry of National Education in cooperation with the Higher Education Council, which put eight-year compulsory education into the action. Ministry of National Education proposed a development project that would lead the innovation in English Language Teaching curriculum. With this project length of primary education was extended from 5 years to 8 years. As a consequence, 4th graders have finally met with English language thus a foreign language for the first time had been added to the primary school curriculum (Kırkgöz, 2007). Within the limits of this model learners at fourth and fifth grades had two hours and sixth, seventh and eighth graders had four hours of English courses per week. Moreover, according to Kırkgöz (2007) after the innovation took place in 1997 on the English Language Teaching curriculum communicative approach gained importance in the courses and more learner-centered point of view throughout learning phase was put on and the basic goal became increasing communicative capacity of learners (Kırkgöz, 2007). In the fourth and fifth grades, learners took English courses which mostly depended on playing games, songs, and short listening sections. On the other hand, starting from the sixth-grade foreign language curriculum the aim was to enable learners to achieve learner autonomy and take responsibilities according to their styles and learning preferences (Kırkgöz, 2007).

After that point, the view of authorities towards the English language moved under a gradual change and the idea of being able to be competent at a foreign language became an important notion. In 2005, current curriculum via the attempts of alignments with EU norms, which was renewed in 1997 went under another development. Curriculum 2005 followed a "constructivist approach", included "tasks", "active learning theories" and "multiple intelligences" Additionally, the performance-based assessment was introduced as well. (Kırkgöz, 2007b, 2012). Books are indispensable parts of education and have an invaluable impact on the learning and teaching process. As suggested by Hutchinson and

Torres (1996) "*the importance of the textbook becomes even greater in periods of change*" (Hutchinson & Torres, 1996) major renovations on education policies accommodate also updates on English course books and Turkish, 2005 curriculum is not an exception. (Kırkgöz, 2017). Furthermore, prep classes in the Anatolian High Schools and Foreign Language Intensive High Schools were removed and education length at all the secondary high schools extended from 3 years to 4 years as a result English was spread out to 4 years of education.

Above mentioned facts and changes are the brief history of English as a Foreign Language teaching in Turkey. So, how does EFL teaching occur today in Turkey? With the latest, third in number, curriculum renovation in Turkey in 2012, EFL teaching shaped into what it is today. Up until the education year 2013 – 2014 primary schools, middle schools, and high schools offer 5, 3, and 4 years of education respectively. However, in 2012 with one more curriculum revision "4 + 4 + 4" system has been integrated into the Turkish education system. Within this model, English language teaching was lowered from 4^{th} grade to 2^{nd} grade and reached at the lowest grade of all time. This renovation was made in cooperation between the Ministry of National Education and TUBITAK, a Turkish government institution which carries out scientific research and follows up technological developments all around the world. The main aim of this revision was to integrate the latest developments in the areas of methodology and technology into Teaching English to Young Learners (Kırkgöz, 2017). While modeling the latest curriculum three descriptors of CEFR was taken into account which are learner autonomy, self-assessment, and appreciation for cultural diversity (Kırkgöz, 2017).

Finally, it is clear that language teaching in Turkey is still under development in the search for the best model to enable learners to become competent in a foreign language. This constant development allows teachers and learners in Turkish education eco-system to be hopeful for the future because it is clear that authorities give importance to language education. What is more, authorities are not the only ones to take actions or to be responsible for learners to become good-speakers of English but also teachers have to take responsibilities during the teaching session and should not regard language teaching same

as teaching other subjects and should raise the awareness of their learners that a language is a communicative tool and it should be used for communication.

This chapter has briefly investigated the history and current status of foreign language education in Turkey. Following chapter will be technology use in English as a Foreign Language context.

2.3. Technology Use in EFL Teaching Context

2.3.1. Introduction

Today, technology, from fridges to smart and remote-controlled homes, is readily available in every aspect of people's daily life and it is rare to not to find its traces in education and in also language education as well. Thus, for a country, it is important to keep the pace with the latest developments in order not to stay behind of modern age and lose the ability to compete with other countries, in other words, its competitors, in the international arena. The existence of technology and its wide range applications have led researchers to investigate whether it is effective in teaching and learning processes or not. Stepping out from this question many developed countries invested huge amounts of resources -e.g. money and work hours- in integrating technological developments into the curriculum to innovate teaching and learning processes to meet the requirements of the twenty-first century (Rahimi & Yadollahi, 2011). Computers and internet with a daily-developing technology offer a huge amount of resources and provide learners and teachers with many opportunities, new tools, novel strategies and approaches in teaching and learning field.

The main aim of this section, following brief history and current status of EFL teaching in Turkey, is to investigate of technology use in EFL environments both global and national level two big movements in English language teaching field CALL and MALL will be identified. Each movement will be identified and exemplified under separate topics and their advantages, disadvantages and with their national and global applications of above-mentioned technology integrations to language education.

2.3.2. Computer Assisted Language Learning (CALL)

2.3.2.1. Introduction

Computer-assisted language learning is a field with widespread applications and diversifying nature (Motteram, 2013). CALL has many different definitions propose by different researchers and each definition reflects one aspect of it. The most well-known definition, by Levy (1997), suggests that CALL is "*the search for and research of applications of the computer in language teaching and learning*" (Levy, 1997). In accordance with this definition, Prandheep-Singh (2015) states that this definition acknowledges the diverse nature of CALL in terms of disciplines (Prandheep-Singh, 2015). Important fields related to language education such as Applied Linguistics, Second Language Acquisition, and Artificial Intelligences have made contributions to the development of this language learning technology. Beatty (2003) proposes that CALL is "*any process in which a learner uses a computer and, as a result, improves his or her language*" (Beatty, 2003) this is another definition which somehow deals with the changing nature of CALL. In another definition Egbert (2005) states that learners learn a language via the computer which is around them and learning occurs everywhere regardless of the context. (Egbert, 2005). Furthermore, in line with the definition of Egbert (2005), Hubbard (2014) claims that learning environment or the learning context may differ and from classrooms to cafés or kind of public places could be used to learn (Hubbard, 2014). Integrating CALL into language teaching not only includes the computers but also it consists of "*the networks connecting them, peripheral devices associated with them and a number of other technological innovations such as PDAs (personal digital assistants), mp3 players, mobile phones, electronic whiteboards and even DVD players, which have a computer of sorts embedded in them*" (Hubbard, 2009). As a result, stepping ahead from these definitions and statements it is clear that computer-assisted language learning (CALL) is one of the renovative ways to enhance language learning and teaching environments and move side by side with the technology in the educational field.

In the following headings History of Computer Assisted Language Learning, its different applications and finally advantages and disadvantages of CALL will be discussed.

2.3.2.2. History of Computer Assisted Language Learning

The history of CALL, in other words making use of computer in the educational field, roots back to the years of the 1950s and 1960s. Starting from that date until today CALL has evolved into a synergetic bond has been constructed between technology and pedagogy (Stockwell, 2007). In the 1950s mainframe computers used for language teaching were only at the university campuses where research departments were located and they were large in size. (Beatty, 2013). Computers were not that affordable due to their size and price so that the time allocated to CALL was not considered high. However, this was not a complete barrier lying in front, especially for military purposes required fund and time to allocate were provided to find a better way to teach a language (Beatty, 2013). Stanford University, Dartmouth University and the University of Essex were three leading institutions which used CALL for language teaching purposes although the language taught was Russian other languages were also included (Ahmad *et al.*, 1985).

When it is the years of the 1970s and 1980s there were discussions on categorizing computers. The computers were divided into three categories Main Frame, room-sized, computers, minicomputers, today what servers are and microcomputers, which are used as everyday devices today namely Personal Computers, Desktops. In 1975 microcomputers were started to be sold in kit forms (Merrill et al., 1996). Processing powers and storage capacities of these computers were extremely low and were not that useful in reality. However, high-end mainframe computers were still in use at research labs of universities for CALL research. To make the most of developing technology in language teaching Video-disc technology started to be used which replaced old videotapes. Video discs had better pause, advance one frame at a time feature and better visual quality as well (Beatty, 2013). Macario, Montevidisco and Interactive Digame are three well-known early examples of videodisc technology. Video discs later on replaced by CD-ROMs (Compact Disk- Read Only Memory) then due to capacity issues they were

also replaced by DVD-ROMs and let learning material creators have a larger capacity to fill in.

The 1990s were considered as the years when interactive games to teach a foreign language appeared. In 1996 a game called "Who is Oscar Lake?" published. It specifically based on point-and-click mechanics and teaching a language through videos as well. The program includes many languages other than English such as Spanish, German and French. With the videos in which narrative speakers included users are expected to solve the mystery of Oscar Lake using clues and clicking the correct answers. Other than practicing reading and listening program allows users to record and listen to their own voice as well.

In the 21st century technology has gone even further. From fridges to televisions many household items are now able to connect to computers. For making the most of these advantages and creating an interactive learning environment in language teaching, technological adaptations into the educational field gained more pace. With a starting point of tactile interactions Nintendo Wii, a console which depends on this type of interactions was developed and through the games, learners have started to learn with an ingredient of "lots of fun" (Beatty, 2013). Moreover, in addition to tactile interaction, virtual reality (VR) and augmented reality (AR) have appeared and linked with the state-of-the-art technological developments listed above new learning programs such as Mondly and Argotian were released to enhance learners' language learning experiences. Furthermore, the development of speech recognition programs such as Dragon NaturallySpeaking enables learners to listen and give self-feedback on their speaking abilities. Additionally, on the point of improving listening skill, podcasts stored in popular internet music hubs, such as iTunes which found on Apple devices, allow learners and language teachers to reach the native language with ease. Beatty (2013) states that a program called Earworms has been developed which accompanies learners while learning and make them learn through music (Beatty, 2013). Earworm, in its dictionary reference, means that repetitive part of a music and listeners can easily recall that part. In the program referenced above specific language forms, namely phrases, collocations or target vocabulary, are repeated over and over again as a result learning occurs. However, this

type of learning as in Earworms more likely suggests an audio-lingual approach for introducing the sound system of the target language (Beatty,2013). With the introduction of Web 2.0 tools designing learning and teaching activities become a lot easier. Besides making preparing materials easier Web 2.0 tools also made it easy to access the prepared learning material. Social networking sites, such as Facebook, Twitter or even YouTube or online encyclopedias like Wikipedia enhance learners' creativity and help them meet with the natural type of target language anywhere anytime.

Brief history and current status of was discussed above. In the literature, there are two well-known categorizations related to CALL. One of them was created by Warschauer (1996, 2000 and 2004) and the other one was by Bax (2003). All two categorizations divide the history of CALL into stages. For example, Warschauer (1996) typology states that there are three stages of CALL which are Behavioristic CALL, Communicative CALL, and Integrative CALL.

Table 1 given below summarizes all three stages of CALL from Warschauer's (1996) typology which was reviewed and edited by Warschauer in 2000.

Table 1: The Three Stages of CALL

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

(Based on Kern & Warschauer, 2000; Warschauer, 1996; Warschauer, 2000; Warschauer, 2004)

2.3.2.3. Behavioristic CALL

Between the 1950s and 1960s education was affected by behaviorist theory the main teaching philosophy was behaviorism. As a result, behavioristic CALL was created in the 1960s and it became popular and used widely in 1970s. In the behaviorist, approach learning was considered as a result of mere responses to an outside stimulus (Duffy, McDonald & Mizell, 2005). The audio-lingual method was in favor and computers in this stage of CALL was seen as mechanical tutors which never lets learners research at their own pace and learning was mostly depended on repetition and imitation. For teaching and learning activities repetitive language drills, also known as drill-and-practice activities, were used. Drills were generally included patterns of dialogues.

PLATO (Programmed Logic for Automatic Teaching) project is the very first example of behavioristic CALL which was first started in the University of Illinois in 1959 (Levy, 1997). In that project, the main role of computers was no different than it was in Behaviorism thus computers were considered as providers of mechanical types of vocabulary and grammar drill and free up some more in-class time for expressive exercises (Hart, 1981 cited in Levy, 1997). In addition to the PLATO project, first ever created CALL software had focused on repetition drills and practices as well as the learning and teaching approaches listed above.

2.3.2.4. Communicative CALL

As the technology continued to develop through the time CALL approaches also continued their evolution to adapt to the needs of the age and the learners as well. The 1970s and 1980s correspond to the second stage of CALL which was regarded as Communicative CALL (Warschauer & Healey, 1998). According to Warschauer & Healey (1998) communicative CALL corresponds to "*cognitive theories which stressed that learning was a process of discovery, expression, and development*" (Warschauer & Healey, 1998). On the contrary to behaviorists, cognitivists claim that learning occurs through mental processes, not as a result of a stimulus-response chain. Moving forward from the influence which stemmed from constructivism and communicative language teaching defendants, it was suggested that communicative CALL should include activities and exercises which mostly focus on using forms rather than on forms themselves.

(Gündüz, 2005). Moreover, Han (2009) stated that pursuers of this approach suggest that CALL software should foster intrinsic motivation and should enable interactivity both between learner-computer and learner-learner. (Han, 2009). In accordance with this Gündüz (2005) states that in communicative CALL it has less importance what learners does with the computer when compared to what they do with each other during the times working via computer (Gündüz, 2005). Furthermore, in the early 1980s, a new invention borrowed from corpus linguistics was developed that were computer-based concordances in which learners enabled themselves to see the meaning of the words or expressions with their usage in a text it directly occurs (Tafazoli & Golshan, 2014). Chapelle (2001) claims that this type of vocabulary activity program helps learners to find answers to the questions related to vocabulary use and grammatical collocations by themselves (Chapelle, 2001).

One of the benefits of these kinds of programs is that it helps learners learn in a meaningful context and let learners build their own knowledge (Warschauer & Meskill, 2000). Furthermore, in terms of learner autonomy and hands-on learning, development of those programs was based on a skills practice "with a greater degree of student choice, control and interaction" (Davies, 2005).

2.3.2.5. Integrative CALL

In the 1990s effectiveness of communicative CALL arouse criticism among researchers. As the communicative language teaching started to become old along with the cognitive view of language teaching and leaving its place to socio-cognitive view of teaching, instructors and teachers started to include the teaching of language skills, such as listening, speaking, reading and writing, in language teaching curriculums (Tafazoli & Golshan, 2014). With an influence stemming from socio-cognitive theory in second language acquisition, this time in language teaching more emphasis was put on using language in an authentic context (Lee, 2000). During this phase of CALL, integrative teaching and learning approaches, namely task-based, project-based and content-based approaches, appeared in language teaching (Warschauer & Healey, 1998).

Multimedia and Internet, also known as the World Wide Web (WWW) constitute the basis of integrative CALL. Warschauer (1996) states that in the mid-1990s the most

well-known multimedia technology were CD-ROMs (Warschauer, 1996). One of the main benefits of these multimedia packages is that it includes activities that aim to integrate and teach all four skills and learners have a high degree of control over the learning material through the learning process which fosters learner autonomy (Davies, 2005).

2.3.2.6. Advantages and Disadvantages of CALL

As CALL has continued to attract attention in the field of language learning and teaching many different researchers to consider various advantages and disadvantages related to the concept. Learning a language involves learning the culture of the target language as well. In accordance with this, Singhal (1997) suggests that technology lets learners access the target culture easily thus resulting in more work on the cultural background of a language and influences on one's world view (Singhal, 1997). Furthermore, computers having an internet connection provide learners with some of the activities that give positive or negative feedback by automatically correcting or praising their online exercises (Lee, 2000). Learners using internet and e-mail technology easily find the natural and real context of the target language by sending and getting emails from real people who are the native speakers of the language that is being learned (Warschauer, 1995). Moreover, computers and internet also made it easy to contact with the people all around the world cheaply, quickly and reliably (Cabrini Simões, 2007). In addition to benefits listed above, Han (2008) suggests that with the help of developed CALL software learners could be classroom independent and they can learn anywhere at any time and additionally providing more learning materials for learners. (Han, 2008). What is more, exercises in CALL can be devoted to particular skill if learners need to work on specific language area activities focusing on it are developed.

