

**THE USE OF QUIZLET
IN TEACHING VOCABULARY
TO 9th GRADE EFL STUDENTS**

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Eskişehir 2022

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MA THESIS

**Department of Foreign
Language Education**

MA in English Language Teaching

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Anadolu University
Graduate School of Educational Sciences
July 2022**

FINAL APPROVAL FOR THESIS



ABSTRACT

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Department of Foreign Language Education
Program in English Language Teaching
Anadolu University, Graduate School of Educational Sciences, July, 2022

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In recent years, numerous innovative tools such as digital and online flashcards have emerged in the education field to meet the needs of digital natives. Therefore, in the present study, it was aimed at investigating the impact of a digital flashcard tool, Quizlet, on vocabulary acquisition and pronunciation improvement of Turkish EFL learners. Besides, learners' perception of using Quizlet was investigated through a semi-structured interview with 26 participants in the Quizlet group.

The study was conducted in classes of 9th graders: one of them is a Quizlet group (N=26), and the other one is a regular class (N=26). An experimental mixed methods research design was implemented to gather data. Pre and post-tests were adapted from Laufer and Goldstein (2004) and Webb (2009). The tests were implemented in two groups to evaluate the effectiveness of Quizlet on vocabulary learning and pronunciation. The findings of this research indicated that there was a statistically significant difference between the Quizlet group learners' pre and post-test scores. When the Quizlet group and regular class were compared, it was found out that both increased their scores at different rates. The findings of the second part of the study concluded that the Quizlet group learners were the least successful in word stress. Lastly, the results of the interviews supported that more than half of the participants' opinions of using Quizlet were mostly positive. The study concluded with that the teachers should evaluate and try digital tools as learning resources for today's learners as digital natives.

Keywords: Digital Flashcards, Turkish EFL High School Students, Vocabulary Teaching, Quizlet.

ÖZET

9. SINIF İNGİLİZCEYİ YABANCI DİL OLARAK ÖĞRENEN ÖĞRENCİLERE KELİME ÖĞRETİMİNDE QUIZLET UYGULAMASI

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Yabancı Diller Eğitimi Anabilim Dalı
İngilizce Öğretmenliği Programı
Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü, Temmuz 2022

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Son yıllarda, eğitim alanında dijital yerlilerin ihtiyaçlarını karşılamak için dijital ve çevrimiçi kelime kartları gibi çok sayıda yenilikçi araç ortaya çıkmıştır. Bu nedenle, bu çalışmada, dijital kelime kartı aracı Quizlet'in İngilizceyi yabancı dil olarak öğrenen Türk öğrencilerin kelime edinimi ve telaffuz gelişimi üzerindeki etkisinin araştırılması amaçlanmıştır. Ayrıca, Quizlet grubundaki 26 katılımcıyla yapılan yarı yapılandırılmış görüşme ile öğrencilerin Quizlet kullanım algısı araştırılmıştır.

Çalışma biri Quizlet grubu (S=26), diğeri ise kontrol grubu (S=26) olan 9. sınıf öğrencilerinin sınıflarında yürütülmüştür. Veri toplamak için deneysel karma araştırma tasarımı uygulanmıştır. Test öncesi ve sonrası Laufer ve Goldstein (2004) ve Webb'den (2009) uyarlanmıştır. Testler Quizlet'in kelime öğrenimi ve telaffuz üzerindeki etkinliğini değerlendirmek için iki grupta uygulanmıştır. Bu araştırmanın bulguları, Quizlet grubu öğrencilerinin test öncesi ve sonrası puanları arasında istatistiksel olarak anlamlı bir fark olduğunu göstermiştir. Quizlet ve kontrol grubu karşılaştırıldığında, her iki grup da puanlarını farklı oranlarda arttırmıştır. Çalışmanın ikinci bölümünün bulguları, Quizlet grubu öğrencilerinin kelimedeki gerekli yeri vurgulamada en az başarılı oldukları sonucuna varmıştır. Son olarak, görüşmelerin sonuçları katılımcıların yarısından fazlasının Quizlet'i kullanma görüşlerinin çoğunlukla olumlu olduğunu desteklemiştir. Çalışma, öğretmenlerin dijital yerliler olarak adlandırılan günümüz öğrencileri için dijital araçları öğrenme kaynağı olarak değerlendirmeleri ve denemeleri gerektiği sonucuna varmıştır.

Anahtar Sözcükler: Dijital Kelime Kartları, İngilizceyi Yabancı Dil Olarak Öğrenen Türk Lise Öğrencileri, Kelime Öğretimi, Quizlet.

ACKNOWLEDGEMENTS

First and foremost, I would like to express sincere gratitude and appreciation to Assist. Prof. Dr. Gonca SUBAŐI whose support has been invaluable throughout this study. This thesis would have not been the same without her guidance.

I am thankful to my thesis committee: Assoc. Prof. Dr. Mustafa CANER, Assist. Prof. Dr. Selma KARA, Assist. Prof. Dr. Meral  APAR, Assist. Prof. Dr. Dilek  ALIŐKAN for their insightful comments and contributions to my study.

Special thanks must be given to all my students who wanted to participate in the study and contributed to my study. Their innocence encouraged, motivated, and inspired me. I am glad to have you all.

Finally, I would like to thank my friends, colleagues, and those who have participated in this study and helped me without expectation.

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Eskiőehir 2022

STATEMENT OF COMPLIANCE WITH ETHICAL PRINCIPLES AND RULES

I hereby truthfully declare that this thesis is an original work prepared by me; that I have behaved in accordance with the scientific ethical principles and rules throughout the stages of preparation, data collection, analysis and presentation of my work; that I have cited the sources of all the data and information that could be obtained within the scope of this study, and included these sources in the references section; and that this study has been scanned for plagiarism with “scientific plagiarism detection program” used by Anadolu University, and that “it does not have any plagiarism” whatsoever. I also declare that, if a case contrary to my declaration is detected in my work at any time, I hereby express my consent to all the ethical and legal consequences that are involved.

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LIST OF ABBREVIATIONS

CALL	: Computer-Assisted Language Learning
CAPT	: Computer-Assisted Pronunciation Teaching
DF	: Digital Flashcard
PF	: Paper Flashcard
PV	: Productive Vocabulary
MALL	: Mobile-Assisted Language Learning
VKS	: Vocabulary Knowledge Scale

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1. INTRODUCTION

In the context of SLA, the significance of vocabulary is defined as “No matter how well the student learns grammar, no matter how successfully the sounds of L2 (second language learner) are mastered, without words to express a wider range of meanings, communication in L2 just cannot happen in any meaningful way (McCarthy, 1990, p.8)”. It has been noted that knowledge of words is necessary for successful and meaningful communication (Zimmerman, 1997). In this regard, to be able to comprehend the messages, one should express the ideas and messages well through a large vocabulary repertoire both in L1 and L2.

Vocabulary is needed in educational settings to function a healthy communication. With a great amount of vocabulary, learners can perform successfully in four skills (Folse, 2006). To master all four skills, vocabulary should be notable in all curriculum areas (Ediger, 1998). However, vocabulary was a neglected area for a long period in the research studies and the focus was mainly on four skills throughout language teaching history. Alizadeh (2016) indicated that vocabulary achieved its recognizability after a long period of time. Additionally, knowing words is a prominent element for all language learners for successful performance in all four skills (reading, listening, writing, and speaking) in the field of language teaching, and lack of vocabulary results in difficulty in processing, expressing opinions, and conveying messages. Therefore, scholars working in the field of vocabulary tried to shed light on different ways of teaching techniques and strategies (Pourakbari and Biria, 2015; Schmitt, 2000; Zou, 2017).

Teaching vocabulary mostly helps how to use the target language to communicate effectively and efficiently; for this reason, EFL learners are required to improve their vocabulary skills to master speaking skill and real-life situations. Speaking is a challenging skill to be mastered compared to other language skills. Hence, the students with a lack of vocabulary have difficulty in expressing themselves. It has been discovered that a larger vocabulary repertoire affects learners’ oral and written production successfully. Students may have difficulties without enough lexical stock while producing oral and written outcomes specifically for the tasks of productive skills (Sofian and Salam, 2015; Yang, 2015). Deficiencies in vocabulary stock might cause speaking anxiety and create a language barrier for the learners (Anova, Antoni, and Kasyulita, 2015).

Even though the importance of vocabulary knowledge is unquestionable these days, the techniques and methods have been still explored in many research studies (Hulstijn and Laufer, 2001; Karalík, 2016). As stated in the aforementioned studies, having a large stock of vocabulary has a positive effect on oral comprehension and production comparing a lower level of vocabulary knowledge which leads to problems. To conclude, the mentioned studies asserted that the significance of vocabulary knowledge has a direct relation to main skills namely listening, reading, writing, and speaking. Vocabulary instruction should be reformed under the formal instruction framework in language classrooms (Marmol and Sánchez-Lafuente, 2013). With that being said, vocabulary teaching and learning techniques and strategies became the areas of interest for the researchers, practitioners, and language teachers to find out effective vocabulary instruction methods to boost the learners' vocabulary knowledge (Liu, 2009). Since the sheer memorization of the words and the traditional chalk and board method is no longer considered an effective vocabulary teaching method, even though it might be useful in some cases, vocabulary instruction has been morphed into web-based e-learning in recent years (Nejati, Jahangiri, and Salehi, 2018).

As L2 vocabulary learning is known as a complex process, there have been many efforts to facilitate and enhance this process (Groot, 2000). In recent years, technology-enhanced vocabulary teaching has been viewed as the new learning medium in language classrooms. The history of technology-enhanced language learning goes back to the mid-1960s. Then, early manifestations of CALL (Computer-Assisted Language Learning) were replaced by web-based e-learning via personal computers after the 90s (Kohn, 2009). The fact remains that technology-enhanced language learning has started the area of interest for many researchers during the past two decades as a new vocabulary instruction. (Brandl, 2002; Meskill and Antony, 2005; Yang and Chen, 2007; Yang, 2001). After all, the influence of technology-enhanced instruction on foreign language instruction has expanded in ESL/EFL classrooms by using e-mail, networking, video-conferencing, Web-based projects, pen pal activities, use of multi-media contexts, animated texts, e-books, and e-animation. Furthermore, the use of technology-enhanced instruction in classrooms provides many benefits for teaching and learning in the 21st century (Ritzhaupt, Dawson, and Cavanaugh, 2012). Web-based e-learning environments increase motivation, foster autonomy, and enhance interactivity as well as independent learning potential (Cellat, 2008). Web 2.0 technologies are one of the tools that provide

these advantages to the learners. While Web 2.0 technologies and tools help the development of four skills in foreign language teaching, it also plays a facilitating role in vocabulary teaching. Therefore, it will be appropriate to increase research studies on the use of educational environments that are enriched with Web 2.0 tools in the vocabulary teaching process.

1.1. Background of the Study

There has been a rapid change in language classrooms into information and communication technology and a huge increase in the number of teachers who integrate computers and the internet in their classrooms to teach vocabulary. Integration of technology into teaching contexts altered the nature of second language learning and teaching. Indeed, with the introduction of the integrative ‘Computer-assisted Language Learning’ approach in the 1990s, new contexts of teaching by integrating learners in communicative, informational, and authentic environments have started. Computer-assisted education became an important part of vocabulary learning in the early 1980s, however, the lack of technological infrastructure was not enough to maintain the effect of vocabulary exercises. Only fill-in-the-blanks, text translation, and vocabulary games had part of the vocabulary teaching process (Ma and Kelly, 2006). Nowadays, there are many opportunities to access various platforms and various multimedia applications for vocabulary learning compared to the past. With the fact that CALL offers a variety of activities such as embedded exercises and automatically generated multiple-choice questions, computers have now made it possible to make even traditional class exercises in vocabulary teaching interactive and more useful. With the developing technology, new teaching methods have emerged and the use of digital tools in language teaching has not been supported with movies, listening tapes, and televisions in classrooms as it used to be, but supported with the development of digital language learning programs. Specifically, a form of text, audio, and picture in the multimedia context supports vocabulary acquisition (Chien, 2015), and as they are easily accessible for learners via internet and smartphone applications, they have replaced traditional vocabulary teaching materials such as word cards and paper flashcards. In the context of Turkey, although it is common to teach vocabulary with flashcards and traditional methods in English Language Teaching, the studies revealed that newly found digital tools affect vocabulary

development (Kiliçkaya and Krjka, 2010; Nakata, 2011; Samur, 2012). Various e-learning tools focusing on vocabulary acquisition such as My Word Coach, Study Stack, Cram, Word Engine, and the commonly used Quizlet digital tool with 50 million users (Quizlet, 2019) have been developed and integrated into the language classrooms. Specifically, to create an ideal learning and teaching atmosphere, the Quizlet application is selected as a digital tool for this study since it provides student autonomy, and feedback to students, and finally, it provides student observation opportunities for teachers.