In addition to the above-mentioned advantages of CALL, there are some drawbacks of the concept as well. Singhal (1997) suggests that finding needed information on the internet cannot always be easy (Singhal, 1997). In addition to Singhal's (1997) suggestion, Corrêa (2001) states using the internet might be time-consuming and learners may easily lose track and get lost (Corrêa, 2001). Furthermore, although most people readily have an internet connection to use for CALL purposes, sometimes connection problems might

occur and as a result, access to resources becomes impossible (Coghlan, 2004). Moreover, according to some researchers cost that is devoted to the use of CALL is another disadvantage to be mentioned. Lai (2006) reports that computers are needed in the first place for a CALL practice in language education and some of the students at schools might have financial problems thus resulting in lack of a number of computers to be used (Lai, 2006). The attitudes of teachers and learners constitute another drawback in the application of CALL.

Abu Seileek & Abu Sa'aleek (2012) states that teachers mostly tend to use traditional ways to teach since they do not feel comfortable with the new technology (Abu Seileek & Abu Sa'aleek, 2012). Additionally, on the point of learners, they need to have basic skills of computers in order to easily participate in CALL software, if not there could be difficulties in adapting computers in learning progress (Abu Seileek & Abu Sa'aleek, 2012). What is more, another disadvantage of CALL stems from teachers' or learners' lack of training or skill. Romano (2003) claims that technology itself does not improve learning and teaching environments teachers should also accept and adopt technology as a tool for teaching (Romano, 2003). However, most teachers are not competent in using computers and the Internet as effectively as required (Abu Seileek & Abu Sa'aleek, 2012).

Finally, it is clear from the listed advantages and disadvantages above CALL, from finances to learner and teacher attitudes, could be considered as a multidimensional concept in language teaching and all of them should be carefully diagnosed and identified before applying the concept into teaching and learning environment.

2.3.3. Mobile Assisted Language Learning

2.3.3.1. Introduction

As technology has become a company of people more and more everyday educators seek for ways to implement it into education and enable learners to make the most of it and have the opportunity to use it for their benefits in the classroom and in other learning situations. Along with this, some researchers believe that mobile learning or specifically mobile assisted language learning is predicted as one of the next stages in education and in language learning (Stockwell, 2012). Mobile Learning, in line with its name, mostly

happens outside the classroom namely while waiting for a friend or while traveling around (Stockwell, 2008) which signals a leap forward from a conventional computer-assisted language learning concept which mostly occurs within the boundaries of a classroom (Stockwell, 2012). Supporting Mobile Assisted Language Learning Prensky (2001) coined the term "Digital Natives" which defines a generation who were born into and brought up in an environment that is surrounded by technology and to use it for educational purposes would be perfectly normal for them (Prensky, 2001). Those generation named after "Digital Natives", as Prensky suggests, are good at dealing with more than one task at a time and able to get information from different channels and sources at the same time. Digital Natives can do searches and research on a specific topic using their portable devices while commuting or in the times when they travel with any kind of transportation vehicles. In line with the specific traits of Digital Natives, mobile learning requires the capability of multitasking and learners need to interact with multiple sources, such as carrying out their mobile phones and negotiating with other learners, during this type of learning is carried out. However, there was some criticism related to Digital Natives by Prensky (2001) such as the one stating that multitasking may not necessarily be one of the traits particular to those Digital Natives (Bennett, Maton & Kervin, 2008). Additionally, technology would be less intimidating for learners who are/were always within the perimeter of technology and technological devices and mobile learning would make sense if the learners have their own tools to carry out the process (Stockwell, 2012).

During the discussions on the effectiveness of mobile assisted language learning two of the main questions are "What is a mobile device?" and "what makes it different from other devices?" To provide answers for the both questions, Trifonova et al. (2004) suggests that for a device which could be recognized as mobile it should be small, autonomous and unobtrusive and should accompany people in every moment during their daily lives and could be used for educational purposes (Trifonova et al., 2004). This statement briefly states that mobile devices are with us all day long and they are within users' range whenever they need them regardless of time and place. However, our routines determine to use mobile devices for educational purposes to a certain extent. For example,

if a person carries a mobile phone all the time in his/her pocket uses of that for education is possible (Stockwell, 2012). Even though, mobile phones are popular for a relatively short period of time compared to other technological devices it is found out that they nearly become 100% rate of use amongst university-age students in Japan (Thornton & Houser, 2005). Mobile phones are not only ready-to-use learning devices but also thanks to their smart features such as bringing global social media anywhere and anytime to users' fingertips where natives who use language as their mother tongue and authentic language uses could be accessed. Furthermore, as Stockwell (2012) suggests with their ability to boot up in no time they are perfect tools for learning in even the shortest period of time (Stockwell, 2012).

Mobile devices are divided up into categories according to their certain characteristics and features that they include. In the next section, some of the leading mobile devices in the technological field will be listed and explained.

2.3.3.2. Types of Mobile Devices

Technology related to Mobile Learning changes from day to day and mobile devices used for learning by teachers and learners are reaching a wide range. Recent mobile devices ranging from PDAs to smartphones to laptop computers and tablet PCs many devices are amongst the state of the art. All of the devices mentioned above have different characteristics and each of them has their own potential to carry out processes for what they are used. Between these devices, the physical differences are also present. Their screen sizes, weights, storage capacity, and processing power, depending on the CPUs they have, varies as well.

2.3.3.2.1. Personal Digital Assistants (PDAs)

PDAs, kind of mobile devices and also called as handheld PCs, work as a personal information manager. Beatty (2003) states that PDAs are small hand-held PCs which can be used for storing information, namely documents, databases and calendar entries (Beatty, 2003). Viken (2009) suggests that PDAs can also work as a mobile phone, fax machine and a web browser (Viken, 2009). Input for PDAs is provided through a specific pen designed for the device itself not with keyboard, unlike today's computers.

Furthermore, some of the PDAs are equipped with a technology which recognizes users' voice. PDAs could be found in the list where devices are shown to be used for learning purposes (Clough et al. 2007; Corlett et al., 2005; Song & Fox, 2008; Trinder, Magill & Roy, 2005). However, they are equipped with fewer people when compared to the number of mobile phone owners (Cavus & Ibrahim, 2009; Chinnery, 2006). Song & Fox (2008) aimed to use PDAs for vocabulary teaching. Their goal was to enable their participants to use PDAs for learning new vocabulary. PDAs were used as a virtual dictionary and to connect to the internet (Song & Fox, 2008).

2.3.3.2.2. Smartphones

In the early 21st century personal digital assistants started to lose their popularity when the smartphones having custom operating systems such as Android or iOS began to appear (Smith, 2010). Smartphones, developed recently, have touch screens which let users interact with them without needing anything which resulted in gaining an impressive amount of attraction among language teachers and learners because of the easiness of use they provide. Not only the bigger touch screens enable mobile phones to become popular but also some services like short messaging service (SMS) which lets users send and receive text messages regardless of the time and place. Additionally, most of the phones have support for multimedia messaging service (MMS) through which users send and receive visuals, sounds, and text (Collins, 2005). Although mobile phones are used widely around the world the percentages of discovering their potential for possible learning tools by the users is low (Pettit & Kukulska-Hulme, 2007).

With the increasing number of studies on using mobile phones for learning, purposes created awareness on their potential. For instance, Kiernan and Aizawa (2004) performed one of the first studies which researching effects of using mobile phones in a learning context. They put MALL approach and task-based learning together and tried to draw attention to the number of possible advantages of mobile phones in language learning. Mobile phones, for some researchers, were recognized as useful vocabulary learning tools. Lu (2008) states that mobile phones are more effective vocabulary learning tools when compared to conventional pen and paper-based vocabulary learning.

It is obvious from the studies mentioned above mobile phones were/are more frequently used tool for learning in comparison with the other types of MALL devices. There are several reasons behind this frequent-use. First one is the wide usage of those devices all around the world. The other one is related to the characteristics of mobile phones namely being relatively cheap, light and more ergonomic and practical than the other devices.

2.3.3.2.3. Tablet PCs

Laptop computers as the technology developed further and further left their place to another kind of computers but smaller in size and much easier to carry around which are tablet PCs. Although tablets take a lot more place in people's daily lives as Savaş (2014) suggests using tablets for educational purposes at its infancy stage (Savaş, 2014). The many reasons behind this situation it is partly due to lack of training of instructors of teachers and on the other side of the medallion financial issues stem from the institutions themselves (Savaş, 2014). There is a limited number of studies that show tablets' effectiveness in the educational field this is mainly because of the lack of research in using those devices for the purpose of education. In research, Xiang, et.al (2009) state that tablet PCs provide a more flexible way of presentation to the teachers and instructors letting them edit and revise instantly (Xiang, et. al., 2009). Furthermore, some other studies related to using of tablet PCs in education suggest that tablets free learners from any physical barriers of assessment (Siozos, et.al, 2009) and facilitate collective discourse capabilities (Alvarez, Brown, and Nussbaum, 2011).

Today's modern tablet PCs do as many things as a standard laptop computer does. Recently developed ones can carry out many processes from reading e-mails to browsing the internet. With those developments at all Li et al. (2010) considers that learners have recently found a new replacement for their personal computers which is along with them anytime and anywhere (Li et al., 2010). Ubiquitous Internet network enabled a rapid increase of tablet PCs and with the increase in Internet network rise in the number of people using tablets gaining pace. According to the research carried by Johnson (2013) in the US, one out of five Americans has a tablet device (Johnson, 2013). Nowadays

researchers are looking for ways to make the most of this increase in technology usage for educational purposes especially in language teaching.

2.3.3.3. Benefits and Drawbacks of MALL

Every new technology especially if implemented into the educational field it has certain advantages and disadvantages. Here in this section, the advantages and disadvantages of mobile assisted language learning will be discussed.

2.3.3.3.1. Benefits of Mobile Assisted Language Learning

Since the emergence of mobile devices and witnessing their widespread availability all around the world researchers have started to look for the ways to implement this new technology into education. Many of the studies which were carried out in the field have either supported or disregarded the effects of mobile assisted language learning.

Anxiety is one of the major problems in a learning environment. Several studies have shown that learners should have an optimal level of anxiety in order to keep learning in good condition. Neither low nor higher levels of anxiety could be followed by a better learning experience. Kessler (2010) reported in one research which was carried out in a lab using mobile devices for fulfilling speaking tasks reduced self-consciousness and anxiety (Kessler, 2010). Not only mobile devices help learners reduce their anxiety but also some research shows that learners, especially young learners, show positive attitudes towards using MALL in learning tasks which resulted in improved motivation and as a conclusion, language production has increased (Ally, Tin & Woodburn, 2011, Al-Shehri, 2011).

In language teaching developing a good attitude towards learning material and taking responsibility for one's own learning are two important concepts. Some studies were related to benefits of MALL from the eyes of the learners and some of them have sought how learners perceived the concept. Some of the research that asked learners about the effectiveness of mobile learning in language classes reported improvement in their learning (Camarena & Facer, 2009; Gromik, 2012). Furthermore, in terms of taking responsibility for the learning, in other word autonomy issue, it is reported that students

feel more autonomous and playing an active role while learning with mobile devices (Al-Jarf, 2012; Palfreyman, 2012).

MALL studies generally based on one of the commonly shared features of mobile devices which is mobility. This feature lets learners accomplish their learning anywhere and anytime. Pachler, Bachmair and Cook (2010) state that mobile devices helped learners learn a second language without sticking to the boundaries of the classroom (Pachler, Bachmair & Cook, 2010). This is only possible with the aid of mobile devices like mobile phones or tablets. Learners can take it outside the classroom and continue learning where they left beforehand.

Devices that are used and expected to be used in mobile assisted language learning are widespread which constitutes another advantage for using those devices for educational purposes. According to statistics provided by the International Telecommunications Union (ITU), there are more than eight billion mobile cellular subscriptions all around the world (ITU, 2018). Additionally, Wexler (2014) states that about 95% of teenagers aged between 12 – 17 are the active users of the internet (Wexler, 2014). According to the definition, portability and widespread ownership make it easy for learners to achieve ubiquitous learning which aims to accomplish learning anywhere and anytime (Barnhart & Pierce, 2011). With the widespread ownership of those devices and developed internet connection network which surrounds all around the world, it has been possible to reach the other side of the world in the blink of an eye and communicate with people easily. So, it is easy to have the chance to have a conversation with a native speaker of a target language which in turn without any doubt results in an improvement in one's language.

The fun factor takes up an important place in language learning, particularly with the younger generation of learning groups. Using mobile assisted language learning, mobile devices and related mobile applications such as "Kahoot!" it is possible for an instructor to bring that fun into language teaching and push learners to move on with learning outside the institution as well. According to the research carried out by Kennedy and Levy (2008) if the instructors use mobile devices and applications during learning

process students tend to find those type of instructions more motivating and funnier (Kennedy & Levy, 2008).

In addition to the benefits listed above, mobile devices namely PDAs can act as a virtual dictionary and learners easily access those dictionaries then find related information, they look for quickly which saves time as well. Song & Fox (2008) find out that learners can use PDAs as complex and internet-supported dictionaries that help them develop their own vocabulary and pronunciation skills (Song & Fox, 2008). Additionally, in research by Sato, Matsunuma, & Suzuki, (2013) learning L2 vocabulary through using mobile devices boosts automatization of vocabulary recall and thus learners save cognitive resources which they can re-apply afterward for reading which results in successful L2 reading comprehension (Sato, Matsunuma, & Suzuki, 2013).

Benefits of using mobile devices and mobile-assisted language learning in foreign language learning have been mentioned. Although there are many other benefits that have not been mentioned in this section, it is indispensable that the concept has some drawbacks and difficulties while using in the language learning situation. Next section will be dealing with the drawbacks of MALL.

2.3.3.3.2. Drawbacks of Mobile Assisted Language Learning

Mobile assisted language learning has a number of benefits that is a fact. Along with that many benefits, there can be some drawbacks of the concept for both learners and instructors and those drawbacks are stated in numerous studies. Although many of the studies carried out reveal the benefits and potential advantages of mobile assisted language learning there are some studies that report drawbacks and show that it is not as beneficial as it is perceived.

Smartphones are the common mobile assisted language learning devices to be used in theory. One of the drawbacks of MALL is related to physical features of smartphones. Some smartphones have small screen sizes and sometimes learners have difficulties with the input method. Thornton & Houser (2002) states that smartphones cannot be regarded as beneficial tools for learning they are merely tools to practice and review (Thornton & Houser, 2002). Additionally, smartphones are not effective tools for teaching and

practicing particular skills such as writing due to their screen sizes do not constitute enough space to write (Chinnery, 2006).

Mobile devices namely, PDAs and Laptops are considered as modern tools to be used in mobile assisted language. However, those devices come with certain drawbacks related to them. One of the mentioned drawbacks is related to the network connection and thus Wishart (2008) states that finding an internet connection outside the institutional boundaries would be a problem for their users. Additionally, battery life and limited memory of PDAs have been found out to be drawbacks of personal digital assistants which often seriously interrupt learning processes (Corlet et al., 2005).

Using and integrating mobile devices into language classroom or any educational environment require certain skills and proficiencies. In order to use technology instructors, need to be tech-enthusiast in their whole life and they need to understand that technology is changing and developing every day so that they are required to increase their technological knowledge up to the latest changes in the technology (Koehler & Mishra, 2008). If the instructors do not have related technological background, they tend not to use technology especially mobile devices and technology in their classrooms and this can be regarded as the main reason behind their choice (Koehler & Mishra, 2008).

Under the umbrella of the concept of mobile assisted language learning have been and continue to be carried out researches from many different aspects and as a result, there are different conclusions related to its advantages and disadvantages. The benefits and drawbacks of a relatively new concept have been mentioned in this section. In the next section, related studies in mobile assisted language learning field will be mentioned.

2.4. Studies related to MALL use in EFL teaching

Researchers since its first appearance have shown a significant interest in mobile assisted language learning studies and always have aimed to add more strong information to the field by carrying out new research. In the past 20 years according to records, there has been a total of 345 publications and the majority of those project implementations publications are related to mobile technology in education (Burston, 2013). Mobile assisted language learning briefly involves delivering many sorts of learning material by

making most of the mobile devices and their applications. Kukulska-Hulme and Jones (2011) many different language learning activities are supported through different materials namely short messaging service (SMS), multimedia messaging service (MMS), internet browsing, audio and visual materials (Kukulska-Hulme & Jones, 2011). In this section, there will be brief information about studies which aim to explore the effectiveness of mobile assisted language learning concept.

Moreover, in a more recent research Dashtestani (2013) in Iran explored attitudes of 168 EFL teachers towards implementing mobile assisted language learning into education. According to research results, it was found out that teachers showed moderately positive attitudes towards using mobile learning in their classrooms. Additionally, participants stated that they perceive some of the challenges during the application of the concept. Moreover, it was found out that teachers do not have sufficient ability to develop related mobile learning software. In another research which aimed to measure attitudes of teachers towards using mobile assisted language learning for educational purposes Goad (2012) found out that there is a positive correlation between teachers use of mobile technology and their ability to this technology for teaching purposes efficiently.

Short Messaging Service, SMS for short, is one of the applications that is used to implement mobile devices into language education. Alemi, Sarab, & Lari (2012) carried out research in Iranian context to prove positive effects of mobile learning. Researchers send 320 head vocabulary to the learners for 16 weeks and 10 words a day then improvement of the learners has been compared with control group learners, who studied above-mentioned vocabulary using conventional dictionaries, via posttest and delayed posttest. The results suggested that there were no significant differences between the groups on the posttest. However, learners who received vocabulary-included SMSs did way better on the delayed posttest which gives an important overview of the recall effects of mobile technology.

In addition to short messaging service, there is another messaging service which supports sending and receiving aural and visual content via mobile phones which is MMS that stands for Multimedia Messaging Service. With an attempt to integrate this type of

messaging service into language education Saran, Seferoglu, & Cagiltay (2008) conducted research trying to use MMS for vocabulary teaching to L2 learners. Throughout this research researchers, at specific periods, three times a day for 10 weeks, 120 total words sent out to 32 prep school learners. The system they used let learners see the definition of a word, its pronunciation and some other audio-visual elements to aid vocabulary teaching and final quizzes for learners to take. As a result of research, they found out that learning vocabulary by using MMS has been very effective and learners return very positive attitudes as well.

Tablet PCs are also regarded as effective tools in mobile assisted language learning approach and many studies conducted to prove their effectiveness. Tablets often come with bigger screen size when compared to smartphones which makes it easy for learners to use it for educational purposes. Brown (2012) investigated the possible benefits and drawbacks of using tablet devices (iPad 2 particularly) in L2 English classrooms in the Japanese EFL context. The main aim of the research is to find out when the learners participate in such assisted tasks, namely using tablets for learning, whether their L2 digital literacy developed or not. Additionally, researchers investigate learners' perceptions of tablets to see whether or not they could be successful tools in the design of a constructivist learning environment.

Providing portability of aural and visual materials is one of the advantages of mobile devices. Learners could bring videos or audio recordings wherever they go and are able to research using them regardless of time and place. Additionally, some features of smartphones such as their ability to record videos create new chances for better learning. Gromik (2012) carried out research in Japan using cell phone video recording feature as a language learning tool. In this research learner for 14 weeks used video recording feature of their mobile phones to improve their L2 English speaking skill. 9 university students take part in the research and they record themselves for 30 seconds each week. As a result of the research, participants showed a 46% increase in word production and a 37% increase in word articulated per second. Additionally, all of the learners agreed that weekly smartphone videos improved their speaking skills in English.

Learner autonomy, in other words, one's taking responsibility for his or her own learning, is an important factor for the best language learning to occur. Al-Jarf (2012) performed research to investigate the relationship between student autonomy and mobile technology in oral skill acquisition. The report mentions the effects of using self-research MP3 L2 English Lessons (TalkEnglish) on oral skills development of learners in Saudi Arabia. 44 learners received only classroom instruction which constitutes the control group and 46 of them in the experimental group used TalkEnglish for 12 weeks in addition to conventional instruction. As a result of the research, it was found out that the experimental group outperformed control group in speaking and listening skills which were the effect of additional exercise they did through using TalkEnglish.

To summarize, there are many studies and also a growing number of studies related to mobile learning field continuously. As it is clear from the above-mentioned studies mobile technologies are mostly profitable for learners in the language learning context. MALL is relatively new in many aspects and still, require more research to become an alternative approach to be used in language classrooms. In this section, some of the research What's been discussed and in the next section past and current trends in EFL teaching in Turkey from the technological perspective will be mentioned.

2.5. Technology Use in Turkish EFL Context

In the history of teaching English as a foreign language in Turkey, as mentioned briefly in previous sections, there have been different approaches and various trends to create the best learning environment for learners. In an attempt to accomplish this goal researchers are looking for ways to implement technology especially mobile technology into English learning curriculum.

The most well-known technology implementation movement into Turkish education is called FATIH project. The name "FATIH" stands for Movement of Enhancing Opportunities and Improving Technology. Prior to FATIH project, conventional technological devices namely overhead projectors were used to carry out teaching and learning processes. BTYK, The Supreme Court for Science and Technology, gave the Scientific and Technological Research Council of Turkey (TUBITAK) the role of

determining scientific and technological policies for twenty-years. Furthermore, TUBITAK (2004) "Vision Report 2023" states that information and communication technologies will be improved significantly starting from the last quarter of the 20th century.

The birth of FATIH project has realized as a result of renovations and studies mentioned above. A great deal of investment has been put into this project so that it has an important role in the Turkish educational policies. The first leg of the project has been started on November 22, 2010, and actually planned to be completed in five years at most but has not been completed yet. First two years considered as planning, preparation and piloting time.

The last three years were divided into three stages given below:

Phase 1	**Phase 2**	**Phase 3**
High Schools	Vocational Schools	Primary and Pre-School Period

Table 2. The Planning of FATIH Project in Education in terms of Infrastructure and Hardware. **Source:** Yavuzalp, Derya Gürer, Curaoğlu, Durmuş, Akayoğlu, Bahar, & Tekinarslan, (2015).

Turkish Ministry of National Education defines FATIH project as a concept that provides equal opportunities in education and improves technologies in schools to use information, communication, and technology (ICT) tools efficiently for learning and teaching processes in Turkish State Schools. With this project, it was meant to fulfill the classes and schools all around Turkey starting from the high schools with Interactive White Boards and providing learners with tablets. Additionally, the Ministry of National Education (MONE) accompanied in-service teachers with training in order to enable them to use Information, Communication and Technology tools in classes for learning and teaching processes. In addition to the activities mentioned above, FATIH project involves five main components determined by the Ministry of National Education:

- providing equipment and software substructure;
- providing educational e-content and management of e-content;
- effective usage of the ICT in teaching programs;
- in-service training of the teachers;
- conscious, reliable, manageable, and measurable ICT usage.

After making technology available in every part of the country it has become easy to implement technology into language education. With the FATIH project, some of the software for teaching foreign language gained importance and DyNED is one of them. DyNED is developed by a team of educators of language, computer programmers, neurologists, and artists. DyNED is a language teaching software which is considered as the most effective and the very best all around the globe. DyNED as a program collects everything related to language teaching and transfers it to the computers and thus learners gain autonomy and learn a foreign language on their own. Learning English through DyNED will be permanent and meaningful to the learners since the program sends signals to more sensory organs and this appeals to the learners with different learning styles in regards to multiple intelligence theory (DynEd English Language Education System, 2010). In 2007, in an attempt to solve problems in foreign language instruction in Turkey, MONE tried to implement DyNED in Turkish Education System. The main reason for implementing this kind of software is that many researchers claim that language education in Turkey is a complete failure. Tılfaroğlu and Öztürk (2007) suggest that knowing and speaking a foreign language is an important and essential concept today and language education in Turkey is in a problematic situation (Tılfaroğlu & Öztürk, 2007).

In addition to DyNED, Ministry of National Education has developed a content called Education and Information Network, EBA for short. EBA was created to use information technologies effectively which 2was set up in classrooms under the umbrella of the FATIH project. On EBA, aural and visual materials related to teaching and learning processes are uploaded and through a network, connection learners are able to access that material. The main aim of the EBA project is providing a successful integration of technology into education and using information technologies efficiently at school, home or anywhere in the world to complete learning and teaching processes. Furthermore, on

EBA learners and other individuals who are enthusiastic about creating content have permission to produce and publish so that a content pool is being created (MONE, 2016).

Technology use in Turkish EFL Context has been briefly mentioned in the following section MALL studies related to field and learners' attitudes toward MALL concept will be discussed.

2.5.1. MALL Studies and Learner Attitudes in Turkish EFL Context

In the previous pages, studies from all around the world related to mobile assisted language learning have been mentioned. In this section, the topic will be narrowed down and research reports from the Turkish educational context will be discussed.

Vocabulary is an indispensable part of a language, learning a language starts with a learning target language's vocabulary. Nowadays, technological devices are used not only for communication but also used to fulfill the educational needs of individuals. With the invention of mobile phones, researchers aimed to implement them into education and the advantages of mobile phones in teaching and learning situation is a fact. They simply provide chances to learn for learners in anywhere and anytime. In a research Başoğlu and Akdemir (2010) compared the effects of mobile assisted language learning on learning new vocabulary. Sixty students, who are researching at Compulsory Preparatory Programs, from universities located in the Black Sea Region participated in the research. As a result of the research, it was found out that learning through mobile devices as a tool for learning vocabulary is more effective than conventional vocabulary learning techniques.

In another research Çakır (2015) investigated the current use of mobile phones in a foreign language context in which English is used as the main language for teaching and learning by ELT students. Furthermore, the research provides attitudes of ELT students on using mobile phones as an educational tool for language learning purposes. In the research, there were 193 students from the English Language Teaching department of Erciyes University, Kayseri. Results suggested that most of the participants prefer to implement mobile phones as instructional tools in their teaching and learning experiences. Additionally, it is also found out that how could language teachers apply suitable

approaches to learning and teaching processes to make them meaningful and communicative. What is more, participants, ELT students, also stated that they make use of mobile phones for teaching when they graduate and start working. To sum up, researchers suggest that technology-based language teaching activities could be integrated into the foreign language teaching curriculum.

Tablet PCs are one of the mobile devices that are mostly used in mobile assisted language learning and have been distributed to most of the high school students as a part of FATIH project as mentioned above. By putting distributed tablet PCs at the center Dündar and Akçayır (2013) carried out research with high school students. Attitudes, expectations, and views of 206 students from four high schools were investigated within the FATIH project in Turkey. Aims of the research were determine if there is a significant difference among genders on tablet PC use and the effects of computer and internet on learners' attitudes towards tablet PC usage. Additionally, eight teachers, from pilot schools, also interviewed related to the implementation of mobile technology into classes and both positive and negative aspects were analyzed. As the results of the research suggest that learners have positive attitudes towards using tablet PCs in a teaching environment. What is more, it was identified that there was no significant difference improves female and male learners on tablet PC usage.

The other research in mobile learning field searched for the opinions of teachers who are teaching at the preparatory program of three state universities in Turkey. Hişmanoğlu, Erşan, and Çolak (2017) aimed to evaluate preparatory program teachers' attitudes towards mobile assisted language learning. In the research 50 EFL preparatory program teachers attended and they were expected to answer a five-part survey as well as five open-ended questions all of which tries to measure their attitude towards mobile learning. Research results suggested that although most of the teachers have a positive attitude toward mobile assisted language learning there are instructors who have a negative opinion about implementing mobile devices into language teaching and learning environment.

Moreover, in another research researchers to measure attitudes of language learners at a university they developed an attitude scale. Uzunboylu, Hürsen, Özütürk & Demirok (2014) did research in Turkish Republic of Northern Cyprus with Turkish university students to investigate the attitudes of Turkish university students' attitudes who were actually learning with mobile tools and who were investigating by researchers. To this end, the researcher developed an attitude scale named "English Language Learning via Mobile Technologies Attitude Scale (ELLMTAS)" which contains 37 items and consists of six sub-dimensions. 275 university students, having different grades and from different departments of the university, participated in the research. Results showed that university students mostly prefer mobile assisted language classrooms and what is more, grades and departments do not differ in learners' language learning through mobile tools and devices.

As the mobile phone ownership ratio increases researchers become more and more eager to implement those devices into technology and they aim to turn classic classroom-based learning into anytime and anywhere learning the concept. From this perspective, Cavus and Ibrahim (2009) investigated the possibility of learning the technical English word by using mobile devices and Short Messaging Service (SMS). Throughout this research, researchers developed a software called mobile learning tool (MOLT) and it has been tested with 45 freshman students. Students have been applied pretest and posttest within the experiment and the results show that learners have a positive attitude towards using mobile phones and learning new words. Additionally, researchers believe that MOLT system as an educational tool will support the students' success.

Attitude might sometimes be defined by the perception of the concept. In another research carried out by Serin (2012) which analyzes perception levels of prospect teachers on mobile learning with 355 prospective teachers researching at private university, in Northern Cyprus. As a result of the research Serin (2012) found out that perception levels of prospective teachers were low which could be the reason behind the negative attitudes towards mobile learning.

In another research Şad and Göktaş (2014) explored pre-service teachers' opinions and perceptions on using mobile phones and laptops for teaching and learning in an

educational setting. They carried out relatively large-scale research with 1087 pre-service teachers.

2.6. Summary

The literature review in this chapter has been started with computer-assisted language learning (CALL). History of CALL and different phases of CALL have also been mentioned. Following different phases of CALL, the advantages and disadvantages of the concept have been discussed. Afterward, there has been a shift from CALL to MALL. Brief information related to MALL has been provided and different types of MALL devices and their use has been explained. In the next section, the advantages and disadvantages of implementing mobile technologies into language education reviewed. Following benefits and drawbacks of MALL, significant studies, that reveal important facts, instructor and learner attitudes, based on mobile learning discussed. The last two sections contained technology use in Turkish EFL setting and MALL usage and learner-opinion related studies have been negotiated and exemplified.

In the following chapter, the setting, participants, research design, instruments, procedure and data collection and analysis methods of the research will be discussed.

CHAPTER 3

3. METHODOLOGY

This research aims to investigate the attitudes of ELT students and in-service EFL teachers towards using mobile assisted language learning in their teaching and learning experiences. In this research a questionnaire adapted from Dashtestani (2013) has been used and attempted to answer five research questions:

1. What is the general attitude of ELT students and in-service EFL teachers towards mobile assisted language learning as a teaching or learning material in Turkish EFL context?

2. What are the perceived challenges of using mobile assisted language learning during learning or teaching processes in Turkish EFL context?

3. What are Turkish ELT students and in-service EFL teachers' perceptions of the current use of mobile devices for their EFL courses?

4. What are Turkish ELT students and in-service EFL teachers' perceptions of their ability to use/develop MALL activities and software?

5. Do attitudes of ELT students and in-service teachers towards using mobile assisted language learning differ significantly?

3.1. Research Setting

The research took place in Turkish EFL context in the 2018 – 2019 academic year and most of the participants in the ELT students' group are currently studying at Kocaeli University in the program of Teaching English as a Foreign Language. Learners who attend programs of language education in Turkey aim to become teachers of the specific language and start teaching. Language teaching programs consists of four years of education in addition to the one-year preparatory class. If the learner succeeds at the preparatory class exam s/he may skip directly to the first year. In the last year of four-year education learners start teaching experience courses and attend to actual courses at public or private schools assigned by the university. The first-semester prospect teachers

start as observers and observe an experienced teacher after in the second term they start teaching.