In conclusion, the instructional digital flashcard tool, Quizlet, was administered because of some reasons in the current study. Firstly, it is preferred and appreciated by a large number of people. For instance, the platform was recognized worth by an instructional mobile application platform, Educreations (Jackson III, 2015). What is more, was investigated by Chien (2015) by adopting Nakata's (2011) "Criteria for Evaluating Flashcard Software" and Nation's (1994) "Activities for Vocabulary Learning" comparing by two other flashcard websites (Study Stack and Flashcard Exchange). Taiwanese EFL learners stated positive attitudes towards Quizlet. Secondly, its multimedia features (pronunciation of the words, inserting pictures and sentences, games) create purposeful vocabulary learning. Furthermore, Quizlet is a user-friendly and accessible program via computers and smartphones without any payment.

1.2. Significance of the Study

Vocabulary teaching is a major part of the English learning process. In traditional methods, while the words are given with their equivalent in the first language, the students are expected to memorize these words and then use them appropriately in a sentence. Furthermore, the students are pushed to memorize words with a given word list and traditionally learn them (Kim and Gilman, 2008). Some traditional unrewarding practices as seen in the early periods have been modified to meet the needs of digital natives, which is called by Prensky (2009), as the technology adopted in teaching environments. Even some traditional activities can be integrated into technologically enhanced learning environments as competitions and group work to provide an active learning environment desired by millennials.

In the present study, it was aimed to make learning permanent and the words that are intended to be taught were aimed to teach not only in the meaning dimension, but also

its pronunciation, parts of speech, and the sub-skills of a vocabulary by using both entertaining and motivating techniques. Games are one of these techniques. The computer-aided environment offered by Quizlet also brings it with the game feature. Moreover, it is important to investigate the effect of hearing the target word and make students use and repeat it at all levels on English learners' English vocabulary learning process. Many research studies in the literature were conducted to find out receptive and productive knowledge of the meaning and form within vocabulary-based studies (Karakoc, 2016; Tömen, 2016), however, instead of revealing meaning and form, receptive and productive knowledge of orthography and grammatical accuracy were tested to add any new dimension to this area as Nation (2001) featured the notion of knowing a word collected under three titles: form, meaning and use.

Gaining the ability to pronounce a word clearly is a crucial component of oral communication. Even if it does not prevent communication between interlocutors by itself, it is vital to speak more intelligibly. Munro and Derwing (1995) define intelligibility by saying “the extent to which the speaker’s message is actually understood by a listener” (p.76) The aim of the study is an attempt to have participants good pronunciation to enable intelligibility and motivate them to speak English more intelligibly. Chien (2015) focused on comparing three online vocabulary flashcard websites (Study Stack and Flashcard Exchange) according to Nakata’s (2011) criteria. It was also supported in that study that while spelling mode is emphasized in other applications, only Quizlet focuses on pronunciation out of three digital flashcard websites.

Additionally, a lack of vocabulary knowledge, spelling mistakes, and lack of intelligibility were noticed both by the research schools’ English teachers and the students who orally stated that there was a need for more vocabulary learning at the beginning of the semester after the student took the proficiency exam. As the English classroom time was limited to four hours in a week and the learners orally stated that they have not been engaged in a digital application before to learn English, a digital tool was preferred both to meet the needs of learners and to meet the need of vocabulary teaching more than the current situation.

The Quizlet system that is designed as a website is commonly utilized for language learning. The digital system supports learners’ autonomy and pleasure; provides relevancy; and increases the attention span and confidence of the learners. So far, various

studies focused on the content and design of Quizlet as a new online tool (Ashcroft and Imrie, 2014; Eatherton, 2017; Foster, 2009) and its impact on vocabulary learning (Bircan, 2019; Chien 2013; Dizon, 2016; Fransiosi, 2017; Lander, 2016; Özer and Koçoğlu, 2017), its comparison with other flashcard programs (Chien, 2015), its comparison with vocabulary notebooks (Kalecky, 2016; Özer and Koçoğlu, 2017), and reported participants' engagement (İnci, 2020; Stroud, 2014), perception (Chien 2013; Wolff, 2016; Wright, 2016) and autonomy (Cunningham, 2017; Wolff, 2016).

In Turkish EFL contexts, many research studies were conducted to investigate the effectiveness of Quizlet on vocabulary learning (Bilcan, 2019; Çakır, 2019; Çınar and Arı, 2019; İnci, 2020). The main aim of these research studies was to test only the effectiveness of Quizlet on vocabulary learning. However, these research studies did not provide any results in terms of pronunciation development. Therefore, the present study aimed to shed light on the probable effect of Quizlet on pronunciation improvement as a new dimension to the current study. Like many Quizlet studies conducted in other countries and Turkey, the effect of Quizlet on vocabulary learning were analyzed in the current study. However, the participants were university-level learners unlike the current study (Cvitkovic and Prayer, 2018; Çakır, 2019; Dizon, 2015; İnci, 2020; Waluyo and Bucol 2021). Although Bilcan (2019) investigated the vocabulary progress of 9th EFL learners through Quizlet to test whether it helped vocabulary gain in three-week intervals, in the study, there was not any control group for comparison. The data also yielded that there was a statistically significant difference between students' progress on Quizlet and test scores. Additionally, Çınar and Arı (2019) examined effects of Quizlet on vocabulary gain with a group of 71 ninth grade learners. However, the researcher did not take learners' viewpoints on the Quizlet digital apps. The difference of the current study is to interview the participants about the impact of Quizlet.

In this respect, the current study would lead to feasible outcomes as (1) to what extent an online digital flashcard website affects learners' vocabulary gain comparing the traditional teaching approach was limited and the control group was not included; (2) whether the digital system has any effects on pronunciation skill as most of the Quizlet studies only focused on vocabulary learning; (3) and studies in Turkish context were limited for the use of Quizlet as a vocabulary flashcard program in lower level Turkish high school students.

1.3. Statement of the Problem

Having a large stock of vocabulary to be mastered in English through all main skills is an important issue. Yet, learners' exposure to the target language is inadequate in EFL contexts. Especially, beginner-level Turkish High School EFL learners who can master English only during English classes need to learn vocabulary in a short time. Therefore, the learners need to be supported with much vocabulary to enhance their skills by providing opportunities to decrease the burden of vocabulary learning. In that case, many types of research have been carried out to find out useful instructions, strategies, and techniques for vocabulary acquisition (Little and Kobayashi, 2015; Ponniah, 2011; Webb, 2008).

In the past, the students were only given the Turkish equivalent of the words to make them memorize the words without using them in the appropriate context with traditional vocabulary teaching methods such as Grammatical Teaching Method (GTM) (Hartwig, 1974). After that, it is aimed to integrate students into the process with the new methods and techniques. Recent studies indicate that the meaningful way of vocabulary learning through flashcards is invaluable (Crandell, 2017; Imrie, 2014; Nikoopour and Kazami, 2014). A lot of words can be recollected with pair-associated learning, which is reinforced by flashcards (Webb, 2009). Additionally, Nakata (2011) exemplified the advantages of using flashcards especially by adding that computer-based flashcards support the enhanced presentation of materials and exercise types than traditional paper-based flashcards due to their multimedia capabilities. Even though digital opportunities (interactive whiteboards, Fatih project, and EBA) were recommended by the Turkish Ministry of National Education in the last decade, awareness of language teachers to use them effectively is problematic in classrooms. Additionally, only four-hour English lessons per week might not be sufficient for learners to get adequate reinforcement. In response to this, the current study may provide an example for language learners to study vocabulary in a digital learning environment outside the classroom and for language teachers about the tool and how the tool will be used in the class.

As digital tools have become more and more used in the field of foreign language teaching, technology-enhanced vocabulary instruction learning has become a larger trend in language education to accommodate the learning needs of the new generation of 'Digital Natives' to meet their needs of them and to ensure that they are motivated. Furthermore, it is aimed to develop the student's creativity, problem-solving, critical

thinking, metacognition, and self-confidence skills. Nation (2000) asserted language learners should take control of their vocabulary learning. To accomplish this, teachers need to direct learners to use vocabulary strategies and to be independent learners in the classroom since “students cannot learn all the vocabulary they need in the classroom” (Sökmen, 1997, p.225). For instance, Ranalli (2009) examined vocabulary learning strategies of L2 learners to improve the effective use of vocabulary learning strategies of L2 learners regarding computer-based training. During web-based training, a virtual vocabulary trainer (the VVT site) consisting of multimedia tutorials, practice exercises, and awareness-raising tasks were utilized to get learners’ opinions. The researcher investigated the effectiveness of the VVT site under three categories: usefulness, usability, and enjoyment. The results illustrated the impact of an online multimedia approach on learner training. Similarly, a study carried out by Altiner (2011) looked for the impacts of a flashcard program (Anki) on L2 learners’ vocabulary development regarding the useful reusability, and enjoyment through a survey, an interview, and observation. The results demonstrated the content and design of the online site. In a similar vein, the researchers, teachers, and web developers might get benefit from the framework of this current study based on subjects’ perceptions about the effects of the online multimedia approach on their vocabulary learning strategies. Thus, the current study is an attempt to shed light on what extent to the content and design of the online site (Quizlet) and online multimedia approach change learners’ attitudes positively because of technology integration.

Although it is possible to find studies related to vocabulary teaching using a computer-aided teaching tool and mobile-assisted vocabulary learning in the literature (e.g. Brown, 2008; Shih, 2007; Stockwell, 2008), there have not been many studies that tracked the beginner level learners of English to see whether there are any effects of these tools on both vocabulary teaching and pronunciation improvement of learners. It was found that there were deficiencies in pronunciation skills according to the observations made by English teachers in classrooms where the research would be conducted, and it was noticed that this negatively affected their English-speaking skills, and they could not be motivated to learn a language. Even though the learners have vocabulary knowledge, it could become restrictions because of ‘mispronunciation’ as also stated by philosopher Ludwig Wittgenstein (1922), “The limits of my language mean the limits of my world.” This drawback affected 9th-grade learners’ healthy communication and motivation to

learn English, which was also detected by the English teachers working in the research school during classroom observations. They both did not have enough vocabulary knowledge and ability to communicate due to their mispronunciation. On the other side of the medal, the learners did not have any pronunciation examinations, and pronunciation skills do not take serious attention in state schools. Moreover, in the provided coursebooks, the reserved space is very limited related to pronunciation skill and having only four-hour English classes per week already restrict efficient language teaching and learning. It became a necessity for the researcher to track the learners' common errors and give possible suggestions for future teaching. Accordingly, audio-powered Spell study mode through Quizlet flashcards would enable learners to practice pronunciation.

In response to these problems, Quizlet digital flashcard application was considered suitable for this study providing the students with opportunities to work individually by practicing and listening to the words during and after the lesson with different activities by reinforcing those activities with games, which is assumed to motivate and offer engaging learning environment by providing sufficient time for the learners. For the participants of the current study, an English coursebook, Teenwise by the Ministry of Education was used, and in this book, the regular class completed vocabulary tasks together along with tasks of other skills whereas the Quizlet group would complete tasks provided by Quizlet.

1.4. Aim of the Study and Research Questions

The aim of the study was to find out how Turkish learners of English use Quizlet regarding their vocabulary and pronunciation practice. A total of 150 high school students took a vocabulary familiarity test to decide on which words they would work on in connection with their curriculum. Later, the pre-test was assigned primarily concerned with the words they did not know and were not familiar with. The study was an attempt to identify the impact of the online learning and assessment platform Quizlet on the treatment group in terms of vocabulary growth (specific purpose), and any probable improvements in their pronunciation in a public high school in Türkiye, Gaziantep. It was also aimed to explore participants' perceptions of using Quizlet after the implementation. It would further provide information about learners' attitudes towards the degree of usability of Quizlet and whether its features were easy and enjoyable to use for vocabulary

practice. It would also reveal whether using Quizlet could create an engaging atmosphere that enhanced the learners' motivation for learning the English language.