3.2. Participants

The present research was conducted with ELT students who are researching at Kocaeli University, English Language Department and in-service teachers who are working at different state and private schools in Turkey. One hundred ELT students and in-service ELT teachers in total took part in the research and convenience sampling method was implemented. The demographic information of students regarding their current occupation, institution/organization, gender, age, English proficiency, university degree, mobile phone usage time, English teaching experience is given in Tables 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.8 respectively.

Table 3. Occupational Statistics

Occupation	Percent (%)
ELT student	30
In-service teacher	70

As Table 3 shows, way more than half of the total population (70%) 70 in number is from in-service teachers' group, while the rest consists of ELT students (30%) 30 in number. This research aimed to measure attitudes of ELT students and in-service teachers towards using mobile assisted language learning for teaching and learning purposes and sampling is enough to draw conclusions.

Table 4. Institutional statistics

Institution	Percent (%)
University student	30
Teacher at MoNE	42
Teacher at private school	28

It could be seen from Table 4 most of the participants 42%, and 42 in number, are teachers who are currently working at Turkish state schools. 28% of participants and 28 in number are teachers currently connected to private institutions and the last 30% of the participants are currently not working ELT students 30 in number. Their attitudes towards mobile assisted language learning were investigated. The next table shows the gender distribution of the research.

Table 5. Gender statistics

Gender	Percent (%)
Female	72
Male	28

Table 5 illustrates gender statistics that occur in the research. there is a female dominant distribution among the respondents in terms of gender. It could be understood that most of the participants 72% (72 in number as well) were females. The rest of the participants 28% (28 in number) was male. As research does not include gender comparison, the difference between the number of genders does not constitute a problem. Table 3.3 shows the age distribution.

Table 6. Age statistics

Age	Percent (%)
20 – 30	77
31 – 40	22
41 – 50	1

As Table 6 shows over 75%, it is 77 in number, of participants, are between the ages of 20 – 30 while there are participants who are aged between 31 – 40 which corresponds to 22% and 22 in number as well and finally, there is only 1 teacher aged

between 41 – 50 which is 1%. This research targeted young teachers and ELT students in order to provide insights for them that can change the way they behave towards mobile assisted language learning.

Table 7. Training or education course attendance statistics

Attendance Status	Percent (%)
Yes	90
No	10

Table 7 provides insights on participants', who took the survey, background information related to any teacher training and education they attended prior to the survey. It shows that 90% (90 in number) of the participants have attended to teacher training course while 10% of the participants (10 in number) have not attended any training course yet.

Table 8. Proficiency statistics

Proficiency	Percent (%)
Intermediate	2
Upper-Intermediate	31
Advanced	67

As Table 8 shows that most of the participants, 67% (67 in number), believe that their English proficiency is at Advanced level. 31% of participants think that (31 in number) regards that their English level is Upper Intermediate. Finally, 2% of the participants (2 in number) considers their English proficiency is Intermediate.

Table 9. University degree statistics

University Degree	Percent (%)
Undergraduate Student	30
Bachelor's Degree (BA)	61
Master's Degree (MA)	8
Doctor of Philosophy (Ph.D.)	1

It could be understood from Table 9, 61% (n=61) of the participants at least have a Bachelor's Degree (BA). Additionally, 8% (n=8) of the participants have Master's Degree (MA), 1% (n=1) of the participants have Doctor of Philosophy Degree and finally, 30% (n=30) of the participants are undergraduate students.

To draw conclusions related to attitudes of ELT students and in-service teachers, sufficient data from both groups has been collected and the number of participants enabled the researcher to make statements about to-be-reviewed two groups' attitudes.

Table 10. Mobile phone usage statistics

Amount of Time	Percent (%)
0 – 5 Years	9
6 – 10 Years	41
11 or More Years	50

Table 10 illustrates the mobile phone usage statistics of the participants who took part in this present research. It can be understood from the table that half of the participants (n=50) have been using mobile phones for more than 11 years. This statistic suggests participants have already been accustomed to mobile phones and related applications which are mostly used. Additionally, 41% (n=41) of the participants have been using mobile phones for 6 to 10 years which is a decent amount of time to get used to technology

and its software. Finally, 9% (n=9) of the relatively new users of mobile phones who have been using mobile phones for about from 0 to 5 years.

Table 11. Experience statistics

Length of Experience	Percent (%)
No Experience	16
1 – 5 Years	55
More than 6 Years	29

Table 11 shows statistics of teaching English experience of the participants. More than half of the participants 55% (n=55) are fresh teachers who have from 1 to 5 years of experience. Having more new teachers for this research is a somehow beneficial situation so that attitudes toward mobile assisted language learning may be changed easily in the early stages of their teaching periods. 29% of the participants (n=29) have more than 6 years of teaching experience. Finally, 16% of the participants (n=16) do not have any kind of experience. It could be understood from the statistics given above that many undergraduate students in a way have teaching experience and currently doing or did before to have experience.

3.3. Research Design

Methodology parts of many studies which work on identifying learner and teacher perceptions and attitudes toward learning English through the use of mobile devices use exploratory method and also this current research has been designed as exploratory research. Ellis (2001) claims that interpretive research aims to understand how social networks work through participants' perspectives in the sense of their natural environment. Additionally, Ellis (2001) suggests this convention is practical in nature an11d is valid if the participants confirm. Throughout the research, quantitative data have been collected by employing a questionnaire to the participants. As a result of this questionnaire numerical data has been obtained and data gleaning process empirically structured. Participants in the present research were expected to answer 27 questions which were divided into 4 different sections in the Likert-Scale format.

3.4. Instruments

As a data collection tool, a questionnaire has been used and all the numerical data for the research to be carried out has been obtained through that above-mentioned questionnaire.

3.4.1. The Questionnaire

The questionnaire is based on previous research, review and theoretical foundations on mobile assisted language learning, namely Kukulska-Hulme & Shield (2008); Stockwell (2007); Stockwell (2010) and Wishart (2008). Additionally, it was used by Reza Dashtestani in 2013 with Iranian 168 EFL teachers from 13 different institutions in Iran. The content of the survey has been validated by a team consisting of seven English as a Foreign Language and educational technology university professors prior to Dashtestani's research. Dashtestani (2013) states that there were several validations and evaluation sessions related to the layout and content of the questionnaire and according to feedback from the team and as a result content and layout both were improved. The survey included 27 items based on the four sections and questions were four and five-point Likert-scale format. Prior to applying survey Dashtestani (2013) calculated the validity and reliability of the survey section by section. The first section (Cronbach Alpha=0.85, including 10 items) aims to explore EFL teachers' attitudes toward the use of mobile phones for language learning/teaching and was based on a four-option Likert scale format from *strongly disagree* to *strongly agree*. The second section (Cronbach Alpha = 0.82, 10 including items) investigated EFL teachers' perspectives on the challenges to the use of mobile phones for language learning/teaching which is again based on four-point a Likert scale format from strongly disagree to strongly agree. The third section (2 items) examined EFL teachers' perceptions of the current use of mobile phones for their EFL courses. In the penultimate section items, which are five-point Likert scale format starting from *never* to *always*. The ultimate section (Cronbach Alpha = 0.79, 5 items) sought EFL teachers' perceptions of their ability to use/develop MALL activities and software tools. &is section was based on a five-point Likert scale format from *not proficient* to *very proficient*. (*See APPENDIX A*).

3.5. Data Analysis

In the present exploratory research, the attitudes of ELT students and in-service teachers on using mobile assisted language learning in teaching and learning EFL sessions were evaluated with related data obtained from the questionnaire discussed above. The data analysis procedure was performed with a widely used software called SPSS (Statistical Package for Social Sciences) version 22, using Likert-scale questions. Through SPSS version 22 the mean, standard deviation, mode, and the percentages have been calculated and above-mentioned software was used to obtain results of the numerical data obtained from the questionnaire.

3.6. Summary

This chapter has presented the methodology of the research and its subsections. Under methodology heading; the research setting, participants, design, instruments, and data analysis have been explained in detail. Moreover, the reason behind selecting and using specific design and instruments has also been provided in this particular chapter. The following chapter will be including data analysis and the results of the research.

CHAPTER 4

4. DATA ANALYSIS

The aim of the research is to research attitudes of ELT students and in-service teachers toward using mobile assisted language learning (MALL) in their teaching and learning processes. Attitudes have been identified through a questionnaire created by researchers previously based on the reviews and research they did and also applied beforehand. In this respect, five research questions were investigated in this exploratory research:

1. What is the general attitude of ELT students and in-service EFL teachers towards mobile assisted language learning as a teaching or learning material in Turkish EFL context?

2. What are the perceived challenges of using mobile assisted language learning during learning or teaching processes in Turkish EFL context?

3. What are Turkish ELT students and in-service EFL teachers' perceptions of the current use of mobile devices for their EFL courses?

4. What are Turkish ELT students and in-service EFL teachers' perceptions of their ability to use/develop MALL activities and software?

5. Do attitudes of ELT students and in-service teachers towards using mobile assisted language learning differ significantly?

Numerical data for the research questions which are listed above collected with the questionnaire which was explained in detail beforehand. 100 ELT students and in-service teachers have attended the questionnaire. 65 of them were in-service teachers and 35 of them were ELT students.

4.1. Quantitative Data Analysis

It has been previously mentioned in the chapters above, the instrument for the data collection procedure in obtaining quantitative data was a questionnaire in this present exploratory research. The results of the questionnaire were analyzed using with a well-known software which is SPSS version 22 (Statistical Packages for Social Sciences) and thus statistical and numerical data were collected. According to categories of the questionnaire, that were previously determined by the creators, findings of the research starting from attitudes to perceptions of ELT students and in-service teachers about mobile assisted language learning and its application in language learning teaching sessions, have been classified into following five categories:

1. Participants' attitudes towards the use of mobile phones for language learning/teaching.

2. Participants' perspectives on the possible challenges to the use of mobile phones for language learning/teaching.

3. Participants' perceptions of the current use of mobile phones for their EFL courses.

4. Participants' perceptions of their ability to use/develop MALL activities and software.

5. The comparison of attitudes of ELT students and in-service teachers.

4.1.1. Participants' Attitudes Towards the Use of Mobile Phones for Language Learning/Teaching

This section provides answers for the first research question (RQ1) of the present research.

RQ1: What is the general attitude of ELT students and in-service EFL teachers towards mobile assisted language learning as a teaching or learning material in Turkish EFL context?

Table 12: Overview of the questionnaire results for the RQ1

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S1Q1. The use of mobile phones will facilitate the process of language learning	0	6	55	39	.587	3.33	3
S1Q2. Portability is an important property of mobile devices	0	1	29	70	.486	3.69	4
S1Q3. The use of mobile phones can create interactive learning environments	0	7	47	46	.618	3.39	3
S1Q4. The multimedia used in mobile phones is useful for EFL learning	0	9	43	48	.650	3.39	4
S1Q5. Scaffolding can be provided for each learner through the use of mobile phones for language teaching	1	13	53	33	.687.	3.18	3
S1Q6. Mobile phones can be used to teach/learn different language skills	1	8	43	48	.678	3.38	4
S1Q7. The use of mobile phones for language teaching/learning is cost-effective	6	12	54	28	.803	3.04	3
S1Q8. The use of mobile phones for language teaching/learning is time-efficient	1	7	56	36	.633	3.27	3
S1Q9. Mobile phones can be connected to the Internet at any time	1	13	41	45	.732	3.30	4
S1Q10. Mobile phones provide learners with ubiquitous language learning opportunities	0	4	60	36	.548	3.32	3
Total Mean	3.29						

Table 13. Results for S1Q1, S1Q2, S1Q3 and S1Q4

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S1Q1. The use of mobile phones will facilitate the process of language learning	0	6	55	39	.587	3.33	3
S1Q2. Portability is an important property of mobile devices	0	1	29	70	.486	3.69	4
S1Q3. The use of mobile phones can create interactive learning environments	0	7	47	46	.618	3.39	3
S1Q4. The multimedia used in mobile phones is useful for EFL learning	0	9	43	48	.650	3.39	4

Table 13 illustrates the top four questionnaire items which participants have been answered. The first question S1Q1 explores attitudes of ELT students and in-service teachers towards whether mobile phones facilitate the process of language learning or not. Thirty-nine percent of the participants (n=39) *Strongly Agree* that using mobile phones facilitate the process of language learning while fifty-five percent of them (n=55) just *Agree*. However, only six percent of individuals (n=6) who attended the survey *Disagree* and believe that mobile phones do not facilitate language learning.

As shown in Table 13, in the questionnaire, there were questions that aim to gather data related to properties of mobile devices. Along with this idea S1Q2 in the survey participants whether asked portability is an important property of mobile devices or not. Seventy percent of participants (n=70) stated they *Strongly Agree* that portability is an important property of mobile devices while twenty-nine percent of them (n=29) *Agree* with this statement. Whereas, only one percent of participants (n=1) *Disagrees.* In this context, portability of paves the path to using those devices anywhere and anytime.

S1Q3, analyzed in Table 13, reveals participants' beliefs whether using mobile phone create interactive learning environment or not. It is understood from the table that forty-six percent of the total participants *Strongly Agree* with the statement given in the S1Q3 while seven percent of them *Disagree* with the idea that mobile phones can create an interactive learning environment. So, the majority of the participants believe the interactive learning environment can be created by the use of mobile phones.

S1Q4 explored opinions related to materials used in mobile phones is useful for EFL learning. It can be seen in Table 13, there was a positive tendency in the responses of the participants and 48% of them chose *Strongly Agree* as well as other 43% who chose *Agree* from the Likert scale options. Finally, only 9% of the participants preferred option *Disagree*.

Table 14. Results for S1Q5, S1Q6, S1Q7and S1Q8

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S1Q5. Scaffolding can be provided for each learner through the use of mobile phones for language teaching	1	13	53	33	.687.	3.18	3
S1Q6. Mobile phones can be used to teach/learn different language skills	1	8	43	48	.678	3.38	4
S1Q7. The use of mobile phones for language teaching/learning is cost-effective	6	12	54	28	.803	3.04	3
S1Q8. The use of mobile phones for language teaching/learning is time-efficient	1	7	56	36	.633	3.27	3

Table 14 includes results for the items S1Q5, S1Q6, S1Q7 and S1Q8, found in the first section, respectively. In the S1Q5 participants were expected to give information

about their beliefs on whether scaffolding can be provided for each learner through the use of mobile phones for language teaching or not. Majority of the survey takers, which corresponds to 53% (n=53), *Agree* that scaffolding could be provided with mobile phones while 13% of them *Disagree* and interestingly 1% of the participants *Strongly Disagree*s.

Teaching language skills, without any kind of aid, is one of the major encountered problems in classrooms for teachers. S1Q6 evaluates participants' opinions about the mobile phones role in teaching and learning different language skills. Most of the participants 48% Strongly Agree that mobile phones could be used as an aid to teaching different language skills while 8% of the participants *Disagree* and 1% of them *Strongly Disagree*s.

In the S1Q7, as it is clear from Table 14, participants opinions on cost issue related to teaching with mobile phones is obtained. 54% of the participants (n=54) stated that they *Agree* with this statement and 28% of the participants *Strongly Agree* that teaching through mobile phones is cost-effective in other words productive in relation to its cost. 12% of the participants *Disagree* and 1% of the participants *Strongly Disagree*s as well. As the most probable reason behind those *Disagree*s and *Strongly Disagree* is that distractive effects of mobile phones and the applications come as a feature of recent mobile phones could be listed.

The following, S1Q8 as results included in Table 14, item seeks to obtain responses from participants on whether the use of mobile phones for language teaching and learning is time efficient or not. More than half of the participants, 56% (n=56), Agree with the statement and 36% of the participants *Strongly Agree*. Whereas, 7% of the participants Disagree and 1%, again, *Strongly Disagrees*. In some cases, learners, while teaching and learning through mobile phones, may easily be distracted due to other uses of mobile phones and thus this may lead to loss of time. This is could be the possible reason behind participants' choices ranging from *Disagree* to *Strongly Disagree*.