1.5. Research Questions

This study was conducted for high school students who are learning English as a foreign language about improving their vocabulary and pronunciation skills, and a semi-structured interview was conducted to measure the effect of the online tool on students' motivation. The following questions were posed to design the study:

1. What is the effect of Quizlet on the 9th grade EFL students' vocabulary learning?
2. What is the effect of Quizlet on the 9th grade EFL students' pronunciation?
 - a) What are the words commonly mispronounced and pronounced correctly by these students after using Quizlet?
3. What are the viewpoints of 9th-grade EFL students about the impact of Quizlet?

2. REVIEW OF LITERATURE

2.1. Introduction

This chapter presents the review of the literature relevant to the current study that explores the impact of the Quizlet flashcard software program on the vocabulary gain and pronunciation skills of the learners.

2.2. Review of Theoretical Background

2.2.1. What does it mean to know a word?

One of the things that is covered under our written discourse is vocabulary. Vocabulary is among the widely acclaimed prevailing aspects of language competence (Schmitt, 1997; Nation, 1990). Every word is a vocabulary item, and they are essential for mastering a language. Vocabulary knowledge requires knowing pronunciation, syntax, meaning, collocation, and frequency of use, and mastering them is a benchmark for writing quality. The notion of knowing a word can be collected under three titles: form, meaning, and use (Nation, 2000) displayed in Table 2.1. The model featured by Nation describes 9 aspects of vocabulary. According to Nation's framework (2000), these facets should be mastered to be fully successful in knowing a word. Nation (2000) presented an extensive and accepted definition of the meaning of a word.

Table 2.1. *Knowing a word* (Nation, 2001, p. 27)

Form	Spoken	R What does the word sound like? P How is the word pronounced?
	Written	R What does the word look like? P How is the word written and spelled?
	Word parts	R What parts are recognizable in this word? P What word parts are needed to express the meaning?
	Form and meaning	R What meaning does this word form signal? P What word form can be used to express this meaning?
	Concept and referents	R What is included in the concept? P What items can the concept refer to?
	Associations	R What other words does this make us think of? P What other words could we use instead of this one?
Use	Grammatical functions	R In what patterns does this word occur? P In what patterns must we use this word?
	Collocations	R What words or types of words occur with this one? P What words or types of words must we use with this one?
	Constraints on use (register, frequency)	R Where, when, and how often would we expect to meet this word? P Where, when, and how often can we use this word?

Nation (2000) also defined the receptive and productive vocabulary terms, which the former one means state of knowledge one recognizes while reading or listening; and the latter indicates the words that students produce meaningfully, accurately, and appropriately in a meaningful context. To improve fluency in writing and speaking, being proficient in the knowledge of productive and receptive vocabulary is prominent. Nation (2001a) postulated that learners need extra learning of output, thus, productive use of a word is more difficult than the receptive understanding of a word.

The importance of vocabulary knowledge led researchers to measure the state of vocabulary knowledge. Pioneers of vocabulary tests were Paribahkt and Wesche's Vocabulary Knowledge Scale (VKS) and the Word Associates Test (WAT) that was created by Read. They have been found problematic in measuring receptive and productive knowledge of the word. Thus, Laufer and Nation (1999) formed a new way

of measurement. They put forward that active vocabulary contributes to the importance of vocabulary knowledge in writing and emphasis was given on not the number of the words the learners know but how the words are used in writing and speech.

2.2.2. Theoretical framework of receptive and productive vocabulary knowledge

In the literature, many scholars have focused on the issue of vocabulary in writing as an important indicator of L2 writing development. It has been under investigation what kind of vocabulary should be known by L2 learners to improve writing proficiency and performance. For this reason, studies were conducted on receptive and productive skills to see whether there was any impact of the knowledge of vocabulary on those skills. Solak and Altay's (2014) and Hamouda's, (2013) research studies revealed that if students encountered an unknown vocabulary during listening or if they have lack of receptive vocabulary, they experienced difficulties in comprehension during listening. Additionally, Dang and Webb (2013); Hu and Nation, (2000); Silverman, Coker, Proctor, Haring, Piantedosi, and Hartranft (2015); Schmitt, (2000) compared the scores of readings with the vocabulary size of learners. It was seen that there was a positive correlation. In addition, there was attempts to see the effects of vocabulary knowledge on speaking and writing skills. For instance, Tahir's study (2015) stated that despite comprehensibility, there were long pauses, silence, and a gap between interlocutors because of a lack of productive vocabulary. One of the MA theses was conducted to show the relationship between skills and vocabulary knowledge was carried out by Karakoç (2016). Karakoç compared scores and performance of reading and writing with receptive and productive knowledge. It was obvious from the results that the case of having a large receptive vocabulary made them successful in reading exams. According to the results, the correlation between 2000-word level productive knowledge test and writing scores was moderate and the impact was significant.

There is no clear-cut distinction between receptive and productive knowledge of vocabulary. As Milton (2007) claimed that classifying the features of vocabulary knowledge arises problems because both cannot represent one's vocabulary knowledge on their own and both are interconnected. Using receptive knowledge requires productive knowledge as well.

Several significant research studies investigated vocabulary as empirical studies in Turkey. While some investigated vocabulary teaching strategies, others have focused on vocabulary learning strategies. Aitkuzhinova, Gün and Üstünel (2016) studied the effectiveness of semantic clustering when teaching vocabulary to L2 young learners by using digital storytelling while Canbay and Kök (2011) investigated vocabulary consolidation strategies using their scores on VLT and Vocabulary Consolidation Strategy Inventory. However, the studies about vocabulary size, lexical diversity, density, dimensions of vocabulary knowledge, and their effect on language skills are few.

2.3. Review of Empirical Research on Measurement of Productive and Receptive Vocabulary Knowledge

A number of studies have been carried out so far to investigate the measurement of productive and receptive vocabulary knowledge through reading and writing skills (Douglas, 2010; Ibrahim, Muhamad and Esa, 2019; Karakoç, 2016; Tömen, 2016) and to determine the types of measures (Nation, 2000; Waring, 1997; Takala, 1984).

For instance, Nation (2000) justified that receptive and productive measurement should be assessed through recognition and recall items. Retention measures include recognition and recall types of measures. Choosing the first (L1) or second language (L2) equivalent of the given item measures receptive knowledge named as recognition whereas when productive knowledge is measured through translating the prompt into L1 and L2 language, which is called recall.

Similarly, Takala (1984) analyzed receptive (passive) and productive (active) word knowledge by conducting recall tests. The tests that were required to provide a word's first language equivalent measure passive knowledge but the tests that ask for a second language equivalent of provided L1 word measure active knowledge. Apart from recall tests, Waring (1997) illustrated recognition tests by assessing receptive and productive word knowledge. The learners were required to designate correct answers among options of the word form for a given meaning or to decide on the correct answer from among the options of the meaning for a given word.

The learners' writing quality in terms of receptive and productive knowledge and their writing scores have been also investigated in the literature. Douglas (2010) studied with 184 novice non-native undergraduate students. He examined lexical richness and

compared students' GPAs- to the academic outcomes. Lexical richness was measured with TTR and EWT was used as a tool. He presented that lexical richness facilitates academic success and there was a significant difference between NS and NNS. NNS were more stick to high-frequency words than NS. Lexical richness was an important indicator in EWT tests.

As a more recent study was conducted by Tömen (2016) to investigate the lexical features of the learners' written text. This co-sectional comparative study focused on Turkish 1st and 4th ELT students in Turkey. 309 argumentative essays were written to analyze terms of vocabulary size, lexical diversity, and density as the first objective of the study. Tömen (2016) investigated productive vocabulary use and its effect on their writing score by comparing 1st and 4th ELT students. He conducted the study with 165 first-year and 144 fourth-year students. The academic lexical performance of the students was analyzed by LFPs, and vocabulary size, lexical diversity, and lexical density were calculated with the formula. What was found in the study is that considering the variable's lexical features was not only an explanation concerning writing grades. They did not have a direct relation with grades and vocabulary test scores.

Similarly, Karakoç (2016) looked at the effect of vocabulary knowledge on general language ability. She both compared scores based on reading and writing. In this study, vocabulary knowledge was calculated with 2000 PVK, RVK, and LFP. She concluded that there was a significant relationship between the lexical level of the students and productive vocabulary knowledge.

Ibrahim et al. (2019) investigated the development of lexical richness in the essay of third-year students and entry-level university students. Also, they showed the differences in the essays in terms of word frequency. They used RANGE to categorize vocabularies regarding frequency, and word families or to put them not-in-the-lists category. The use of 1000 and 2000-word levels and the AWL were different between pre-sessional and post-sessional students. 1.000 frequent words more employed by post-sessional students, but the use of 2000-word level in the pre-sessional students' essay was greater compared to the others.

Admittedly, the research studies examined above proposed various instruments, which led researchers to put forward more comprehensible conclusions on the lexical richness and measures of lexical richness. Though only a study proposed different

conclusions, varied and large vocabulary plays a crucial role in writing an expression of L2.

2.4. Theoretical Framework of Incidental and Intentional Vocabulary Learning

Researchers have shown that most of the new words in the first language are acquired incidentally through reading and listening. In the field of SLA, Krashen (1989) and Laufer (2001) put forward that the same strategies can be applied to second language learning. Two types of vocabulary learning strategies, which are incidental and intentional were compared in terms of word gain. While incidental learning texts, tasks, and other activities are not directly related to target vocabulary, vocabulary itself has all attention in intentional teaching and learning by integrating vocabulary learning strategies. Even though there is no consensus that a word can be learned incidentally without giving specific attention to that word by external force or by the learner, based on the studies in the literature, what is generally agreed as upon second language vocabulary is learned incidentally through reading in context. Prior research studies generally confirm some limitations of incidental vocabulary learning. Firstly, Nation (1990) claimed that learners need sufficient word knowledge, that is almost 95% of the words in a text, for successful incidental learning. The second issue is long-term retention. Even if learners have enough vocabulary knowledge and deal with rich contexts, the researchers argue that this might not result in learning in the first place. Guessing from the context may limit learning and when students give their attention to both form and meaning, they might fail. The next limitation is the error-prone process. There is a possibility that there cannot be any relation with a known word supported by form and context so that they can guess the meaning incorrectly. Most of the researchers have documented that those arguments did not make incidental learning less effective or worthwhile. The consensus has been on the issue that both instructions should accompany each other (Haynes, 1993; Paribakht and Wesche, 1993). Stahl and Fairbanks (1986) conducted a meta-analysis on over one hundred studies and they suggested that combining natural learning from context and intentional instruction together contributes the vocabulary knowledge. On the other hand, many early studies indicated that word items that are learned may not have any relationship with intentional learning strategies (Hulstijn, 1992; Krashen, 1989) and the number of them learned by intentional instruction

is limited. In addition, it was seen as insufficient in terms of having enough lexical items in a limited time except for having limited stocked words in mind by intentional instruction, that's why incidental learning in L2 was put forward by the researchers. They added that students need exposure and strategies for word guessing along with the quality of the context.

Most of the early studies were conducted based on informing learners that they are going to take a test as an upcoming test on target vocabulary items, or the subjects were not told that they were supposed to take the upcoming test. Intentional and incidental teaching started to gain a prominent role, instead of using implicit and explicit learning terms, after behaviorist learning theorists lost attention. Intentional and incidental learning have still a place in vocabulary learning and teaching literature, though. After the absence and presence of notification studies in literature, focal and peripheral attention were tested; attention on form or form-meaning and message content respectively (Shokouhi, Maniati and Goosh, 2009).

Using reading as a receptive skill made the research area richer even though most of the researchers also worked on listening skills (Barcroft and Sommers, 2005; Ellis and He, 1999; Mason and Krashen, 2004; Vidal, 2003). Using textual input help readers keep track of the pace of their reading by giving them extra time to notice unfamiliar words in the input. It provides researchers with quantitatively and qualitatively rich context helping learners gain high word learning and retention rates. However, Schmitt (2008) critically influenced that academic dialogue by indicating that incidental word learning from exposure to reading alone helps only partial development, not complete word knowledge, and therefore greater amount of textual input is needed.

Ahmad (2012) investigated the difference between intentional and incidental vocabulary learning and tested their effects on Saudi ESL learners to find out how they understand, retain and use in different situations. Two types of tests such as the Standard Confirmation Test and a Contrastive Extempore Test of intentional and incidental types were assigned to 20 subjects. They took two different instructions. Intentional Vocabulary type questions were synonyms, antonyms, crossword puzzles, and word substitutions based on word-meaning (synonyms) only and incidental type tests included reading passages and contextual sentences. The ones who took incidental vocabulary techniques scored better than others. The researcher concluded that the number of words acquired from the exposure to the context was higher. The researcher proposed that developing

inferring vocabulary meaning from context as Nation (2011) stated is an important strategy for reading comprehension and lexical acquisition. The researchers added that the learners involve in the cognitive process more by establishing new words in their lexicon. Previous studies conducted by Ferris (1988) and Pitt, and White and Krashen, (1989) also supported the same idea that learning through reading for meaning only or to improve vocabulary showed that incidental vocabulary results were better than intentional vocabulary learning.

Yali (2010) also conducted a study by comparing two instructional techniques to explore their effect of them on L2 vocabulary learning. Reading plus comprehension questions and vocabulary enhancement exercises were given with different instructions to the experimental and traditional classes. The total number of subjects was 93 Chinese university students. Both groups performed equally well in terms of receptive vocabulary knowledge, but the number of lost vocabulary items was higher in the traditional class one week later. The combination of the instructions resulted in better retention and vocabulary gains. It should be noted that subjects' vocabulary size which was decided on the pre-test played a decisive role in the study. The study revealed that even if it looks focusing on meaning results in vocabulary acquisition, reading supplemented with vocabulary exercises makes learners have greater numbers of words and depth of knowledge. Karami and Bowles's (2019) data findings also promoted the same conclusion. They studied 78 EFL Iranian students divided into six groups, three groups of them were randomly assigned to the traditional class and had no direct, indirect, or intentional vocabulary instruction; three groups of thirteen were randomly assigned to the experimental groups with specific instructions for each group to investigate which instructions improve both vocabulary learning and retention. It was found that word learning, and retention were significant in mixed group instruction followed by intentional and intentional vocabulary learning. However, Perez, Peters and Clarebout (2014) claimed that incidental vocabulary acquisition was less effective than intentional vocabulary learning due to slower gains and worse retention as pointed out in Vidal's (2011) and Sun's (2017) studies contrary to Kweon and Kim (2008). They concluded that learners achieved higher and more effective incidental vocabulary gains by the formal characteristic of explicit elaborations. Kweon and Kim (2008) made a direct comparison in their research and argued that incidental vocabulary acquisition was more effective than explicit instruction. In addition, incidental and intentional instructions were

compared in terms of their impact on the depths and breadth dimensions of vocabulary knowledge through extensive and intensive reading. The experimental groups were assigned extensive reading programs with different form-focused and meaning-focused tasks as incidental vocabulary instruction and the third experimental group was assigned to the intensive reading program as intentional instruction. The results revealed that both groups enhanced lexical items. A significant effect was observed in the form of ER program as incidental learning comparing the intentional IR program. Maghsoudi, Talebi and Mirkamali (2014), and Khnoamri and Roostae, (2014) deduced the same conclusion that both instruction groups developed their lexical knowledge with form-focused and meaning-focused tasks. Other than that, delayed tests showed that the intentional group outperformed in word memorizing and retention comparing the incidental group. On the contrary, Khonamri, and Roostae, 2014 suggested that learning in the form of ER can be fully integrated into EFL language programs.

Some researchers were interested in how to facilitate incidental word learning in L2 through reading. According to Tavakoli and Eckerth (2012), repeated encounters with unfamiliar words and the relative elaboration of processing these words should be highlighted in this study separately. The results showed that both variables resulted in equal effects on word learning but the relative elaboration of word processing has stronger effects than does frequency over time. The amount of word learning mattered in the actual study since word recall was significantly retained than word recognition. Another study conducted by Teng (2016) on repeated encounters with unfamiliar words and the effect of contexts to facilitate incidental vocabulary acquisition showed that the more informative context helped more than the less informative one. Word forms gained a significant rate concerning the effect of word frequency. Word meaning, overall, was affected less by increased exposure to target words than word form of acquisition of productive and receptive knowledge of words.

In this current study, the learners were informed about the upcoming test of selected target vocabulary, and an intentional vocabulary learning strategy was selected to implement as the instructional strategy as the research samples struggle in learning and retaining new vocabulary over a limited and short period.

2.5. Review of Computer-Assisted Language Learning (CALL) and English Vocabulary Learning

The rising use of technology in language teaching has been the most crucial in the classrooms. Regarding growing interest in computers in education as a tutee, tutor and tool has increased gradually. Besides being a tool and tutee, the fundamental use of the computer as a tutor is to teach a lesson and give corrective feedback. It is possible to have access to games, practice activities, and tutorials thanks to computers in education (Mandell and Mandell, 1989; Taylor, 1980).

Computer-Assisted Language Learning (CALL) has begun used in language teaching since the 1960s (Warschauer and Healey, 1998). The history of CALL can be analyzed in three stages: behaviorist CALL, communicative CALL, and integrative CALL. These stages differ from the pedagogical approach to the level of technology. According to Salabery (2001), with the help of CALL and multimedia learning, aural and visual aspects of communication through computers especially vocabulary learning can help learners with monitoring, recording, assessment, and analysis. Similarly, guiding learners and providing prompt feedback to become more autonomous regarding language learning has been an issue in CALL education.

Even though the technology did not provide various vocabulary activities except for gap-filling, speed reading, simulation, and vocabulary games back then (Ma and Kelly, 2006), learners now have access to different types of activities. The effects of CALL on vocabulary learning by providing different types of activities have been searched in numerous studies. For example, according to a research study by Gholinia (2010), the effect of a multimedia CALL on vocabulary learning was investigated with thirty-five college students. The investigation yielded the conclusion that the use of multimedia CALL supported participants' long-term recall of the English vocabulary. The study also confirmed that the software helped to learn and remember by promoting motivation to learn the target language. In another study conducted by Kilickaya and Krajc (2010), thirty-eight subjects have been investigated by practicing an online software called 'WordCamp' in Turkey. The findings uncovered that learners exposed to online vocabulary programs scored higher than a regular class who had regular class instructional methods. To test vocabulary retention, the delayed post-test was administered. It was concluded that online vocabulary learners lost 4% of the words whereas the traditional class lost 6% of the target words. Similarly, Asl, Marandi and

Maftoon (2021) presented a study exemplifying the effect of CALL on 40 intermediate-level Iranian learners. Twenty-five target words were administered with two instructional conditions a simple computer program and a traditional class one. The results stated that VTS.S teacher e-feedback and computerized dictionary outperformed the traditional class.

Although recent studies show some promising results for CALL, others claim that it is still speculative to admit CALL instruction's superiority to pen and paper learning (Nakata, 2008; Horst, Cobb and Nicolae, 2005). For instance, in another study conducted by Hirschel and Fritz (2013), it was found that both experimental and traditional classes scored equally well in post-test whereas the CALL group had better scores in the longer term in terms of vocabulary scores. Even though the differences were statistically significant, they were small.

Contrary to Kilickaya and Krajka's study (2010), which had only 38 participants from Turkey, Hirschel and Fritz's sample was rather big including 140 Japanese students. The researchers found out that, throughout a 5 week-term, the 38 subjects demonstrated an average 44% gain on words using an online program called WordCamp while the traditional class showed approximately 32% gain on words.

CALL-based language teaching and learning aid vocabulary acquisition to a great extent, hence CALL should have a considerable place in vocabulary teaching (Tozcu and Coady, 2004; Renie and Laurier, 1998; Iheanacho, 1997; Somogyi, 1996; Duquette; Kang and Dennis, 1995).

Even though vocabulary learning with computers is efficient with its instantaneous feedback (Sagarra and Zapata, 2008), its multimedia capabilities, strengthening memory through repetition and production of newly learned words (Allum, 2004), CALL has become an outdated term and old phenomenon that has a long history. Thus, the rising use of technology-led CALL education is being replaced with new tools and new multimedia applications with the help of mobile technologies.

2.5.1. The theoretical background of mobile-assisted language learning (MALL)

The influence of mobile technologies on teaching and learning has been rapidly attracting educators and learners. Such influence provides new contexts for learning (Pachler, Bachmair and Cook, 2010). In a more specific manner, mobile learning (mLearning) is characterized by permanency, accessibility, immediacy, interactivity, and

situating of instructional activities by Ogata and Yano (2005). The definition of mLearning is explained as the “process of coming to know through conversations across multiple contexts among people and personal interactive technologies (Sharples, Taylor and Vavoula, 2007, p. 225)”. Smartphones, pads, pods, and personal digital assistants (PDSs) can be considered mobile in interactive mobile technologies. Although the CALL technology is an old phenomenon and replaced by phenomena like MALL, research studies examining the different aspects of mobile technology that support language acquisition are relatively new.

The reason why recently there has been a tendency to mobile learning can be explained by low cost, small size, flexibility, and user-friendly interface to support learning (Huang, Huang, and Lin, 2012). Despite its advantages, researchers discussed primary disadvantages of mobile technologies such as small screen size and dependence on the Internet, and limited capacity for the presentation of graphics (Albers and Kim, 2001). Besides, initial design of many mobile phones is not appropriate for educational purposes (Bachore, 2015). Undoubtedly, there have been such shortcomings, however, mobile devices can indeed be efficient in gaining linguistic knowledge and skills. Both Thornton and Houser (2005) and Kukulska-Hulme and Shield’s (2008) research studies can be regarded as encouraging studies to analyze how mobile technological devices provide collaborative practice in terms of speaking and listening skills and efficient tools for presenting language learning materials to the learners. Additionally, concerning the use and effectiveness of MALL in foreign language education, the focus is on two main approaches presented by Kukulska-Hulme and Shield (2008): content-related and design-related studies. Though these approaches are the primary focus of MALL, the design-oriented studies dominate the research studies in the literature (Wong and Looi, 2011).

However, despite its emergence in L2 vocabulary acquisition, listening and speaking skills, and language acquisition in more general terms, there is no clear-cut consensus on how CALL or e-learning theories differ. For instance, Kukulska-Hulme (2009) only illustrated the phenomenon of MALL without focusing on any explicit use of theory. Nonetheless, some researchers distinguish the MALL as a distinctive concept from other technology-enhanced learning perspectives such as CALL and e-learning. (Petersen, Sell and Watts, 2011; Sandberg, Maris and De Geus, 2011). That conceptual ambiguity reveals a need for more solid models, definitions, and concrete evidence.

Learners' attitudes towards technologies, the aim of using them, and the uses of mobile-assisted technology in second and foreign language learning are the aspects of MALL that are being researched in the literature (Chang and Hsu, 2011). Although the language acquisition was analyzed through mobile technology applications in general terms (Abdous, Facer and Yen, 2012; Hsu, 2012; Oberg and Daniels, 2011) and concluded significant results with respect to language proficiency, little attention is given to enhancing the writing process, reading comprehension, pronunciation performance, and grammar acquisition. (Viberg and Grönlund, 2017). There is a lack of empirical research studies on the effectiveness of mobile devices, and longer studies and larger test groups are needed to ensure the effectiveness so that educators who design activities via mobile devices can analyze the interconnections between language proficiency and mobile technologies.

2.5.2. Theoretical background of the multimedia learning and the generative theory of multimedia learning

The theory hinges on the assumption that working memory has a limited ability to process information and keeping information capabilities should be improved by reducing cognitive load. Mayer says "Multimedia learning refers to learning from words and pictures. Multimedia instruction refers to the presentation of material using both words and pictures, to promote learning (Mayer, 2001, p. 3)". It is inferred that words work better not only with visuals but also through graphics and diagrams.

In the light of the theory, Samur (2012) hinged his study on the redundancy principle to investigate how the redundancy principle in multimedia presentation had an impact on vocabulary retention. Pre and post-tests were administered to low levels 22 learners of Turkish undergraduate students. Samur (2012) measured two conditions: a) animation, concurrent narration, and concurrent text were provided for the experimental group, and b) only animation and concurrent narration were provided for the traditional class. Due to the cognitive theory multimedia learning assumptions, the researcher removed on-screen text from the multimedia presentation. According to the assumptions, (Mayer, 2001) adding on-screen text results in poor learning since that means adding explanations to the narration already spoken. However, Mayer (2001) stated that the reason why adding on-screen text to narration results in better learning is because of

multiple ways of exposure to the multimedia presentation according to the information hypothesis. The results appear to suggest that the ANT group performed better than AT regular class. It can be inferred that animation and synchronous narration and synchronous text can build vocabulary retention through multiple senses.