Table 15. Results for S1Q9, and S1Q10

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S1Q9. Mobile phones can be connected to the Internet at any time	1	13	41	45	.732	3.30	4
S1Q10. Mobile phones provide learners with ubiquitous language learning opportunities	0	4	60	36	.548	3.32	3

Instant internet connection is an important feature of mobile phones which could also be used for educational purposes as well. In the S1Q9 (see *Table 15*), participants' views on the internet connectivity of mobile phones were explored. 45% of the participants (n=45) *Strongly Agree* that mobile phones are able to connect to the Internet at any time needed. While 13% of them Disagree with the statement and 1% *Strongly Disagrees* as well. Due to some problems in the network coverage in some places could lead participants to choose *Strongly Disagree* or *Disagree* options.

As shown in Table 15, S1Q10, explored opinions of participants on ubiquitous language learning opportunities which mobile phones create. 60 of the participants (60%) *Agree* that mobile phones create learning opportunities while 4% of the participants *Disagree* with the statement. The answers provided in this question reveals the fact that most of the participants, 96% in total (n=96), believe mobile phones actually good at teaching and learning anywhere and anytime.

The next section will be providing numerical data related to Research Question 2 (RQ2).

4.1.2. Participants' Perspectives on the Possible Challenges to the Use of Mobile Phones for Language Learning/Teaching.

In this section, the statistical and numerical data obtained from the questionnaire related to Research Question 2 (RQ2) will be provided.

RQ2: What are the perceived challenges of using mobile assisted language learning during learning or teaching processes by teachers in Turkish EFL context?

Table 16. Overview of the questionnaire results for the RQ2**.**

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S2Q1. The small screen size of mobile phones	14	24	44	18	0.934	2.66	3
S2Q2. Slow Internet speed	11	16	35	38	0.995	3.00	4
S2Q3. Internet connectivity problems	6	13	48	33	0.837	3.08	3
S2Q4. Students' non-academic use of mobile phones	10	37	23	30	1.004	2.73	2
S2Q5. High costs of mobile phones	11	33	31	25	0.969	2.70	2
S2Q6. High cost of connectivity to the Internet	10	40	30	20	0.921	2.60	2
S2Q7. Students' lack of skill/ knowledge to use mobile phones for academic purposes	12	22	27	39	1.047	2.93	4
S2Q8. Incompatibility of the use of mobile phones with language teaching/learning	8	39	37	16	0.852	2.61	2
S2Q9. Students' resistance to the use of mobile phones for academic purposes	8	30	36	26	0.921	2.80	3
S2Q10. Lack of language learning mobile-based software and activities	9	27	44	20	0.880	2.75	3
Total Mean	2.786						

Table 16, illustrates numerical data obtained from the survey and analyzed with SPSS software according to participants answers which they provided beforehand. In the forthcoming paragraphs, items will be analyzed and similar items will be explained together in the same table.

Table 17. Results for S2Q1, S2Q2, S2Q3 and S2Q4

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S2Q1. The small screen size of mobile phones	14	24	44	18	0.934	2.66	3
S2Q2. Slow Internet speed	11	16	35	38	0.995	3.00	4
S2Q3. Internet connectivity problems	6	13	48	33	0.837	3.08	3
S2Q4. Students' non-academic use of mobile phones	10	37	23	30	1.004	2.73	2

Mobile phones come with different sizes of screens and this sometimes constitutes a challenge according to the purposes for what they are used. S2Q1, in the second section of the questionnaire, explored opinions of the small screen size and the challenges related to it. 44% of the participants *Agree* that if the screen size of the mobile device is small it is a problem. While 14% of the participants (n=14) *Strongly Disagree* and suggest that the small screen size does not create any challenge.

Wide range of internet connection is an important factor for mobile learning to be used by learners and teachers with maximum benefits. S2Q2 and S2Q3 identify internet connection issues that would be considered as challenges by the learner. S2Q2 explores slow internet speed as a challenge and 38% of the participants *Strongly Agree* and 11% of the participants Strongly Disagree and rejects the slow speed of the internet as a challenge. On the other hand, S2Q3 aims to identify whether Internet connectivity problems constitute a challenge or not. 48% of the survey takers (n=48) *Agree* that internet problems

are drawbacks while they use mobile learning in their classrooms. 6% of the participants *Strongly Disagree*.

Besides mobile phones are good companions for language learning and teaching but using them effectively for academic purposes is a challenge most of the time. Section 2 Question 4 aims to explore participants' perceptions related to students' non-academic use of mobile phones. In this question majority of the participants, 37% Disagree with the item and 10% of the participants Strongly Disagree with the idea of non-academic use of mobile phones by the students while 30% of them Strongly Agree and think that students use mobile phones for non-academic purposes and this constitutes a challenge.

Table 18. Results for S2Q5, S2Q6, S2Q7and S2Q8

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S2Q5. High costs of mobile phones	11	33	31	25	0.969	2.70	2
S2Q6. High cost of connectivity to the Internet	10	40	30	20	0.921	2.60	2
S2Q7. Students' lack of skill/ knowledge to use mobile phones for academic purposes	12	22	27	39	1.047	2.93	4
S2Q8. Incompatibility of the use of mobile phones with language teaching/learning	8	39	37	16	0.852	2.61	2

Cost is an important issue which either hinders or enables a new technology to be implemented into language classrooms. S2Q5 and S2Q6 aim to explore participants' perceptions related cost issues of mobile phones. In the S2Q5, participants were asked whether mobile phones are expensive and this high-cost issue is a challenge for teachers to implement mobile assisted language learning in their classrooms or not. 31% (n=31) of the participants *Agree* that high cost of mobile phones constitute a drawback while 11%

of the survey takers *Strongly Disagree* and, in a way, they stated that cost does not define anything.

In the S2Q6, internet connectivity costs and participants challenge perceptions have been explored. Again, most of the participants, 30% (n=30), *Agree* high costs of internet connectivity is a challenge in front of mobile assisted language learning. However, 10% of the participants (n=10) *Strongly Disagree* with the issue of connectivity costs.

Benefiting from the technology for academic purposes at its maximum level requires some specific knowledge and skill as well. In the S2Q7, participants' perspectives on this issue were investigated. 39% of the participants (n=39) *Strongly Agree* that if learners do not have knowledge and skill to use mobile phones for academic purposes it is a real challenge. However, 12% (n=12) *Strongly Disagree* with the statement and think that lack of skill is not a challenge.

In Table 18, S2Q8 aimed to explore the perspectives of the participants whether mobile phones are incompatible to use them for teaching and learning processes or not. The choices participants made in this question nearly even. 39% of the participants (n=39) *Disagree* with the statement however, 37% of the participants (n=37) *Agree*. Modern smartphones generally compatible with most of the teaching, learning and even distance education software published up-to-date. Participants lack of knowledge on the technological developments may influence their choices at the time of taking the survey.

Table 19. Results for S2Q9 an S2Q10

ITEMS	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	SD	Mean	Mode
S2Q9. Students' resistance to the use of mobile phones for academic purposes	8	30	36	26	0.921	2.80	3
S2Q10. Lack of language learning mobile-based software and activities	9	27	44	20	0.880	2.75	3

Willingness, in other words, instinctive motivation, is an important factor for a beneficial instruction to be made in language teaching if students do not want to learn they simply do not learn. S2Q9 investigates perceptions of the participants on the resistance of students towards learning through mobile phones. 36% of them (n=36) *Agree* that if learners resist using mobile phones for teaching purposes it would constitute a challenge while 26% of them *Strongly Agree* with the statement as well. However, 30% of the participants *Disagree* with the idea and possibly think that resistance to using mobile phones for academic purposes may not be an actual challenge that teachers face during the use of mobile learning.

The last item, S2Q10, investigates perspectives of participants on the lack of language learning mobile-based software and activities. Since it is regarded as a relatively new field number of applications, software and activities peculiar to mobile phones or mobile devices, in general, is limited but not insufficient. In the item S2Q10, most of the participants, 44% (n=44), *Agree* that if there is a lack in a number of mobile-based language learning software and activities it is a challenge for implementing mobile assisted language learning to the teaching and learning environment. On the other hand, 27% of the participants *Disagree* with the statement and believe the lack of software and applications would not be counted as a challenge.

4.1.3. Participants' Perceptions of the Current Use of Mobile Phones for Their EFL Courses

This section provides analyses of numerical data obtained from the questionnaire and processed with the SPSS software related to RQ3.

RQ3: What are Turkish ELT students and in-service EFL teachers' perceptions of the current use of mobile phones for their EFL courses?

Table 20. Overview of the questionnaire results for the RQ3

ITEMS	Never	Rarely	Sometimes	Frequently	Always	SD	Mean	Mode
S3Q1. How often do you use mobile phones for your teaching practices?	7	12	43	33	5	0.954	3.17	3
S3Q2. How often do students use mobile phones for their learning in your classes?	20	28	27	24	1	1.093	2.58	2
Total Mean	2.87							

Table 20 shows data related to RQ3 which investigated participants' perceptions on the current use of mobile phones for their EFL courses' teaching and learning processes. S3Q1 investigates the frequency, how often teachers use mobile devices for their courses. 43% of the participants stated that they *Sometimes* implement portable devices in their courses and 33% of them benefit from mLearning tools *Frequently* and what is more, 5% of teachers who attended to survey revealed they *Always* use mobile technology in their teaching and learning processes. However, 7% of the participants chose option *Never*. Lack of sufficient knowledge and teaching experience are two possible reasons behind the selection of "*Never*".

S3Q2, as shown in Table 20 explores in a class mobile phone using frequency for learning purposes of students of the teachers who attended the survey. Majority of the participants 28% (n=28) informed that their learners use mobile phones for teaching purposes *Rarely*. Additionally, 27% of the participants suggest their students *Sometimes* use mobile devices during the course time. Finally, 20% (n=20) of the participants stated students *Never* use mobile phones for learning during course time.

4.1.4. Participants' Perceptions of Their Ability to Use/Develop MALL Activities and Software.

This, final, the section provides numerical data related to RQ4 which as follows:

RQ4: What are Turkish ELT students and in-service EFL teachers' perceptions of their ability to use/develop MALL activities and software?

Being able to develop and use mobile devices for their own benefits are two important aspects of using MALL activities and software in teaching and learning processes. In order to, adapt available materials for their own audience or develop new MALL materials in accordance with the level of the learners who they teach. Through this Research Question, ELT students and in-service teachers' perceptions of their ability to use or develop MALL activities and software have been assessed.

Table 21. Overview of the questionnaire results for the RQ4

ITEMS	Not Proficient (%)	Fairly Proficient (%)	Undecided (%)	Proficient (%)	Very Proficient (%)	SD	Mean	Mode
S4Q1. Designing MALL activities	10	11	40	32	7	1.048	3.15	3
S4Q2. Ability to adapt your teaching styles/ techniques to MALL	5	13	25	45	12	1.029	3.46	4
S4Q3. Ability to evaluate MALL software tools	10	14	37	30	9	1.092	3.14	3
S4Q4. Your ICT literacy to use mobile phones for language teaching	3	11	38	42	6	0.872	3.37	4
S4Q5. Ability to use MALL software tools	3	11	31	46	9	0.915	3.47	4
Total Mean	3.32							

In the following tables, items from Section 4 (S4) will be investigated and analyzed.

Table 22. Results for S4Q1, S4Q2, and S4Q3

ITEMS	Not Proficient (%)	Fairly Proficient (%)	Undecided (%)	Proficient (%)	Very Proficient (%)	SD	Mean	Mode
S4Q1. Designing MALL activities	10	11	40	32	7	1.048	3.15	3
S4Q2. Ability to adapt your teaching styles/ techniques to MALL	5	13	25	45	12	1.029	3.46	4
S4Q3. Ability to evaluate MALL software tools	10	14	37	30	9	1.092	3.14	3

Table 22 illustrates participants perceptions of their ability to design MALL activities. Majority of the participants, around 40% (n=40), chose option *Undecided* for the item S4Q1 which could be the sign of insufficient MALL awareness among participants. Furthermore, 32% of the participants stated that they are *Proficient* at designing MALL activities. Finally, 10% of the participants revealed that they are *Not Proficient* and they are not able to design MALL activities.

Flexibility and versatility are the two important must-have traits of a teacher in order to keep up with the developing technology and changing times. S4Q2 investigates perceptions of the participants on their ability to adapt their teaching styles and techniques to MALL. While 25 of the ELT students and in-service teachers who attended the survey remain *Undecided*, 45% of the participants stated that they are *Proficient* in adapting their teaching styles and techniques into MALL. Furthermore, 5% of the participants revealed that they are *Not Proficient*.

As shown in Table 22 participants were also asked to explore the perceptions of their ability to evaluate MALL software tools. They were expected to make a selection

from various options from *Not Proficient* to *Very Proficient*. 39% of the participants stated that they are either *Proficient* or *Very Proficient* in evaluating MALL software tools whereas 24% of the participants reported they are *Not Proficient* or *Fairly Proficient* and finally, 37% remained *Undecided*.

Table 23. Results for S4Q4, and S4Q5

ITEMS	Not Proficient (%)	Fairly Proficient (%)	Undecided (%)	Proficient (%)	Very Proficient (%)	SD	Mean	Mode
S4Q4. Your ICT literacy to use mobile phones for	3	11	38	42	6	0.8	3.37	4
S4Q5. Ability to use MALL software tools	3	11	31	46	9	0.9	3.47	4

Using mobile phones and integrating mobile assisted language learning into language teaching curriculum requires some information and communication technology (ICT) background and knowledge. S4Q4 aims to investigate participants' perceptions of their ICT literacy to use mobile phones for language teaching purposes. Slightly less than half of the participants 48% reported that their ICT literacy is *Proficient* or *Very Proficient*. However, 38% of them do not have any idea related to their ICT literacy and stay *Undecided* while 14% of the participants state they are *Not Proficient* or *Fairly Proficient*.

Final question, found in table 23, of the questionnaire S4Q5, tries to explore participants perceptions of their ability to use MALL software tools which is a basic ability to use that related software in classes. 46% of the participants (n=46) state that they are *Proficient* enough to use MALL tools while more than 30% of the participants remain undecided. There could be many reasons, such as insufficient contact with mobile learning tools and software, behind those *Undecided* choices. Finally, 14% of the participants report that they are either *Not Proficient* or *Fairly Proficient* in using MALL software tools.

4.1.5. The Comparison of Attitudes of ELT Students and In-service Teachers Towards Using MALL

The table given below represents the results of Independent Sample T-Test for each section obtained from the questionnaire through the answers provided by participants.

RQ5: Do attitudes of ELT students and in-service teachers towards using mobile assisted language learning differ significantly?