The reason why there has been significant vocabulary retention can be explained through the Generative Theory of Multimedia Learning. The foundation of the Generative Theory of Multimedia Learning discussed by Mayer (2001) proposed that words and pictures together help the human mind to learn better instead of learning only by words. He added that the goal was not to add pictures to words but to create instructional media with the help of knowing the working way of the human mind. Mayer stated that “people learn more deeply from words and pictures than from words alone” (Mayer, 2001, p. 47). The theory is based on three main assumptions: the theory of Dual-Coding theory which is the way process information through auditory and visual channels, the finite capacity of each channel and finally the assumptions of how learning happens through organizing, selecting, filtering, and integrating information based on our prior knowledge (Mayer, 2005).

Mayer’s cognitive theory of multimedia learning underscores that there can be only a limited amount of information processed in auditory and visual channels at a time and the active process of creating a mental representation of incoming information is stored in three memory stores, which is short-term memory (sensory), working memory (schema) and long-term memory where everything is stored. He also explained that because of the limited capacity assumption learners keep only a few words instead of keeping whole words in their mind when a text is narrated. Mayer (2005) discussed that the integration of prior knowledge to new words, pictures, and auditory information happens actively to create logical mental constructs. In addition, Paivio (1971) proposed that verbal (language) and non-verbal systems (sensory and visual modalities) are interconnected cognitively, however, they are different subsystems structurally and functionally. Nonverbal and linguistic subsystems of the mind are also referred to in vocabulary teaching research. Paivio (1971) claimed that both imagery systems and verbal codes represent a word, and these encoding methods work better remembering a word if these codes represent a word together.

In his study, Shen (2010) showed an attempt to seek an answer to the effectiveness of single and dual coding systems. The researcher gave definitions and verbal

explanations for verbal coding and on the other hand pictures and enactments were applied to the verbal coding group to teach 20 concrete and abstract words. The subjects consisted of 45 college learners of Chinese. The results revealed that the retention of the words showed significant differences in learning abstract words by using the instructional method of imagery and verbal codes. On the other hand, two coding methods were not significant in teaching concrete words. Also, it can be concluded that this study supports the framework of DTC in showing that the retention of shape and meaning of the abstract words not the sounds was possible through verbal and imagery encoding methods.

In a similar vein, Smith, Stahl, and Neil (1987) carried out a research study to find out the effectiveness of imagery codes to learn new vocabulary. It was aimed to see whether both imagery and verbal coding had an impact on their learning instead of only providing definitions or sentences demonstrating the word. The participants were 142 college upper-level freshmen, and fifty target words were administered. The results demonstrated that treatment group 3 which had a definition, a sentence in a context, and picture illustration instruction showed significantly better scores than Group One which only had a definition of the word. Imagery helped learners to acquire new vocabulary items and to have improved long-term memory for those items.

These findings were encouraging to find out how multimedia learning through the representation of a word with both verbal and imagery codes made significant contributions to learners' interconnected memory when recalling the words. In this regard, learning words (verbal code) through pictures (nonverbal/imagery code) on flashcards and flashcards programs increase the effectiveness of multimedia learning.

2.6. Review of Flashcards as a Vocabulary Learning Tool

Teachers use a variety of materials to make the classroom environment a favorable place for language learners. The most commonly used of these materials are flashcards with their visual elements. Flashcards are defined as cardboard including a word, a sentence, or a simple picture on it (Komachali and Khodareza, 2012), namely flashcard software programs are called where the learners are motivated to study target words in a paired-word associate design. The characteristic of the flashcard use in L2 vocabulary learning has been defined as one of the deliberate vocabulary learning tools (Crandell, 2017) that the learners can learn the meaning of the word in a short time (Nation, 2011).

The reasons why the results consistently present the effectiveness of the flashcards over word lists vary (Nakata, 2008). The presentation order of flashcards does not depend on one presented word order so that flashcards can be presented in flexible presentation order (Nation, 2013). Moreover, flashcards, along with an effective deliberate word memorization technique, serve as a tool for spaced repetition by enabling spending extra time with the words that learners do not master yet or have difficulty with (Nakata, 2008).

Another benefit of learning vocabulary with flashcards is that flashcards can be categorized based on lexical sets, collocation patterns, or other items. Learners improve retention of the words by setting the unknown words aside to spend more time reviewing the words they struggle with, in addition, it leads to effective spaced learning (Nakata, 2008). Spaced learning is called one of the metacognitive strategies by Nation (2013), which means lexical items are revisited over a long period helping for a more structured study regime (Ashcroft and Imrie, 2014).

The effectiveness of the flashcards has been discovered by some researchers and stated that using flashcards to teach vocabulary effectively helps learners to gain words more than the word lists (Nakata, 2008; Schmitt and Schmitt, 1995). It is in line with Komachali and Khodareza (2012) who investigated the effectiveness of the flashcards on Iranian pre-university participants' vocabulary gain. They found out that the use of flashcards facilitated and made it possible for learners to have a higher level of vocabulary knowledge. Moreover, Joklova (2009) added that while presenting new words in a foreign language, they facilitated the process and attract the attention of the students by making activities more fun. The empirical studies in the literature compared the vocabulary teaching methods to assess to what extent those strategies were effective in vocabulary mastery. Teaching vocabulary through flashcards and word lists was also attempted to be searched. Based on its cheapness and widely used among the learners, word lists given as worksheets are utilized in the classrooms as one the effective strategies.

Sitompul (2013) and Thornbury (2002) carried out research studies to compare the effectiveness of flashcards and word lists on vocabulary learning. Two research group was chosen to receive treatments to compare the strategies. The results highlighted that both groups increased their scores. The groups utilizing flashcards increased their scores more. Besides, the learners perceived the words more easily and indicated that it was not a tedious strategy as opposed to stated by word list group.

Considering the results that the aforementioned studies revealed, it can be concluded that flashcards enable learners to get the meaning of a new word and facilitate memorizing in a short period of time as they are able to turn the meaning of the word when needed by making connections between form and meaning. Although using flashcards is supported by pair-associated learning and thought to be feasible (Webb, 2009), Nakata (2011) claimed that enriched presentation of materials and various exercise types supported by computer-based flashcards are more effective than paper-based flashcards.

2.6.1. Review of efficacy of digital flashcards on vocabulary learning

Since the 1960s and 1970s, when the CALL movement emphasized language teaching, there has been a movement on investigating programming for the communicative potential of technology (Warschauer and Healey, 1998). Digital flashcards have been a focus among learners and teachers. The role that digital flashcards play in vocabulary teaching is a non-negligible trend and the necessity and importance of digitalized flashcards are on-trends in the field. Most digital flashcards have been specifically designed with capabilities that are not possible with paper flashcards (Nakata, 2011).

Learners' acquisition of the word knowledge via online flashcard websites depends on some factors. To begin with, it should have a user-friendly interface regarding how to log in, play online games, or make flashcards. Furthermore, word knowledge of learners encompasses meaning, spelling, pronunciation, connotation, collocation, register, opposite, and a word's derivation (Benjamin and Crow, 2010) the fact remains that it includes the knowledge of meaning, form, and use. Hence, online websites should offer a variety of word knowledge instructions as follows: example sentences, parts of speech, L1 and L2 definitions of words, sound files, pronunciation of the words, and collocations (Browne and Culligan, 2008) and should focus on improving receptive and productive skills by offering exercises to practice and acquire both receptive and productive skills of word knowledge.

Several research studies highlighted the efficacy of digital flashcards comparing paper flashcards and the results indicated that using digital flashcards was more effective (Azabdaftari and Mozaheb, 2012; Basoglu and Akdemir, 2010; Kiliçkaya and Krajka,

2010). Even though all studies conducted in the field comparing digital versus paper flashcards found that DFs are more effective in L2 vocabulary gains, vocabulary learning strategies were not provided in PFs. Regardless of DFs' positive effect on vocabulary learning outlined above studies, Nikoopour and Kazami (2014) indicated that learners who studied with PFs comparing the computer-based group were superior to the DFs group regarding gains on vocabulary post-test. There were not any significant differences between paper and mobile phone flashcard groups. Researchers suggested that the availability of mobile phones and PFs over DFs was the reason for enhancing vocabulary gains. On the other hand, digitized tools (mobile and online flashcards) did not show any significant difference based on the type of delivery.

Given the fact, that the aforementioned studies did not incorporate vocabulary learning strategies (VLS) as a way to support to PFs and the success of VLSI (receptive and productive L2 vocabulary learning) in fostering L2 vocabulary enhancement by offering a range of features that put PFs at a disadvantages position. For this reason, Dizon and Tang (2016) had a target to compare DFs and PFs groups who included 26 Japanese learners studied with 3 vocabulary learning strategies to see whether any significant differences in receptive and productive vocabulary knowledge. It was concluded that although learners' PV improved at the same pace as their RV which differed from other previous studies (Azabdaftari and Mozaheb, 2012; Basoglu and Akdemir, 2010; Kiliçkaya and Krajka, 2010), there were not any significant differences in RV and PV L2 vocabulary gains between DFs and PFs. It was also reported that there were improvements in each group. In an attempt to find out whether Quizlet instruction had benefits for vocabulary learning for Japanese university students, three intermediate-level students were chosen as samples by Imrie (2014). 100-word lists were chosen from their coursebook and tested according to Nation's (2007) Vocabulary Size Test. Class 1 was administered to use Quizlet, Class 2 was utilized to use paper flashcards, and Class 3 did not get any treatments. The results indicated that Class 1 who was instructed with Quizlet scored higher than (97%) than Class 2 who was instructed with paper flashcards (69%). It was also presented that the Quizlet group spent an average of 2 times per week whereas the paper flashcard group studied only an average of once every two weeks.

Though the studies discussed proposed chapter proposed different conclusions comparing paper-based flashcards and digital flashcards because of the different vocabulary strategies the researchers applied, the positive influence of digital flashcards

on vocabulary learning revealed vocabulary gains. There are still apparent contradictions in the research regarding the effectiveness of digital flashcards. It is clear that more research should be done on the learning effect, linguistic environment and the learners' perceptions of the tools to more clearly understand the benefits of digital flashcards.

2.6.2. Review of quizlet as a flashcard tool

The integration of multimedia and technology types of instruction such as web-based programs, online flashcard games, word annotations, and glossing into vocabulary learning has been recorded in the literature. As a part of multimedia learning, the studies indicated several effects of online flashcards on vocabulary learning concluding that sound, pictures, annotation containing text, and L1 equivalent help EFL learners acquire more words. (Ali, Mukundan, Baki and Ayub, 2012; Browne and Culligan, 2008; Daloğlu, Baturay and Yildirim, 2009; Tuite, Pavlik, Fan, Robison, Jaffe, and Liu, 2012).

As an online flashcard tool, Quizlet with its over 50 million users every month (Quizlet, 2016), and offering 18 different languages is known as multidimensional CALL software and an online mobile application. Apart from its extra features for teachers, it can serve as free online learning material.

The Quizlet digital tool can be studied on computers, and cell phones via mobile apps (iPhone or Android). Users can access diverse flashcard sets on numerous topics, or they can create different study sets. Even though the software program presents a prompt on the front and the answer on the back like regular class paper flashcards, the Quizlet flashcard software program enables users to insert visuals to correspond to the target word. Hence, this feature is in line with Mayer's multimedia learning framework that is saying "people learn better from words and pictures than from words alone" (Mayer, 2005, p. 31). Moreover, clicking on the 'Audio on' button supports learners in hearing the pronunciation of the word. Quizlet, with its feature, supports Mayer's 'dual-channel assumptions' by promoting both visuals and auditory materials. Following that Crandell (2017) asserts some crucial reasons to utilize Quizlet for vocabulary learning:

- 1) Learners can hear as well as see the information presented on the cards
- 2) Users can engage in several activities in which they must type from memory one side of a card when the other side is presented to them, requiring them to do more than passively review the cards (p. 22).

Likewise, with its entertaining and competitive atmosphere, Quizlet gives learners control over their autonomy and facilitates their engagement in the class (Cunningham, 2017).

2.7. Quizlet Studies

Quizlet has been frequently used as an online website and phone application to recognize and acquire a new word. Even though Quizlet has not been designed for language learning, its language-learning-friendly features enable language learners to learn a language.

2.7.1. Empirical studies on quizlet digital tool

Nakata's (2011) "Criteria for Evaluating Flashcard Software" reviewed 17 studies on flashcard learning and designed a list of criteria for the evaluation of digital flashcards. Nakata investigated several flashcards and iKnow! was determined as the best tool in his study. Even though iKnow! met most of the criteria, it is currently not free which makes it a less accessible tool. According to the criteria, nine flashcard software were evaluated depending on two categories: flashcard creation and editing, and learning. With respect to flashcard edition and creating, flashcards were analyzed through the following criteria: 1) flashcard creation, 2) multilingual support, 3) multiword units, 4) types of information, 5) support for data entry, 6) flashcard set (Nakata, 2011 p. 28).

Regarding learning, the following criteria are used: 1) presentation mode, 2) retrieval mode, 3) receptive recall, 4) receptive recognition, 5) productive recall, 6) productive recognition, 7) increasing retrieval effort, 8) generative use, 9) block size, 10) adaptive sequencing, and 11) expanded rehearsal (Nakata, 2011, p. 29). Currently, increasing retrieval effort, generative use, and expanded rehearsal (spaced repetition) are not supported by Quizlet.

Chien (2013), for example, conducted a study with a total of 76 Taiwanese university students to find out whether using Quizlet was useful or not. The study also aimed to get the opinions of participants about the illustrated word cards used in Quizlet. The researcher concluded that the most effective learning tool was the 'Space Race', while the 'Scatter' exercise was the part that was not preferred. According to the students, the most difficult part of preparing illustrated word study cards was finding the

appropriate definitions for the words. The research study showed that definitions used only to increase vocabulary knowledge were insufficient for learners in Quizlet application. Finally, the researcher proposed that the tool needed to be modified by adding synonyms and antonym parts and there should be extra options to see the word in a sentence with its parts of the speech. Following that Chien (2015) compared three online vocabulary flashcard websites focusing on Nation's (1994) activities for vocabulary learning. While form-meaning connections and written form are emphasized in Quizlet by matching words with their definitions, it does not focus on meaning (i.e. association, goal) and use (i.e. collection, constraints of use). Words are given in isolation without word parts, and it is inefficient in teaching and learning vocabulary. Even though Study Stack includes spelling, pronunciation is supported only in Quizlet.

Dizon (2015) examined in what ways Quizlet increased students' vocabulary knowledge with a total of 9 Japanese university students. After a 10-week data collection process, the results showed that Quizlet was an effective and practical tool for word acquisition. Students showed a positive attitude towards the application, and the retention of words increased significantly. The students stated that they would continue using this digital tool in the next academic semester. Similarly, Crandell (2017) reported that thanks to this digital tool, the learners have access to not only the meanings of words but also their pronunciation while emphasizing that created word sets have contributed significantly to the teaching of words in a foreign language. The researcher suggested that learning the word sets to learn the first 500 academic words with the correct translations wherever there is Internet access is the right way to learn from this platform.

One significant study based on Quizlet's impact on the self-autonomy of students and their vocabulary knowledge development conducted by Kalecky (2016). The researcher compared the Quizlet group with control group, which studied the words on paper by taking notes. Of the 2 groups of students, the control group that kept a vocabulary notebook made similar progress compared to the Quizlet Quizlet group. The results showed that the Quizlet group did not make any better progress and Quizlet did not show any difference comparing keeping vocabulary notebook group. On the other hand, the participants preferred to study the words from Quizlet rather than keeping a notebook and stated that it was easier to access, especially both fun and educational.

Waluyo and Bucol (2021) suggested the elements of gamified learning in Quizlet provided significant improvements between pre and post-test vocabulary scores. The

research was carried out with 65 low-level university learners in Thailand. The data was collected in two cycles. The learners did not get any instruction with Quizlet in the first one but were supported with Quizlet in the second cycle. The learning outcomes uncovered the positive impacts of the tool.

In a similar way, Cunningham (2017) discussed the potential of Quizlet and how it improved the capability of interactive flashcards. The researcher asserted the activities both scaffold learner autonomy and serve visual, auditory, and kinesthetic learners. He added on that the digital type of pedagogical training through instructors' contributions and experiences makes learners accustomed to its use and they develop further strategies. Moreover, learner autonomy through Quizlet was mentioned by Wright in his small-scale research (2016) claiming that creating study sets promote independent learning for the learners. The research indicated that accuracy emerges as a problem during the creation of study sets by the learners. Monitoring is needed for efficient vocabulary learning.

Approaching the Quizlet app from a different perspective, Ashcroft, Cvitkovic, and Prayer (2018) compared the effectiveness of Quizlet and paper flashcards on the vocabulary gains of the EFL learners whose proficiency levels were beginners, intermediate and advanced. Participants were 139 university students. They were separated into two groups, and they learned 120 target words in Academic Word List Sub-lists 1 and 2. One group used Quizlet to learn AWL Sub-list 1 and the other group utilized paper flashcards to acquire AWL Sub-list 2. Then the data tools were changed between the groups. Research findings suggested that the participants who studied Quizlet after paper flashcards showed significant differences while there was no difference for the first group who first used Quizlet before the paper flashcards. The individual differences of the learners were not taken into consideration which is crucial in the ICT-supported learning activities. (Kawaguchi, 2016). These studies were listed in Table 2.2. below.

Table 2.2. *Table of summarizing quizlet studies*

	Author and Year	General Aim	Context of the Study	Main Findings
1	Nakata (2011)	To evaluate the digital flashcards and to decide on the best tool	-	iKnow! met most of the criteria.
2	Chien (2013)	To find out whether using Quizlet was useful or not	Taiwan	The most effective learning tool was the 'Space Race', while the 'Scatter' exercise was the part that was not preferred. According to the students, the most difficult part of preparing illustrated word study cards was finding the appropriate definitions for the words. Definitions used only to increase vocabulary knowledge were insufficient for learners in Quizlet application.
3	Dizon (2015)	Whether the Quizlet increased the vocabulary knowledge or not.	Japan	Quizlet was an effective and practical tool for word acquisition. Students showed a positive attitude towards the application, and the retention of words increased significantly.
5	Waluyo and Bucol (2021)	To investigate the effects of the elements of gamified learning in Quizlet	Thailand	The learning outcomes uncovered the positive impacts of the tool
6	Ashcroft, Cvitkovic, and Prayer (2018)	To compare the effectiveness of Quizlet and paper flashcards on the vocabulary gains of the EFL learners whose proficiency levels were beginners, intermediate and advanced.	Japan	the participants who studied Quizlet after paper flashcards showed significant differences while there was no difference for the first group who first used Quizlet before the paper flashcards. The individual differences of the learners were not taken into consideration

2.7.2. Empirical quizlet studies in Türkiye

There are several studies conducted in Turkey to investigate the impact of Quizlet on vocabulary learning. To illustrate, a recent study carried out by İnci (2020) applied the Quizlet application to reveal the effect of computer-aided learning on student participation and vocabulary development with 100 participants in a university. Also, he investigated whether the groups showed significant differences by conducting the motivation subscale. Finally, the Quizlet group improved in their attendance compared to the regular class. Additionally, the Quizlet group showed significant improvement in terms of productive vocabulary. Çakır (2019) aimed to compare gamified student-response applications (Kahoot!, Quizlet, Biquiz, Quizizz, Socrative) with traditional educational methods (based on paper and pencil) in his master thesis. In this way, the researcher attempted to explore the effects of applications on vocabulary learning and the intrinsic motivation of students. A total of 40 learners of English were sampled for the study during 6- weeks in this mixed research design. The findings indicated that the effect

of gamified student-responding applications on English vocabulary development was significant compared to the traditional class, and it was noted that students found the applications enjoyable and useful in terms of intrinsic motivation.

Another research made by Bilcan (2019) was to find out whether the Quizlet flashcard tool had an impact on learners' vocabulary gain and recall. The researcher compared the progress of the learners on Quizlet to their immediate test scores. The researcher in this quasi-Quizlet study collected data from 93 high school students. Correlation analysis showed that there was a significant relationship between the immediate tests and learners' progress on Quizlet. Post-test results also indicated a strong relationship between Quizlet progress and their vocabulary recall. Regarding pair sample t-test results, it was found that differences between immediate and post-test results were significant, which has corresponded with the aforementioned studies showing us how using Quizlet online flashcards showed significant differences between pre and post-test and also between pre and delayed post-test. Furthermore, a study carried out by Çınar and Arı (2019) explored the efficacy of the Quizlet digital tool on vocabulary learning skills and attitudes toward English. Participants in this study were 71 ninth-grade students in Eskişehir. The study follows a design including pre and post-test consisting of 63 target words. The participants were divided into two groups. Data was gathered for a total of four weeks. According to the results of the study, there was a significant increase in the Quizlet group and their attitudes and motivation increased at the same pace. However, a significant decrease was observed for the traditional class.

Similarly, Özer and Koçoğlu (2017) investigated which vocabulary learning tools that were computerized word cards (Quizlet) and paper-based vocabulary notebooks had an impact on vocabulary learning and recall. The findings yielded that there were not any significant changes among the Quizlet, vocabulary notebook and traditional class even though there were improvements after treatment among groups. Pre, post and delayed tests were assigned to 89 lower-level subjects over three weeks. The results also supported the foundations of CALL and the multimedia theory since the Quizlet group showed the most significant changes between pre, post, and delayed tests. The studies were listed in Table 2.3. below.

Table 2.3. *Table of a brief summary of quizlet studies*

	Author and Year	General Aim	Main Findings
1	İnci (2020)	To reveal the effect of computer-aided learning on student participation and vocabulary development with 100 participants in a university.	The Quizlet group improved in their attendance compared to the regular class. Additionally, the Quizlet group showed significant improvement in terms of productive vocabulary.
2	Çakır (2019)	To compare gamified student-response applications (Kahoot!, Quizlet, Biquiz, Quizizz, Socrative) with regular class educational methods (based on paper and pencil).	the effect of gamified student-responding applications on English vocabulary development was significant compared to the regular class, and it was noted that students found the applications enjoyable and useful in terms of intrinsic motivation.
3	Özer (2017)	To decide on which vocabulary learning tools that are computerized word cards (Quizlet) and paper-based vocabulary notebooks had an impact on vocabulary learning and recall	there were not any significant changes among the Quizlet, vocabulary notebook, and traditional class even though there were improvements after treatment among groups. the foundations of CALL and the multimedia theory since the Quizlet group showed the most significant changes between pre, post, and delayed tests.
4	Bilcan (2019)	To find out whether the Quizlet flashcard tool had an impact on learners' vocabulary gain and recall.	there was a significant relationship between the immediate tests and learners' progress on Quizlet. Post-test results also indicated a strong relationship between Quizlet progress and their vocabulary recall.
5	Çınar and Arı (2019)	To explore the efficacy of the Quizlet digital tool on vocabulary learning skills and attitudes toward English	there was a significant increase in the Quizlet group and their attitudes and motivation increased at the same pace. However, a significant decrease was observed for the regular class.

2.8. Review of Technology in Teaching and Learning Pronunciation

With its affordances and innovations in language learning and teaching, technology has created a growing need to integrate it into pedagogical settings. It has a very crucial place in learning and teaching pronunciation. Some studies have explored the effectiveness of computer-based technologies. Golonka, Bowles, Frank, Richardon and Freynik (2012) stated that “technology made a measurable impact in FL learning came from studies on computer-assisted pronunciation training, in particular, automatic speech recognition (ASR) (p. 70)”.

The effect of ASR technology on improvement of pronunciation has been investigated by many researchers. (Al-Qudah, 2012, Seferoglu, 2005). One of the software programs is MyET, My English Tutor. The features of MyET are as follows (1) real life conversations that cover audio-lingual and communicative language approaches. (2) different themes based on real-life dialogues so that learners can record dialogues and

get holistic feedback: intonation, stress, individual sounds. Liu and Hung (2016) investigated the impact of MyET on improving the pronunciation of Taiwanese learners. The learners increased their scores significantly. Another reported software program is Clear Pronunciation 2 that incorporates five topics and five related activities including suprasegmental features of pronunciation. The software is supported with three dialects: British English, American English, and Australian English. Khoshsim, Saed and Moradi (2017) incorporated Clear Pronunciation 2 to enhance learners' pronunciation skills in Iran. The nature of the feedback improved their overall scores on intonation, connected speech, word stress, and sentence stress. A similar finding was revealed by Baradan and Davvari (2010) that using Clear Pronunciation 2 overall pronunciation score of the learners positively.

According to the literature, a considerable number of researchers and language teachers have shown a general inclination on how they can utilize technology to give pronunciation instruction. Despite attempting to carry out many studies to find out whether technology has a very significant role in pronunciation teaching, there has been little evidence from previous research studies that it can be integrated well into classrooms. And still, many studies have been interested in suprasegmental features of pronunciation (rhythm, stress, and intonation).