Table 24. Overview of Independent Sample T-Test Results for the RQ1

		Levene's Test for Equality of Variances	**t-test for Equality of Means**					
		Sig.	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Mean**	**SD**
S1Q1	Equal variances assumed	.291	.779	98	.438	.100	3.40	.498
	Equal variances not assumed		.851	67.940	.398	.100	3.30	.622
S1Q2	Equal variances assumed	**.030**	1.033	98	.304	.110	3.77	.430
	Equal variances not assumed		1.104	64.298	.274	.110	3.66	.508
S1Q3	Equal variances assumed	.177	1.896	98	.061	.252	3.57	.504
	Equal variances not assumed		2.097	70.030	.040	.252	3.31	.649
S1Q4	Equal variances assumed	.224	.771	98	.443	.110	3.47	.571
	Equal variances not assumed		.827	65.017	.411	.110	3.36	.682
S1Q5	Equal variances assumed	.416	.824	98	.412	.124	3.27	.583
	Equal variances not assumed		.900	67.925	.371	.124	3.14	.728
S1Q6	Equal variances assumed	.738	1.160	98	.249	.171	3.50	.682
	Equal variances not assumed		1.155	54.412	.253	.171	3.33	.675
S1Q7	Equal variances assumed	.165	.487	98	.627	.086	3.10	.845
	Equal variances not assumed		.474	51.711	.637	.086	3.01	.789
S1Q8	Equal variances assumed	.264	.309	98	.758	.043	3.30	.535

	Equal variances not assumed		.338	68.571	.736	.043	3.26	.674
S1Q9	Equal variances assumed	.305	1.196	98	.235	.190	3.43	.626
	Equal variances not assumed		1.298	66.930	.199	.190	3.24	.770
S1Q10	Equal variances assumed	.349	.955	98	.342	.114	3.40	.563
	Equal variances not assumed		.940	53.091	.351	.114	3.29	.542

Table 24, as drawn above, represents the Independent Sample T-Test results for the first section of the questionnaire. As it is clear from the table all of the items, except for S1Q2, have "Sig." value lower than 0.05. This means participants provided without regarding their teacher status provided similar or the same answers to the questions. S1Q2, which reads "Portability is an important property of mobile devices", had different responses from both participant groups. This item has a relatively low Sig. the value which is 0.03 so that when the second row is read and thus Sig. (2-tailed) value is found to be higher than 0.05. Finally, it could be concluded that for the second item of the first section there is no statistically huge difference between the responses of both groups.

Table 25. Overview of Independent Sample T-Test Results for the RQ2

		Levene's Test for Equality of Variances	**t-test for Equality of Means**					
		Sig.	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Mean**	**SD**
S2Q1	Equal variances assumed	.250	.512	98	.610	.105	2.73	.868
	Equal variances not assumed		.534	60.719	.595	.105	2.63	.966
S2Q2	Equal variances assumed	.185	1.098	98	.275	.238	3.17	.913
	Equal variances not assumed		1.151	61.346	.254	.238	2.93	1.026
S2Q3	Equal variances assumed	.209	.676	98	.501	.124	3.17	.699
	Equal variances not assumed		.745	69.386	.459	.124	3.04	.892

S2Q4	Equal variances assumed	.477	.022	98	.983	.005	2.73	.980
	Equal variances not assumed		.022	57.020	.983	.005	2.73	1.020
S2Q5	Equal variances assumed	.816	0.000	98	1.000	0.000	2.70	.988
	Equal variances not assumed		0.000	53.957	1.000	0.000	2.70	.968
S2Q6	Equal variances assumed	.386	.472	98	.638	.095	2.67	.884
	Equal variances not assumed		.484	58.248	.630	.095	2.57	.941
S2Q7	Equal variances assumed	**.046**	.021	98	.983	.005	2.93	.944
	Equal variances not assumed		.022	63.187	.983	.005	2.93	1.094
S2Q8	Equal variances assumed	**.018**	.434	98	.665	.081	2.67	.661
	Equal variances not assumed		.495	75.676	.622	.081	2.59	.925
S2Q9	Equal variances assumed	.764	-.236	98	.814	-.048	2.77	1.006
	Equal variances not assumed		-.224	49.345	.823	-.048	2.81	.889
S2Q10	Equal variances assumed	**.005**	1.117	98	.267	.214	2.90	.712
	Equal variances not assumed		1.247	71.763	.217	.214	2.69	.941

Table 25 illustrates the obtained Independent T-test results for the second section of the questionnaire. For all the items, as it could be seen from the table since the Sig (2-tailed) value higher than 0.05, it could be stated easily that both participants provided similar or same answers and thus there is no significant difference between the responses of ELT students and in-service teachers.

Table 26. Overview of Independent Sample T-Test Results for the RQ3

		Levene's Test for Equality of Variances	t-test for Equality of Means					
		Sig.	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Mean**	**SD**
S3Q1	Equal variances assumed	.536	-.023	98	.982	-.005	3.17	1.020
	Equal variances not assumed		-.022	50.742	.983	-.005	3.17	.932
S3Q2	Equal variances assumed	.671	1.527	98	.130	.362	2.83	1.085
	Equal variances not assumed		1.528	54.989	.132	.362	2.47	1.086

Table 26 consists of the results of the Independent Sample T-Test for the third section in which general usage statistics of the mobile devices for the teaching and learning purposes are explored. It is clear from the results of T-Test that there is no significant difference (Sig 2-tailed > 0.05) between the responses of ELT students and in-service teachers in terms of mobile device usage for teaching and learning purposes.

Table 27. Overview of Independent Sample T-Test Results for the RQ4

		Levene's Test for Equality of Variances	t-test for Equality of Means					
		Sig.	**t**	**df**	**Sig. (2-tailed)**	**Mean Difference**	**Mean**	**SD**
S4Q1	Equal variances assumed	.703	2.683	98	**.009**	.595	3.57	.935
	Equal variances not assumed		2.810	61.227	.007	.595	2.97	1.049
S4Q2	Equal variances assumed	.111	1.537	98	.127	.343	3.70	.877
	Equal variances not assumed		1.669	66.884	.100	.343	3.36	1.077
S4Q3	Equal variances assumed	.568	1.570	98	.120	.371	3.40	1.070
	Equal variances not assumed		1.582	55.876	.119	.371	3.03	1.090

S4Q4	Equal variances assumed	.516	1.485	98	.141	.281	3.57	.898
	Equal variances not assumed		1.455	52.523	.152	.281	3.29	.854
S4Q5	Equal variances assumed	.208	1.414	98	.161	.281	3.67	.802
	Equal variances not assumed		1.514	64.688	.135	.281	3.39	.952

The final table, Table 27 provides the Independent Sample T-Test results for the last section that aims to explore participants' perceptions of their ability to use/develop MALL activities and software. As the results show, it is found out that for the first item in the last section responses provided by both groups of participants differ significantly. (Sig 2-tailed < 0.05). The item tried to measure perceptions of ELT students and in-service teachers on their ability to design MALL activities for their teaching and learning sessions. According to group statistics (See Appendix B) the common answer that came from ELT students was *Proficient* (Mean= 3.57) which means they perceived they almost have the ability to design MALL activities, while in-service teachers mostly remained *Undecided* (Mean=2.97) which might be attributed to better technological familiarity and being more literate technologically of the younger generation. The rest of the items turned out to have similar responses from the ELT students and in-service teachers.

4.2. Summary

This research investigated attitudes of ELT students and in-service teachers towards using MALL in their teaching and learning processes. The results showed that ELT students and in-service teachers mostly have a positive attitude towards using MALL. Additionally, in this chapter data obtained from the questionnaire was analyzed and put into words from numbers. The analyzing phase was carried out in relation to research questions and as there are five different research questions the chapter was divided into five sections and related data was categorized under those headings. In other words, each section has its own data.

In the next chapter, the findings of the present research will be discussed under the light of previous studies. What is more, pedagogical implications of the research, limitations of the research, suggestions for further research and conclusion section will also be provided.

CHAPTER 5

5. DISCUSSION and CONCLUSION

In this chapter, which happens to be the last chapter of the research, a general overview of the research, a summary of the findings, discussion of the findings, pedagogical implications of the research, limitations of the research and finally suggestions for further research will be provided. In the first section, there will be a brief overview of the present research and a short summary about it. The following section will be including a summary of findings to depict an overall concept. Additionally, a summary of the findings session will be followed by a discussion of the findings in which results will be compared with the previously carried out studies. Furthermore, after the discussion of the findings section, pedagogical implications of the research will be mentioned. The next chapter will be consisting of limitations of the present research and finally, in the final section of the chapter suggestions for further research to investigate MALL from different perspectives and aspects will be discussed.

5.1. Overview of the Research

The present research investigated attitudes of ELT students and in-service teacher towards using MALL for teaching and learning sessions. In this exploratory research, what explored are:

(a) attitudes of ELT students and in-service EFL teachers toward the use of mobile phones for teaching and learning,
(b) ELT students and in-service EFL teachers' perspectives on the challenges to the use of mobile phones for learning and teaching,
(c) their perceptions of the current use of mobile phones for their EFL courses,
(d) ELT students and in-service teachers' perceptions of their ability to use and develop MALL activities and software.
(e) Difference between the attitudes of ELT students and in-services teachers towards using mobile assisted language learning

In the research 100 ELT students and in-service EFL teachers took part in the research. Their ages varied from 20 to 50. Additionally, there were mostly female participants (n=73) and male participants were less in number (n=27). The exploratory research was carried out using a mono research method, by applying the questionnaire only, according to the aims of the research. Quantitative data obtained in the present to measure the attitudes of participants related to MALL use. With the help of questionnaire numerical data have been collected. In the questionnaire which was applied in this research, there were 27 items divided into four sections in accordance with what they aim to measure.

5.2. Summary of Findings

This research aimed to explore the attitudes of ELT students and in-service EFL teachers towards using mobile assisted language learning for teaching and learning. Data collected in this research related to attitudes towards mobile assisted language learning as follows:

(a) Demographics of Participants (Gender, age, training information, language proficiency, university degree, mobile phone usage statistics, and language teaching experience)
(b) Participants' attitudes towards the use of mobile phones for language learning/teaching,
(c) Participants' perspectives on the challenges to the use of mobile phones for learning and teaching,
(d) Participants' perceptions of the current use of mobile phones for their EFL courses,
(e) Participants' perceptions of their ability to use/develop MALL activities and software.

5.3. Discussion of Findings

Using mobile assisted language learning efficiently for teaching and learning in the classroom is mostly determined by the positive attitudes of the teachers (Goad, 2012). The first research question deals with the attitudes of ELT students and in-service teachers' attitudes towards using mobile devices for teaching purposes. Although studies generally put learners in their focus and there is a number of studies which investigated teachers' attitudes and there are numerous studies which measured learners' attitudes as well. According to results of the questionnaire, which was used in the present research, most of the ELT students and in-service teachers (around 82.5%) who took the survey, showed positive attitude towards using mobile assisted language learning for teaching and learning purposes which goes in line with the research that has been carried out in the field. To this end, regarding the first research questions which investigates the attitudes of participants toward mobile learning most of the participants (94%) agree that mobile learning facilitates learning. Standard Deviation for the mentioned item was 0.587 and when the SD reaches to 0 it means participants mostly made similar choices and thus results are homogenous while it goes higher and higher results are regarded as heterogeneous. The findings obtained from this research correspond to findings research which was done by Cavus and Ibrahim (2009). They conducted research, as mentioned in the prior chapters, to investigate the possibility of learning technical English words through mobile devices. In this research, researchers mention that mobile devices provide learners with many of the advantages. One of the advantage as the researchers suggest mobile devices facilitate the process of language learning and teaching which is in line with the answers provided by participants. Another advantage they mention is, which constitutes the basis of ubiquitous learning, portability of mobile devices that enable learners to learn without the restrictions of time and place. In line with the advantages, Cavus and Ibrahim (2009) mentioned, almost all of the participants (99%) agreed on the idea that portability is an important feature of mobile devices. Furthermore, participants at the end of the research reported very positive attitudes towards using mobile learning in teaching and learning. Additionally, according to responses obtained for the first research question participants (96%) gave similar answers to item ubiquitous learning

opportunities are created by mobile phones and SD for the item is 0.548. Another higher response from the participants was for the item that states “mobile devices can create interactive learning environment”. Apart from the teacher and ELT student environment in another research Thornton and Houser (2002) carried out a research with L2 English learners in the Japanese EFL context. They trialed a prototype audience response system with 25 EFL learners in Japan with this system student connected to a website using their mobile phones and filled in anonymous polls and did comprehension checks those answers were collected and ordered and displayed in class through which system provided greater interactivity.

The second research question of the present research dealt with participants’ “perspectives on the challenges to the use of mobile phones for learning and teaching.” Among all the items in some of them, there were similar choices made by participants. The challenges ELT students and in-service teachers perceive related to mobile language learning and its integration into the classroom are internet connectivity problems. With the lack of internet connection, mobile devices, as a matter of fact, will not be as beneficial as they are expected to be. In similar research carried out by Dashtestani (2013), in Iran with 168 EFL teachers working at different EFL teaching institutions, participants claimed to perceive internet connectivity as the very same challenge to using mobile assisted language learning for educational purposes. However, Stockwell (2008) has a positive attitude towards internet connectivity problems and believes that teachers are able to overcome this obstacle by using specific MALL software which requires limited internet usage. Additionally, Dashtestani (2013) also suggest that EFL providers may equip classrooms with a broadband internet connection so that learners and teachers would be able to make the most of mobile learning during teaching and learning session. In another research Wishart (2008) states, which has consistent findings with the results of the current research, that one of the limitations is the internet connection at the campus and other educational institutions.

Screen sizes, today, have become an important factor while using mobile phones for teaching and learning purposes. Results of the present research suggest that more than 60% of the participants report that screen size issue as one of the most important

challenges to using mobile devices in language classes. Since learning and teaching take place through the screen of the device it should firstly be viewed easily and big enough for a learner to interact with ease. This finding is in line with the findings of research by Şad and Göktaş (2014) that mainly aims to investigate student teachers' mLearning device which is in favor of them. According to the result of the research, it was found out that using laptops in the classroom regarded as slightly more plausible mLearning devices for pre-service teachers than the use of mobile phones within the classroom.

In another research, Thornton & Houser (2002), they criticize mobile phones stating that due to their screen sizes mobile phones could not be suitable devices to learn new things but to review and practice what is learned before (Thornton & Houser, 2002). Additionally, due to their small sizes of screen Chinnery (2006), consistent with the results of the present research, also reports in research that mobile phones are not good for practicing writing skill since one-finger data input makes it difficult for learners to write up easily. (Chinnery, 2006).

To implement mobile assisted language learning into education requires willingness for both teachers and learners as well. If one of the participants lack willingness that was mentioned above, it may not be possible to end up with a beneficial implementation. In the present research, 62% of the participants agree that students' resistance to using mobile devices in language teaching and learning is one of the most important challenges in front of integration of mobile assisted language learning. Consistent with the results obtained from this research Stockwell (2008) reports that learners' resistance towards using mobile phones for learning and teaching purposes is possibly linked with non-preparedness of learners or accepting to use mobile devices for educational purposes. Learners negative opinions towards using above-mentioned mobile assisted language learning in the classroom may not only stem from resistance to use it for educational purposes but also lack of knowledge and skill to benefit from the concept may also be another reason behind (Dashtestani, 2013). Furthermore, in the research by Dashtestani (2013), it is stated that EFL teachers and authorities are suggested to conduct more research to find out the preparedness and skills of learners. Additionally, it is also revealed that EFL teachers may

enable learners to become aware of the skills and knowledge required for EFL students to implement and use mobile learning successfully (Dashtestani, 2013).

The following research question investigated participants' perceptions of the current use of mobile phones for their EFL courses. In the research, it was found out that around 62% of the participants report that as being EFL teachers they use mobile phones ranging from sometimes to never. One of the reasons behind teachers' low percentage of using mobile devices for teaching and learning might possibly be sufficient knowledge and self-confidence on their skills to use technology efficiently. As Koehler and Mishra (2006, as cited in Dashtestani 2013) suggest that teachers need to improve technologically, pedagogically and content related in order to use technology for teaching and learning purposes effectively. On the other hand, the second item taking place under research question three aims to find out the students of EFL teachers' frequency of using mobile phones for teaching and learning goals. Results of present research revealed that there are many reasons behind, 75% of the participants stated that their students use mobile phones for learning purposes ranging from sometimes to never. Several reasons might be considered as the main cause of this situation. As Lai (2006) suggests the implementation of technological aspect into the curriculum is somehow costly and it is hard to equip everyone with needed tools for implementing the technology. Furthermore, in research consistent with the results of this research Begum (2011) claims that cost issue is one of the challenges along with other challenges which constitutes an obstacle for mobile learning.