For instance, Eskenazi (1999) studied 10 native speakers of American English and 20 other participants who were speakers of other languages to investigate the effectiveness of a tool called automatic speech recognition while teaching and correcting errors of pronunciation at the suprasegmental level (intonation). The participants, however, did not show any significant improvements in pronunciation learning. Stenson, Downing, Smith, J and Smith (1992) also investigated the effectiveness of computers by analyzing suprasegmental features of pronunciation (intonation), however, Computer-Aided Pronunciation Teaching (CAPT) had little effect on intonation learning.

Whilst the applications in the CAPT system are still limited and there is not a fully automatic, ready-to-use CAPT system, computer and electronic engineers in the field are exploring developing the fully automatic and ready-made system (Abdous, Facer and Yen, 2012; Moustroufas and Digalakis, 2007; Peabody, 2011). Even though recent trends and issues in technology have started to produce new instructional technologies regarding pronunciation teaching, studies conducted in the field are limited as opposed to CALL methods in the other skills of language. Even studies that have been documented so far

revealed that using technology in pronunciation teaching is useful and should be integrated into classrooms in pronunciation training.

To sum, preceding studies suggested the acceptance of Quizlet in various implementations. However, the impact of Quizlet on vocabulary learning comparing two groups and low-level learners is low. It has become apparent that further research on the effect of digital tools on vocabulary and pronunciation improvement is needed. Even though there have been some studies on the use of Quizlet, the relationship between Quizlet and vocabulary gain is a research gap comparing the regular class. Especially, none of the preceding studies explored the effect of Quizlet on learners' pronunciation development. At that point, adding another dimension to using digital application for pronunciation development would be an interesting area of research. For this reason, the purpose of the present study is to shed light on the effects of Quizlet digital web tool on 9th grade EFL learners' vocabulary and pronunciation development

3. METHODOLOGY

3.1. Introduction

The purpose of this present study was to examine the effectiveness of an online program in improving the vocabulary development of EFL students. This study also aimed to investigate whether a difference appears in learners' pronunciation skills on production level as a result of exposure to audios from Quizlet application. Furthermore, the present study aimed to get a perception of students about using Quizlet as a tool for learning vocabulary and improving their pronunciation including to what extent it is useful and fun. This research would shed light on how to get the most out of an online application in improving vocabulary and pronunciation skills.

3.2. Participants and Setting

52 Turkish EFL learners aging 14-15 years, who were male and female 9th-grade students at a high school in Gaziantep, Turkey with Turkish as their native language, were chosen to participate in this study. About 250 students took place in the vocabulary familiarity test to get to know which words were known by the learners. After vocabulary familiarity and pilot tests, 52 students took part in the pre-test based on the convenience sampling method. In total 28 of the 52 participants were female and 26 were male. The Convenience Sampling method is defined by Creswell as "the researcher selects participants because they are ready and available to be studied (Creswell, 2012; p.145)". The participants were divided into two equal groups: The Quizlet group, which used (Quizlet), and the regular class, which had no special treatment but regular class methods. The subjects of the study were the researcher's teaching classes and for this reason, they were selected depending on the convenience sampling method. To make sure of homogeneity of the classes regarding their proficiency level, the English teachers working at the research school and the researcher investigated the main coursebook and administered a proficiency test. The proficiency test was run to test whether the students at the school were A1 or A2 level learners according to the Common European Framework of Reference for Languages. With regard to their ages and proficiency level, the subjects were homogenous. The research was mentored by only the researcher herself in the researcher's teaching classes.

The participants took English class instruction for four hours per week as a compulsory course determined by the Ministry of Education. The main coursebook of the class, Teen Wise, had 10 units comprising integrated skills that are in accordance with the new ELT program of Turkish National Education. The main coursebook, workbook, and skills book are designed according to the principles of CEFR (See Appendix 1 for detailed information).

3.3. Research Design

The study centers upon the digital program called Quizlet as a teaching method to build learners' vocabulary. The research was an experimental mixed-methods design. "Experimental designs are by definition quantitative procedures for testing a theory or measuring the effects of a treatment (Clark, Creswell, Grenn and Shope, 2008; p. 368)". Quantitative data was obtained through vocabulary assessments administered at the outset and completion of the treatment. The tests were conducted to assess whether or to what extent Quizlet application was effective at enhancing vocabulary gains and pronunciation. Qualitative data was collected through L1 semi-structured interviews which were administered after the completion of the post-test. Creswell (2012) indicated that "You conduct a mixed-methods study when you have both quantitative and qualitative data and both types of data together provide a better understanding of your research problem than either type by itself. A mixed methods research is a good design to use if you seek to build on the strengths of both quantitative and qualitative data (Creswell, 2012; p. 375-382)".

This study involved two instructional conditions. These included 1) Quizlet group: The participants studied flashcards in class at the school laboratory and on their own time after class for two weeks to make them autonomous learners. 2) Regular class: The participants did not get any treatments, but they had the same class materials as the Quizlet group. Both groups stuck to same reading materials, however, the vocabulary activities differed between the groups.

The design of the study was based on a comparison of the pre and post-test scores between groups to assess the effect of the Quizlet digital app. Even though the pre and post-tests were conducted in both groups, the treatment was only received by the Quizlet

group. The research lasted 8 weeks and the research was administered to the treatment group four hours per week by the same instructor.

Not only did the researcher aim to analyze vocabulary achievement and possible pronunciation improvement also aimed to find the possible reason behind these possible achievements and improvements to give future suggestions.

A sequential explanatory design method was utilized for this experimental mixed-methods research design. In the first phase of the study, the researcher collected several data. Secondly, the researcher collected the narrative data. The two phases of this research design are shown in Figure 3.1.

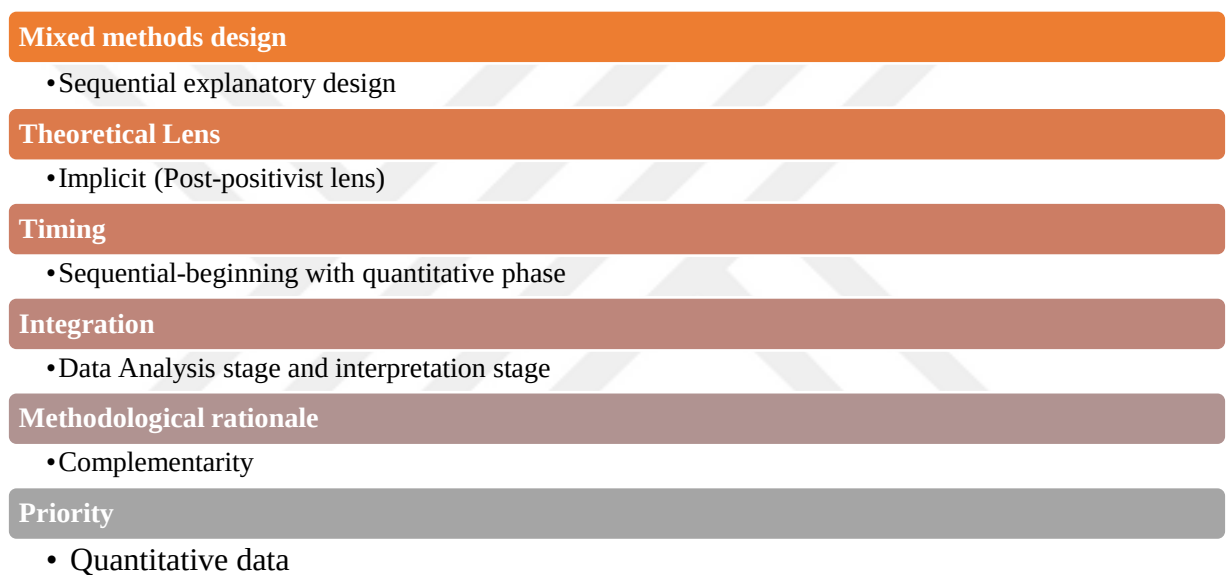


Figure 3.1. *The Sequential Explanatory Design Process of the Mixed Method Design (Creswell, Plano and Hanson, 2003)*

The research questions, data collection tools, and data analysis methods were illustrated in Table 3.1.

Table 3.1. *Summary of the research questions and the procedures to analyze data*

Research Questions	Design (Qualitative or Quantitative)	Data Collection Tools	Data Analysis Method
Research Question 1	Quantitative	Vocabulary Tests Pre-post test	Statistical Analysis
			Independent test
			JASP
			Pair-samples test
Research Question 2	Quantitative	Pronunciation recordings	One-way ANOVA
			Mean scores
Research Question 3	Qualitative	Interview	Coding Scheme
			Content Analysis

3.4. Data Analysis

In the study, quantitative data analysis was conducted by examining the results of pre and post-tests. The researcher utilized the Statistics Package for Social (SPSS) to do quantitative data analysis. First, the students' scores from the pre and post-tests were converted into an Excel table. After that, standard deviations and mean values for the tests were calculated for both groups to gain insights into participants' performance before and after the treatment. A normality test was administered to find out whether the data were normally distributed. To decide whether the distribution of the data affected the type of analysis, the Shapiro-Wilk test was run.

3.4.1. Reliability and validity

Cronbach's alpha was utilized to measure to what extent pre, and post-test provided the same evaluated outcome when it was repeated. To test the reliability of the vocabulary tests designed by the researcher, Cronbach's Alpha analysis was run. At the end of the analysis, Cronbach's Alpha coefficient was found to as 0.924 (See table 3.2. below). The determined coefficient explained that the vocabulary tests are quite reliable. It can be concluded that there is no need to remove any of the questions.

Table 3.2. *Cronbach's alpha statistics for vocabulary test*

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.924	.934	16

Content validity was defined by Bollen (1989) as a “qualitative type of validity where the domain of the concept is made clear, and the analyst judges whether the measures fully represent the domain (p.185)”. Before applying the pre-test, ten English teachers were asked to rate questions by marking appropriate numbers to match their opinion to ensure the content validity of the test. Receptive/ productive knowledge of orthography, meaning, form, and grammar tests were found valid by 9 out of 10 teachers (See Appendix 2). An expert working in the ELT department also checked the content validity of the pre-test.

“Sometimes words say it best; sometimes numbers do; sometimes both can work in concert to compare a richer answer and corroborate each other (Saldana, 2012 pp.177-8)”. In this mixed-methods research study, the Qualitative method, as Saldana (2012) stated, was utilized to investigate the results of the vocabulary tests and investigate the possible reasons, and present suggestions.

A qualitative research method was employed to investigate whether the Quizlet group learners liked the app tool, and thought it was beneficial for their vocabulary and pronunciation studies. The qualitative part of the study was designed within the frame of as Merriam (2009) declares that the researchers center upon “(1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences (p.23)”. Similarly, the researchers shed light on their experiences on how the learners integrated with the Quizlet application, secondly, how they related their experiences and Quizlet application based on that what went well or wrong, and lastly, what kind of precautions they took during integration and the possible reasons to explain the quantitative data. For validity, the interview questions were constructed with an external inspector who has been on the tenure track at a university in Turkey. After all, the questions were checked by English teachers from the research school and an ELT expert. The interview questions used in various studies in the field were also analyzed when deciding the questions. The questions were formed rigorously to derive accurate meanings and to lead the participants to share more experiences (See Appendix 6).

3.4.2. Normality Tests

Since the participants of the study were less than 30, Shapiro-Wilk was applied to determine the normality levels of pre and post-tests. The obtained scores for the pre-test show that Orthography receptive, Orthography Productive, Passive Recall, Passive Recognition, and Active recognition tests did not provide normality assumption, Active Recall, Receptive Knowledge of Grammatical Functions and Productive Knowledge of Grammatical Functions provided normality level. On the one hand, only Productive Knowledge of Grammatical Functions did not provide a normality level for the post-test normality assumption. Other post-test groups showed normal distribution.

In social science, it is not enough to interpret statistically significant data to judge the normality of the data. If the Skewness and kurtosis values are between the range of +2, -2, the data is assumed to have a normal distribution. (Bryne, 2010; Hair, Black, Anderson, and Tatham, 2013; George and Mallery, 2012). The researchers indicate that "A kurtosis value between ± 1.0 is considered excellent for most psychometric purposes, but a value between ± 2.0 is in many cases also acceptable, depending on the particular application (George and Mallery, 2012 p.12)". For this reason, as the Skewness and Kurtosis data values fell between +2, -2, it was determined that groups were normally distributed in the current study. Hence, in this study, parametric tests were employed.