The penultimate research question investigated participants' perceptions of their ability to use and develop MALL activities and software. It was found out from the results obtained from the research that most of the participants, around 61%, state they are either undecided, not proficient or fairly proficient on their ability to design MALL activities. Limited knowledge and skills about information and communication technology hinder applying and using technology efficiently thus it is difficult for them to develop appropriate software or tools according to the level of learners they teach and they only rely on pre-created materials which sometimes may not meet the needs of their target audience. In accordance with the results obtained from this research Serin (2012) found

out in a research, that he carried out in Northern Cyprus with EFL teachers, teachers had limited information and knowledge about technology and specifically mobile learning. Additionally, according to research carried out by Goad (2012) for teachers use technology efficiently there should be a positive relationship between teachers' use of technology and their ability to use it. Moreover, Evaluation is an indispensable part of the education and should not be neglected in order to keep education beneficial and meaningful. Material evaluation is a part of evaluation which takes an important place in language education. Results from present research show that 61% of the participants report their ability to evaluate MALL tools ranging from Undecided to Not Proficient. This inability to "evaluate" most of the time leads to selecting unsuitable materials according to the level of their learners which do not meet the requirements and needs of them.

In the final section of chapter five, a comparison between attitudes of ELT students and in-service teachers towards using mobile learning for teaching and learning purposes has been made. It was found out from the questionnaire that most of the answers provided by ELT students and in-service teachers are parallel to each other except for some of the items which are easier to answer for the younger generation of participants. In the literature, there is a limited number of research or no research that compared the attitudes of ELT students and in-service teachers towards using MALL for teaching and learning purposes. Thus, this makes it impossible to compare the research with the ones that have been carried out before and this research constitutes a base for the forthcoming research as well.

5.4. Pedagogical Implications of the Research

The results of this research suggest that mobile assisted language learning (MALL) and its applications could be used as a novel approach in EFL settings. It is understood from the research that teachers' and ELT students have a positive attitude towards using mobile devices throughout teaching and learning processes. Mobile learning provides learners with chances and thus learners are enabled to use their portable devices for a language learning purpose. In Turkey with the arrival of FATIH project, mentioned in earlier chapters, learners have begun to access portable devices easily and implementation

of technological devices to institutions have gained pace as well. However, this does not mean that mobile learning would be applicable to every single skill in language teaching in the Turkish context. Writing skill, for example, is one of the difficult skills to teach from those small screens of mobile devices (Chinnery, 2006). Moreover, it was found out in the research that teachers and pre-service teachers do not have sufficient digital literacy to use mobile phones to use them for teaching and learning purposes. Additionally, consistent with this finding, this research revealed that teachers need to take in-service training and ELT students need to have courses to improve their technological literacy. What is more, teachers and ELT students' positive attitudes towards technology, which is also found out in this research, is a good start for implementing state of the art technology into classroom but should also be supported with learners' and teachers' higher levels of information and communication technology knowledge.

5.5. Limitations to the Research

Since mobile assisted language learning is a relatively new approach and has recently been begun to be applied in teaching and learning processes this research was limited. Participant and scale related limitations were the first ones in this research. It was carried out with a small scale of participants in a small amount of time. Due to time limitations, it was not possible to carry out large-scale research. Large-scale research would, in the end, provide the researcher with more generalizable findings at the end of the research.

Another limitation of the research is the lack of previous studies related to the research topic. Due to a limited number of studies in the same context and researching the same concept, findings of the present research mostly were compared to just similar research which was carried out previously. Studies which have been carried out up to date mostly focused on attitudes of students towards using mobile learning for teaching and learning purposes studies focusing on teacher attitudes were limited in number.

A final limitation is related to genders and in the research, most of the participants were females and in the results of the research females had a determining power on the

results. If the number of genders was equal or there were more male participants results could turn out to be different than current ones in a way genders might differentiate results.

5.6. Suggestions for Future Research

Regarding the limitations of the research, MALL could be accepted as a relatively new research area in the language teaching field and as a matter of fact, it requires more studies to become better and better.

The first suggestion stems from the first limitation. Same or similar research might be conducted with a bigger number of participants, in other words, a large-scale experiment, and in a lengthier time period thus through this way more generalized results might be obtained.

Moreover, a number of teachers, in order to have more insights related to teachers' attitudes towards using mobile assisted language learning, participants of the research could mostly be a teacher as well. Additionally, providing the field with more research related to teacher attitudes will enable researchers to make comparisons and generalizations about easily teachers as well.

The final suggestions come out from this research, is related to the gender issue. Another research to have clear conclusions could be carried out with an even number of participants for each gender. In addition to gender, the age variable might also be taken into consideration while carrying out new research as well.

5.7. Conclusion

This research has examined attitudes of ELT students and EFL teachers towards using mobile assisted language learning for teaching and learning purposes. Additionally, potential challenges perceived by the participants of this research have also been investigated as well. In addition to the perceived challenges, participants perceptions on their ability to use mobile assisted language learning for teaching and learning was explored as well.

The results reported that participants mostly have a positive attitude towards using MALL. As many of the researchers agree that using a novel approach in teaching and learning processes paved through positive attitudes. Educators, first, must have positive attitudes towards mobile learning and then the successful implementation may take place. Positive attitudes, at first sight, could be regarded as the result of being competent at the technology itself. Researchers claim that if a person does not have enough knowledge to use technology efficiently it is not possible for her/him to carry positive attitudes towards the concept. However, inevitably, there could be problems which might stem from learners or teachers or even the technology sometimes might be problematic. Teachers, in a situation like this, should use their problem-solving skills and need to take a step forward and find proper solutions to the problems in front of the implementation of technology into language classrooms.

Furthermore, it was also agreed by the participants that mobile learning provides them with ubiquitous learning opportunities, which removes the restrictions and enables learners to learn anywhere and anytime. Being able to learn and teach anywhere and anytime will also provide learners with the flexibility that enables them to learn in accordance with their schedule no matter what the time or where the place is. The implementation and adaptation of technology into classrooms have gained pace with the FATIH project. Although this does not mean that all of the language skills could be taught through the use of technology. Some of the skills, namely writing, require bigger screen devices to be taught efficiently. Moreover, digital literacy is one of the important concepts

which should be taken into consideration while using technology for academic purposes. In this research, it has been identified that participants' digital literacy to be able to benefit from mobile devices for teaching and learning is relatively low.

Additionally, this research investigated participants' perceived challenges of using mobile devices inside the classroom. Results show that the majority of the participants believe that internet related problems are among the important challenges which hinder using mobile devices for educational purposes. However, teachers and future teachers need to be aware of software that is developed to work in offline mode, in other words, requires no internet. Nonetheless, teachers and instructors also need to be careful of the situation is that learners may resist using their mobile devices for academic purposes. This might be as a result of lack of required skills to use technology for teaching and learning purposes or might be cost related problem ending up with lack of technological device. Before implementation and adaptation of technology into classrooms teachers need to be aware of the certain outcomes and take precautions as well. What is more, the statistical data obtained from the survey show that participants and their students have a limited amount of time of experience, up to the survey date, in using mobile devices for teaching and learning outcomes. This, in turn, results in less familiarization with the software and hardware which are amongst technological implementation.

The main aim of this research was to identify attitudes of the current teachers and future teachers towards using mobile devices for teaching and learning purposes. In addition to the main aim of the research, it was also desired to define the limits of the participants in terms of technology use for academic purposes and provide them with a shed of light about their digital literacy level and create awareness.

As a conclusion, the history of implementation of mobile devices into the educational curriculum could be regarded as still at its infancy and has a long way to go in front. However, the benefits, ranging from turning learners into autonomous to ubiquitous learning opportunities that this concept has presented and will be presenting, are crystal-clear facts and with the more research in the field will definitely better the approach.

REFERENCES

1. Books

Al-Jarf, R. (2012). Chapter Six Mobile Technology and Student Autonomy in Oral Skill Acquisition. *Left to my own devices: Learner autonomy and mobile-assisted language learning*, *6*, 105

Beatty, K. (2003). *Teaching and Researching Computer-assisted Language Learning*. Pearson Education.

Beatty, K. (2013). *Teaching & researching: Computer-assisted language learning*. Routledge.

Corrêa, D. M. (2001). New technologies in teaching and learning English. *EFL Teaching and learning in Brazil: theory and practice*, 211 – 222.

Chapelle, C. A. (2001). *Computer applications in second language acquisition Foundations for teaching, testing, and research*. Cambridge University Press.

Duffy, J. L., McDonald, J. B. & Mizell, A. P. (2005), *Teaching and Learning with Technology*, USA: Pearson Education, Inc.

Egbert, J. (2005). *CALL essentials: Principles and practice in CALL classrooms*. Alexandria, VA: Teachers of English to Speakers of Other Languages.

Khan, B. H. (Ed.). (1997). *Web-based instruction*. Educational Technology.

Kırkgöz, Y. (2012). Exploring teachers' implementation of the recent curriculum innovation in ELT in Turkish primary education. In T. Muller, S. Herder, J. Adamson, & P. Brown (Eds.), *Innovating EFL teaching in Asia* 181 – 195. Hampshire: Palgrave Macmillan.

Kırkgöz, Y. (2017). English Education Policy in Turkey. In *English Language Education Policy in the Middle East and North Africa.* 235 – 256. Springer, Cham.

Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford University Press.

Palfreyman, D. M. (2012). Chapter Eight: Bringing the World into the Institution: Mobile Intercultural Learning for Staff and Students. In *Left to My Own Devices: Learner Autonomy and Mobile-Assisted Language Learning*, 161–181. BRILL

Sharp, V. F. (2002). *Computer education for teachers: Integrating technology into classroom teaching*. Hoboken, NJ: John Wiley & Sons.

Sharples, M., Taylor, J., & Vavoula, G. (2007). A Theory of Learning for the Mobile Age. *The SAGE Handbook of E-learning Research*, 221 – 247.

Stockwell, G. (2012). Mobile-assisted language learning. In M. Thomas, H. Reinders, & M. Warschauer (Eds.), *Contemporary Computer-Assisted Language Learning*, 201 – 216. London, UK: Continuum Books

Taylor, R. (Ed.). (1980). *the computer in the school: Tutor, tool, tutee*. 1 – 10. New York: Teachers College Press.

Trinder, J., Magill, J., & Roy, S. (2005). Expect the unexpected: Practicalities and problems of a PDA project. In A. Kukulska-Hulme & Traxler, J. (Eds.), *Mobile learning: A handbook for educators and trainers*. 92 – 98. London: Routledge

Warschauer, M. (2013). Technological change and the future of CALL. In *New perspectives on CALL for second language classrooms*, 27 – 38. Routledge.

Warschauer, M., & Meskill, C. (2000). Technology and second language teaching. *Handbook of undergraduate second language education*, *15*, 303 – 318.

6. Journals and Proceedings

AbuSeileek, A. F., Sa'aleek, A., & Odeh, A. (2012). Computer Assisted Language Learning: Merits and Demerits. *Language in India*, *12*(4).

Alemi, M., Sarab, M. R. A., & Lari, Z. (2012). Successful learning of academic word list via MALL: Mobile Assisted Language Learning. *International Education Studies*, *5*(6), 99 – 109.

Ally, M., Tin, T., & Woodburn, T. (2011). Mobile learning: Delivering French using mobile devices. *Proceedings 10th World Conference on Mobile and Contextual Learning (mLearn)* 448. Beijing, China: Beijing Normal University.

Al-Shehri, S. (2011). Context in our pockets: Mobile phones and social networking as tools of contextualising language learning. *Proceedings 10th World Conference on Mobile and Contextual Learning (mLearn)* 278 – 286. Beijing, China: Beijing Normal University.

Alvarez, C., Brown, C., & Nussbaum, M. (2011). Comparative study of netbooks and tablet PCs for fostering face-to-face collaborative learning. *Computers in Human Behavior*, *27*(2), 834-844.

Atkinson, R. C. (1972). Optimizing the learning of a second-language vocabulary. *Journal of Experimental Psychology*, *96*(1), 124.

Barnhart, F. D., & Pierce, J. E. (2011). Becoming mobile: Reference in the ubiquitous library. *Journal of Library Administration*, *51*(3), 279 – 290.

Başoğlu, E. B., & Akdemir, O. (2010). A comparison of undergraduate students' English vocabulary learning: Using mobile phones and flash cards. *Turkish Online Journal of Educational Technology-TOJET*, *9*(3), 1 – 7.

Bennett, S., Maton, K., & Kervin, L. (2008). The 'Digital Natives' debate: A critical review of the evidence. *British Journal of Educational Technology*, *38*(5), 775 – 86.

Brown, M. (2012, May). Tablet computing to cultivate Japanese EFL digital literacy: A research on video production in the classroom. In *The medium matters: Proceedings of the Fifteenth International CALL Conference, Providence University, Taichung, Taiwan.* 25 – 27.

Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994–2012. *Language Learning & Technology*, *17*(3), 157 – 225.

Cabrini Simões, L. (2007). An overview on the use of new technologies in English language teaching. *Acta Scientiarum. Human and Social Sciences*, *29*(1).

Çakır, I. (2015). Opinions and Attitudes of Prospective Teachers for the Use of Mobile Phones in Foreign Language Learning. *Online Submission*, *6*(3), 239 – 255.

Cavus, N., & Ibrahim, D. (2009). m-Learning: An experiment in using SMS to support learning new English language words. *British journal of educational technology*, *40*(1), 78 – 91.

Chinnery, G. M. (2006). Emerging technologies, going to the MALL: Mobile assisted language learning. *Language Learning & Technology 10*(1), 9 – 16

Clough, G., Jones, A.C., McAndrew, P. & Scanlon, E. (2007). Informal learning with PDAs and smartphones. *Journal of Computer Assisted Learning*, *24*, 359 – 371.

Corlett, D., Sharples, M., Bull, S., & Chan, T. (2005). Evaluation of a mobile learning organiser for university students. *Journal of Computer Assisted Learning*, *21*(3), 162 – 170.

Dashtestani, R. (2013). Implementing Mobile-Assisted Language Learning (MALL) in an EFL Context: Iranian EFL Teachers' Perspectives on Challenges and Affordances. *Jalt CALL journal*, *9*(2), 149 – 168.

Davies, G. (2005, June). Computer Assisted Language Learning: Where are we now and where are we going. In *Keynote speech at the University of Ulster Centre for Research in Applied Languages UCALL conference: "Developing a pedagogy for CALL*. 13 – 15.

Dogancay-Aktuna, S. (1998). The spread of English in Turkey and its current sociolinguistic profile. *Journal of multilingual and multicultural Development, 19*(1), 24 – 39.

Dündar, H., & Akçayır, M. (2014). Implementing tablet PCs in schools: Students' attitudes and opinions. *Computers in Human Behavior, 32*, 40 – 46.

Gromik, N. A. (2012). Cell phone video recording feature as a language learning tool: A case research. *Computers & Education, 58*(1), 223 – 230.

Grossman, G. M., Onkol, P. E., & Sands, M. (2007). Curriculum reform in Turkish teacher education: Attitudes of teacher educators towards change in an EU candidate nation. *International Journal of Educational Development, 27*(2), 138 – 150.

Gündüz, N. (2005). Computer assisted language learning. *Journal of Language and Linguistic Studies, 1*(2).

Han, W. A. N. G. (2009). Benefits and barriers of computer assisted language learning and teaching. *US-China Foreign Language, 6*(9), 40 – 43.

Hişmanoğlu, M., Ersan, Y., & Çolak, R. (2017). Mobile assisted language teaching from preparatory program EFL teachers' perspectives. *Bitlis Eren Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, *6*(2), 223 – 238.

Hubbard, P. (2009). A general introduction to computer-assisted language learning. *Computer Assisted Language Learning: Critical Concepts in Linguistics*, *1*(1), 1 – 20.

Hutchinson, T., & Torres, E. (1994). The textbook as agent of change. *ELT Journal, 48*(4), 315 – 328.

İnceçay, G. (2012). Turkey's foreign language policy at primary level: Challenges in practice. *ELT Research Journal*, *1*(1).

Kennedy, C., & Levy, M. (2008). L'italiano al telefonino: Using SMS to support beginners' language learning. *ReCALL, 20*(3), 315 – 330.

Kiernan, P. J. & Aizawa, K. (2004). Cell phones in task-based learning: Are cell phones useful language learning tools? *ReCALL 16*(1), 71 – 84.

Kirkgoz, Y. (2005). Motivation and student perception of researching in an English-medium university. *Journal of Language and Linguistic Studies, 1*(1).

Kirkgoz, Y. (2007). English language teaching in Turkey: Policy changes and their implementations. *RELC journal, 38*(2), 216 – 228.

Kırkgöz, Y. (2009). Globalization and English language policy in Turkey. *Educational Policy, 23*(5), 663 – 684

Kukulska-Hulme, A., Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. ReCALL, *20*(3), 271 – 289.

Kukulska-Hulme. A. (2009). "Will mobile learning change language learning?" ReCALL *21*(2), 157 – 165.

Kukulska-Hulme, A., & Jones, C. (2011). The next generation: design and the infrastructure for learning in a mobile and networked world. In *Informed design of educational technologies in higher education: Enhanced learning and teaching*. 57 – 78. IGI Global.

Kumaresan, K., Balamurugan, K., & Thirunavukkarasu, S. (2012). Computer assisted language learning. *International Journal of Management Research and Reviews, 2*(12), 2083.

Lai, C. C., & Kritsonis, W. A. (2006). The advantages and disadvantages of computer technology in second language acquisition. *Online Submission, 3*(1).

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record, 108*(6), 1017 – 1054.

Mishra, P., & Koehler, M. J. (2008). Introducing technological pedagogical content knowledge. In *annual meeting of the American Educational Research Association*. 1–16.

Motteram, G. (2013). Developing and extending our understanding of language learning and technology. *Innovations in learning technologies for English language teaching, 177*.

Ogata, H., & Yano, Y. (2005). Knowledge awareness for a computer-assisted language learning using handhelds. *International Journal of Continuing Engineering Education and Life Long Learning, 14*(4-5), 435 – 449.

Ogata, H., Yin., C., El-Bishouty, M. M. and Yano, Y. (2010). Computer supported ubiquitous learning environment for vocabulary learning. *International Journal of Learning Technology, 5*(1), 5 – 24.

O'Malley, C., Vavoula, G., Glew, JP, Taylor, J., Sharples, M. & Lefere, P. (2003). *Guidelines for learning/teaching/tutoring in a mobile environment*.

Pachler, N., Cook, J., & Bachmair, B. (2010). Appropriation of mobile cultural resources for learning. *International Journal of Mobile and Blended Learning (IJMBL), 2*(1), 1 – 21.

Pettit, J. & Kukulska-Hulme, A. (2007). Going with the grain: Mobile devices in practice. *Australasian Journal of Educational Technology 23*(1), 17 – 33.

Pradheep Singh, Xavier. (2015). The History and the Current Status of Computer Assisted Language Learning. *The Journal of English Language Teaching.* 57. 25–35.

Prensky, M. (2001). Digital natives, digital immigrants. *On the horizon, 9*(5), 1 – 6.

Rahimi, M., & Yadollahi, S. (2011). ICT use in EFL classes: A focus on EFL teachers' characteristics. *World Journal of English Language, 1*(2), 17.

Romano, M. T. (2003). *Empowering teachers with technology: Making it happen*. Scarecrow Press.

Saran, M., Cagiltay, K., & Seferoglu, G. (2008). Use of mobile phones in language learning: Developing effective instructional materials. In *Fifth IEEE International Conference on Wireless, Mobile, and Ubiquitous Technology in Education.* 39 – 43. IEEE.

Sato, T., Matsunuma, M., & Suzuki, A. (2013). Enhancement of automatization through vocabulary learning using CALL: Can prompt language processing lead to better comprehension in L2 reading? *ReCALL, 25*(1), 143 – 158.

Savas, P. (2014). Tablet PCs as Instructional Tools in English as a Foreign Language Education. *Turkish Online Journal of Educational Technology-TOJET, 13*(1), 217 – 222.

Serin, O. (2012). Mobile learning perceptions of the prospective teachers (Turkish Republic of Northern Cyprus sampling). *Turkish Online Journal of Educational Technology-TOJET, 11*(3), 222 – 233.

Singhal, M. (1997). The Internet and foreign language education: Benefits and challenges. *The internet TESL journal, 3*(6), 107.

Siozos, P., Palaigeorgiou, G., Triantafyllakos, G., & Despotakis, T. (2009). Computer based testing using "digital ink": Participatory design of a Tablet PC based assessment application for secondary education. *Computers & Education*, *52*(4), 811-819.

Stockwell, G (2008). Investigating learner preparedness for and usage patterns of mobile learning. *ReCALL*, *20*(3), 253 – 270.

Şad, S. N., & Göktaş, Ö. (2014). Preservice teachers' perceptions about using mobile phones and laptops in education as mobile learning tools. *British journal of educational technology*, *45*(4), 606 – 618.

Tetàrd, F., Patokorpi, E., & Carlsson, J. (2008). *A conceptual framework for mobile learning*. Abu, Finland: Institute of Advanced Management Systems Research, Abok Akademi University.

Tafazoli, D., & Golshan, N. (2014). Review of computer-assisted language learning: History, merits & barriers. *International Journal of Language and Linguistics*, *2*(5-1), 32-38.

Trifonova, A., Knapp, J., Ronchetti, M., & Gamper, J. (2004). *Mobile ELDIT: Challenges in the Transition from an e-Learning to an m-Learning System*. University of Trento.

Uzunboylu, H., Hürsen, Ç., Özütürk, G., & Demirok, M. (2015). Determination of Turkish University Students' Attitudes for Mobile Integrated EFL Classrooms in North Cyprus and Scale Development: ELLMTAS. *J. UCS*, *21*(10), 1283-1296.

Viberg, O., & Grönlund, Å. (2012). Mobile assisted language learning: A literature review. In *11th World Conference on Mobile and Contextual Learning*.

Viken, A. (2009). The History of Personal Digital Assistants 1980 – 2000. *Agile Mobility*, *10.*

Warschauer, M. (1995). Email for English teachers: Bringing the Internet and computer learning networks into the language classroom. *Teachers of English to Speakers of Other Languages, Alexandria, VA.*

Warschauer, M. (1996), "Computer-assisted language learning: An introduction." In Fotos, S. (ed.), *Multimedia Language Teaching*, 3 – 20. Tokyo: Logos.

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language teaching*, *31*(2), 57 – 71.

Warschauer, M. (2000). The death of cyberspace and the rebirth of CALL. *English Teachers' Journal*, *53*(1), 61 – 67.

Wishart, J. (2008). Challenges faced by modern foreign language teacher trainees in using handheld pocket PCs (Personal Digital Assistants) to support their teaching and learning. *ReCALL, 20*(3), 348 – 360.

Wong, L. H., & Looi, C. K. (2011). What seams do we remove in mobile-assisted seamless learning? A critical review of the literature. *Computers & Education, 57*(4), 2364 – 2381.

Xiang, W. Goh, Steven, C. Pather, S. Maxwell, A. D. Wang, H. & Ku, H. S. (2009). Use of wireless tablet PCs as an effective learning and teaching enhancement tool, In: *EDUCAUSE Australasia Conference*, Perth, Western Australia, 1 – 11.

Yavuzalp, N., Derya Gürer, M., Curaoğlu, O., Durmuş, S., Akayoğlu, S., Bahar, M., ... & Tekinarslan, E. (2015). FATIH Project in Turkey: A Case Analysis. *International Journal of Research in E-learning IJREL, 1*(1), 117– 127.

7. Dissertations

Berner, E. J. (2003), "A research of factors that may influence faculty in selected schools of education in the commonwealth of Virginia to adopt computers in the classroom", *Ph. D. Dissertation,* George Mason University, Fairfax VA.

Coghlan, B. F. (2004). *Addressing the barriers to technology integration: A case study of a rural school* (Doctoral dissertation, Mississippi State University).

Goad, K. D. (2012). *The perception of teachers toward the use of mobile technology as a tool to engage students in learning (Doctoral dissertation, Indiana State University).*

8. Electronic Sources

Quinn, C. (2000). mLearning: Mobile, Wireless, In-Your-Pocket Learning. Retrieved February 5, 2019, from https://www.linezine.com/2.1/features/cqmmwiyp.htm

Wexler, E. (2014). What Are Teens Doing Online? Retrieved April 6, 2019, from https://www.pbs.org/wgbh/frontline/article/what-are-teens-doing-online/

Yükseköğretim Bilgi Yönetim Sistemi. (n.d.). Retrieved March 2, 2019, from https://istatistik.yok.gov.tr/

APPENDICES

APPENDIX A: *Questionnaire*

Dear Participants,

The following questionnaire is part of a research project conducted at Institute of Social Sciences, Kocaeli University as a part of a research that investigates the perceptions of Turkish in-service teachers and ELT Students of the implementation of MALL.

Your responses will be treated in strict confidence and individual teachers/schools will not be identified in any report or publication. Please answer all questions as accurately as you can.

Thanks in advance for your invaluable responses.

Background Information

Job/Position:

Institution/ Organization:

Province:

Gender:

Age:

Have you attended any teacher training/education courses yet?

Yes…… No……

How do you rate your English proficiency?

Elementary_____ Intermediate_____ Upper-intermediate_____ Advanced_____

What's your university degree?

What major have you studied at university?

What EFL courses do you teach?

Elementary_____ Intermediate_____ Upper-intermediate_____ Advanced_____

How long have been using mobile phones?

How long have you been teaching English?

Section 1: EFL teachers' and ELT Students' attitudes toward the use of mobile phones for language teaching and learning

ITEMS	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The use of mobile phones will facilitate the process of language learning				
2. Portability is an important property of mobile devices				
3. The use of mobile phones can create interactive learning environments				
4. The multimedia used in mobile phones is useful for EFL learning				
5. Scaffolding can be provided for each learner through the use of mobile phones for language teaching				
6. Mobile phones can be used to teach/learn different language skills				
7. The use of mobile phones for language teaching/learning is cost-effective				
8. The use of mobile phones for language teaching/leaning is time-efficient				
9. Mobile phones can be connected to the Internet at any time				
10. Mobile phones provide learners with ubiquitous language learning opportunities				

Section 2: EFL teachers' and ELT Students' perspectives on the challenges to the use of mobile phones for language learning/teaching

ITEMS	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The small screen size of mobile phones				
2. Slow Internet speed				
3. Internet connectivity problems				
4. Students' non-academic use of mobile phones				
5. High costs of mobile phones				
6. High cost of connectivity to the Internet				
7. Students' lack of skill/ knowledge to use mobile phones for academic purposes				
8. Incompatibility of the use of mobile phones with language teaching/learning				
9. Students' resistance to the use of mobile phones for academic purposes				
10. Lack of language learning mobile-based software and activities				

Section 3: EFL teachers' and ELT Students' perceptions of the current use of mobile phones for their EFL courses

ITEMS	Never	Rarely	Sometimes	Frequently	Always
1. How often do you use mobile phones for your teaching practices?					
2. How often do students use mobile phones for their learning in your classes?					

Section 4: EFL teachers' and ELT Students' perceptions of their ability to use/develop MALL activities and software.

ITEMS	Not Proficient	Fairly Proficient	Undecided	Proficient	Very Proficient
1. Designing MALL activities					
2. Ability to adapt your teaching styles/techniques to MALL					
3. Ability to evaluate MALL software tools					
4. Your ICT literacy to use mobile phones for language teaching					
5. Ability to use MALL software tools					

APPENDIX B: Group Statistics

Teacher Status		*N*	*Mean*	*Std. Deviation*	*Std. Error Mean*
S1Q1	Pre-service	30	3.40	.498	.091
	In-service	70	3.30	.622	.074
S1Q2	Pre-service	30	3.77	.430	.079
	In-service	70	3.66	.508	.061
S1Q3	Pre-service	30	3.57	.504	.092
	In-service	70	3.31	.649	.078
S1Q4	Pre-service	30	3.47	.571	.104
	In-service	70	3.36	.682	.081
S1Q5	Pre-service	30	3.27	.583	.106
	In-service	70	3.14	.728	.087
S1Q6	Pre-service	30	3.50	.682	.125
	In-service	70	3.33	.675	.081
S1Q7	Pre-service	30	3.10	.845	.154
	In-service	70	3.01	.789	.094
S1Q8	Pre-service	30	3.30	.535	.098
	In-service	70	3.26	.674	.081
S1Q9	Pre-service	30	3.43	.626	.114
	In-service	70	3.24	.770	.092
S1Q10	Pre-service	30	3.40	.563	.103
	In-service	70	3.29	.542	.065
S2Q1	Pre-service	30	2.73	.868	.159
	In-service	70	2.63	.966	.115
S2Q2	Pre-service	30	3.17	.913	.167
	In-service	70	2.93	1.026	.123
S2Q3	Pre-service	30	3.17	.699	.128
	In-service	70	3.04	.892	.107
S2Q4	Pre-service	30	2.73	.980	.179
	In-service	70	2.73	1.020	.122

S2Q5	Pre-service	30	2.70	.988	.180
	In-service	70	2.70	.968	.116
S2Q6	Pre-service	30	2.67	.884	.161
	In-service	70	2.57	.941	.113
S2Q7	Pre-service	30	2.93	.944	.172
	In-service	70	2.93	1.094	.131
S2Q8	Pre-service	30	2.67	.661	.121
	In-service	70	2.59	.925	.111
S2Q9	Pre-service	30	2.77	1.006	.184
	In-service	70	2.81	.889	.106
S2Q10	Pre-service	30	2.90	.712	.130
	In-service	70	2.69	.941	.112
S3Q1	Pre-service	30	3.17	1.020	.186
	In-service	70	3.17	.932	.111
S3Q2	Pre-service	30	2.83	1.085	.198
	In-service	70	2.47	1.086	.130
S4Q1	Pre-service	30	3.57	.935	.171
	In-service	70	2.97	1.049	.125
S4Q2	Pre-service	30	3.70	.877	.160
	In-service	70	3.36	1.077	.129
S4Q3	Pre-service	30	3.40	1.070	.195
	In-service	70	3.03	1.090	.130
S4Q4	Pre-service	30	3.57	.898	.164
	In-service	70	3.29	.854	.102
S4Q5	Pre-service	30	3.67	.802	.146
	In-service	70	3.39	.952	.114

CURRICULUM VITAE

Recep Guven was born on February 10, 1989, in Turkey. He attended Kocaeli University between the years of 2011 and 2016 both for college and graduate school. He obtained a B.A. in English Education in 2016 and completed the coursework and thesis related studies for an M.A. in English Education at Kocaeli University as well. He received M.A. Degree from Kocaeli University in 2019. He has currently been teaching English in Turkey to primary school students for more than two years. His main research interests include technology and language education, technology-enhanced language learning, mobile learning, and language acquisition. He has published some papers according to his research interests as well.

ÖZGEÇMİŞ

Recep Güven 10 Şubat 1989 tarihinde Kocaeli'nde doğmuştur. 2011 – 2016 yılları arasında Kocaeli Üniversitesi Eğitin Fakültesi İngilizce Öğretmenliği Bölümünde lisans ve 2016 – 2019 yılları arasında Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü İngiliz Dili Eğitimi bölümünde yüksek lisans eğitimi almıştır. Şu anda bir ilkokulda iki yılı aşkın süredir İngilizce Öğretmeni olarak çalışmaktadır. Ana araştırma alanları arasında teknoloji ve dil eğitimi, teknoloji destekli dil eğitimi, mobil öğrenme ve dil edinimi yer almaktadır. Araştırma alanlarına ilişkin bildiriler de yayınlamıştır.