For this study, an independent samples t-test was used to see whether Quizlet had an impact on participants' vocabulary gain. An independent sample t-test was also used to present the difference between before and after the treatment and the differences between the Quizlet and regular classes. Furthermore, a paired t-test was needed to compare the means of the very same subjects to interpret the effects of the Quizlet on the Quizlet group.

The summary of the data collection and analysis is given in Table 3.3 below.

Table 3.3. *Test of normality*

Factors	S-W		
	S-W	df	Sig.
Pre-Orthography Receptive	.961	52	.087
Pre-Orthography Productive	.972	52	.263
Pre-Passive Recall	.970	52	.210
Pre-Active Recall	.869	52	.000
Pre-Passive Recognition	.991	52	.967
Pre-Active Recognition	.958	52	.065
Pre-Receptive Knowledge of Grammatical Functions	.952	52	.034
Pre-Productive Knowledge of Grammatical Knowledge	.806	52	.000
Post-Orthography Receptive	.824	52	.000
Post-Orthography Productive	.912	52	.001
Post-Passive Recall	.851	52	.000
Post-Active Recall	.907	52	.001
Post-Passive Recognition	.813	52	.000
Post-Active Recognition	.725	52	.000
Post-Receptive Knowledge of Grammatical Functions	.937	52	.009
Post-Productive Knowledge of Grammatical Knowledge	.966	52	.136

3.5. Data Collection Procedures

The length of the study was eight weeks. The week before the departure of the study, all 9th graders at high school took a vocabulary familiarity test to eliminate known words from the target words group. 52 unknown words were decided out of three target units. The units were determined randomly regarding the starting date of the study. Both groups were exposed to the same lesson plan and the same coursebook, Teen Wise, determined by the Ministry of Education. The Quizlet group presented tasks and assignments through Quizlet adapted from Schmitt (1995) that are: a) parts of speech; examining whether the target word is a noun, an adverb, an adjective, or a verb, b) translation; translating the target word into L1, c) making full sentence; constructing a sentence with target words, d) synonyms and antonyms; investigating synonyms and antonyms of the words. During the creation of the cards, the English and Turkish definitions are provided on one side of the cards and how they would be presented in the flashcard format was taken into account. Nation (2001) put forth that the construction of a sentence for a word improves learners' use of that word productively. He claimed that learners need skills and motivation to utilize the word. Hence, the example sentences were

provided, and making a sentence for a word through Quizlet was assigned for the participants to improve absolute productive knowledge of the target word. As Quizlet enables learners to create word sets, learners were expected to write their example sentences by creating word sets.

Because of the limited number of computers in the school's computer laboratory and depending on the availability of the school computers, the participants utilized the Quizlet modes after English class during school time in groups of 15 under the researcher's control or by studying alone. Besides, for some weeks Quizlet app was assigned as weekly homework. The participants completed word sets on their phone, tablet, or computer either using the website or mobile app. Additionally, the researcher aimed at tracking their progress as self-autonomous learners when the instructional app was assigned as homework.

It was expected from the Quizlet group to complete each study set using each feature of the application in a week so that the researcher could monitor their progress weekly. The feedback was provided to each participant after checking which features were used by them. Among all Quizlet modes, the 'Quizlet Live' game always was played in the school computer lab as a whole class when time permits.

In week 1, the students in the Quizlet group received learner training to increase their familiarity with the Quizlet tool before the start of the treatment. The researcher explained how to log in and how to use features (flashcards, test, spell, learn, write, matching game, gravity) of Quizlet in relation to receptive and productive vocabulary knowledge. Next, a piloting test was conducted to decide whether there would be any modifications to the pre and post-tests such as time allocation and question types. It was done to test some question items to make them easier to be understood. The piloting study was administered with 30 students which corresponds to more than 10% of the number of students in the main study. The participants took the pre-test during the regular class time in the first week. Following the piloting and pre-test, the actual data collection started in the second week and lasted 7 weeks. Then the post-treatment test was administered to 52 students at the end of the 8 weeks. Also, at the end of the last week to examine the Quizlet group's pronunciation production level, the participants were asked to read the target words aloud in a sentence while the instructor was recording them. Finally, to analyze whether a digital flashcard program called Quizlet affected learners' vocabulary and pronunciation knowledge, a semi-structured interview was applied to all

subjects in the Quizlet group for the qualitative research part after the post-treatment test. Table 3.4. presents the schedule of the implementation period of the study.

Table 3.4. *The schedule of the tests and the implementation period*

	JANUARY				FEBRUARY			
TESTS	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Pre-test	*							
Post-test								*
Interview								*
Voice recording								*

*This icon showed the application of the tests.

→ This line showed the duration of the students' practicing new vocabulary for each unit.

3.5.1 Implementation of regular class

The coursebook vocabulary activities presented in the coursebook were used in the study for regular class group as seen in Table 3.5. The regular class followed routine schedule of the main coursebook and workbook for assignments and target vocabulary teaching. The target words were presented within the units. The participants were asked to match the word with definitions and pictures and construct sentences with the target words. When they had difficulty understanding the meaning, an L1 translation of the word was provided. Besides, the researcher incorporated the same vocabulary strategies for both groups to prevent any disadvantaged learning setting for the regular class (See Appendix 3 for an example lesson plan).

Table 3.5. *The implementation of regular class*

Regular Class Group		
Week 1	Vocabulary Familiarity Test and Pre-test	
Week 2	Main Coursebook (TeenWise)	p. 80-81
Week 3	Main Coursebook	p. 86-87-88
Week 4	Main Coursebook	p. 110-111
Week 5	Main Coursebook	p. 114
Week 6	Main Coursebook	p. 122-123
Week 7	Main Coursebook	p 128-131
Week 8	Post-test	

3.6. Evaluation of the Pronunciation Test and Interviews

3.6.1. Design of the evaluation form for the pronunciation rubric

The rubric was designed for the pronunciation assessment when the recordings of the participants finished. The rubric was derived from an evaluation form for pronunciation conducted in a master thesis to evaluate a total sample of 7380 scores (Aktuğ, 2015). A rubric was formed based on two aspects after evaluation of many speaking rubrics in the literature, and an expert opinion from the ELT department and English teachers' opinions from the research school were taken when designing the evaluation form of the pronunciation rubric. Firstly, sentence-level quality items (intonation, linking, grammar, sentence stress) and items related to oral communication assessment (presentation length, structure, speaking skills, and organization) were excluded from the study since only word-level pronunciation was evaluated and there was no special training for given skills in the current study.

A native speaker of English and a native-like speaker listened to each target word two times. Each rating was on a 10-point scale from 1-poor to 10-excellent (See Appendix 4 for an example pronunciation rubric).

3.7. Qualitative Analysis of the Interviews

The researcher presented the data through what the Quizlet group declared in the semi-structured interview. Before conducting interview, the necessary permissions were obtained through consent forms. (See Appendix 5-6 and 7 for the consent forms). First, the coding was determined as the first step of the analysis. The coding method is an essential part of the qualitative method process. Strauss (1987) explained that “Any researcher who wishes to become proficient at doing qualitative analysis must learn to code well and easily. The excellence of the research rests in large part on the excellence of the coding (p 27)”. The answers of the students were coded for each question according to the negative and positive answers of the participants, and common patterns were categorized. Considering the content of the answers, the interview was analyzed by deciding upon codes and categories (Vaismoradi, Turunen and Bondas, 2013). By means of this analysis, the categories were formed, and participants' utterances were put into categories based on the similarities of codes (See Appendix 8). After putting together, the relevant codes, the number and percentage of learners for each category were presented.

Finally, the findings were determined as 2 themes: positive and negative findings of the semi-structured interview. Those two themes were analyzed under 5 categories for negative findings, and 9 categories for positive findings.

The interview was conducted only by the researcher in Turkish and translated into English since the use of English may hinder expressing true feelings or opinions; however, the qualitative analysis of the interviews was conducted under the supervision of a research assistant in an English Language Department when determining the categories and codes of the students' answers. 26 participants' interview responses were analyzed by the researcher and the independent researcher based on categories determined by the negative and positive findings of the interview. To provide consensus for codes and categories, a few examples (30% of the whole data) of coding were analyzed together with the research assistant and the researcher, and the rest of the content analysis was carried out by individuals. In the end, codes, categories, and themes were identified. Two ELT instructors examined the themes, categories, and codes, and provided feedback. Based on feedback provided by the experts, the final shape of the content analysis was decided.

Armstrong, Gosling, Weinman, and Marteau (1997) set forth that it is also essential to determine the inter-rater reliability in qualitative studies. For this reason, inter-rater reliability was calculated as 91.7% between the raters. The percent agreement between the raters was calculated for the inter-rater reliability (Huck, 2012).

The categories derived from the collected data were listed in Tables 3.6 and 3.7 below.

Table 3.6. *Codes for negative findings of the interview*

Codes	Categories
Meaningless, not feel pleased	Satisfaction
Not satisfactory, not satisfied, reluctant, forget	
Inadequate option, limited, insufficient, no option for assessment of voice, not correcting errors, not giving feedback for recordings	Recording Voice Option
Inadequate computers, no Wi-fi, inadequate technological devices, not	Infrastructural
fair, fairness, not remembering, not supported by mobile app	Incompetence
spaced repetition, preferring regular class methods, be used to paper materials, not appropriate learning style, time-consuming, ordinary, not enough, not seeing a big difference, limited skills, not convenient, not example sentences	Inappropriateness
readiness, not engage in before, not use any digital tool, not into a technological device	Unfamiliarity

Table 3.7. *Codes for positive findings of the interview*

Codes	Categories
Helpful, satisfactory, feel content, be able to remember the word, create study modes, less dependent on the teacher	Satisfaction of using Quizlet
The effective, crucial, new, and positive effect, update, technology use in learning, attention, self-confidence, success, successful, positive	Effectiveness of Using Quizlet
Winner, competitiveness, scoring, racing against time, feedback, badges, cooperation	Game Elements
Concentrate, focus, increased attention	Focus
technology, online application, digital applications for learning English, be into games and technology, good at games	Appropriateness of the Quizlet on vocabulary learning
Enjoyable, collaboration on the games, playing with class, not idle, boring class	Fun and Enjoyment
Helpful, useful, remember, recall, practice in a sentence	Memorability of words
Always, nearly every day, regularly	Frequency
Successful, improve	Success of the learners

3.8. Data Collection Instruments

Materials and instruments that were utilized in this study were vocabulary familiarity test, pilot study, pre-and post-tests, Quizlet application, recordings of the Quizlet group, and semi-structured interview.

3.8.1. Pilot study

In the second phase of the study, the researcher specifically prepared a pilot test designed with non-target words to construct a pre-test. The pilot study was a researcher-made piloting a vocabulary test (adapted from Laufer and Goldstein, 2004; Webb, 2009) that consisted of 8 parts and 5 vocabulary items. Time allocation for each test type was decided for the main pre-test. Finally, 52 vocabulary items were used as vocabulary tests after expert's opinion from ELT department was taken (See Appendix 9).

3.8.2. Vocabulary familiarity test

To determine the words the learners were familiar a self-checking vocabulary familiarity test was administered for 250 participants from research school. They were asked to only indicate whether they knew the word or not. To prevent the overuse of tick words they did not know, the researcher constructed a word list including some nonwords. The students who ticked nonwords more than three times were excluded to control unreliable marking. 52 words out of 130 words were unfamiliar to all 9th graders (See Appendix 10).

3.8.3. Vocabulary tests

To collect data, pre-and post-test were used in the current study. Vocabulary tests were comprised of eight tests assessing knowledge of orthography, and grammatical functions which were adapted from Webb (2009) and meaning and form adapted from Laufer and Goldstein (2004). The vocabulary knowledge was measured in the aspect of receptively and productively. The vocabulary tests were utilized both for pre-and post-tests for the Quizlet and regular classs. Additionally, the same vocabulary test was used in the post-test to see whether there was a change in participants' vocabulary gains with the help of Quizlet after the treatment (See Appendix 11 for a detailed version of the Vocabulary Test).

The order of the items was shuffled to diminish the effect of previous exposure to the test. In addition, the researcher gave each vocabulary part one after another to deal with the effect of earlier tests for the following tests.

When it comes to checking the validity of vocabulary tasks, ten English teachers were asked to measure whether tasks were related to receptive and productive knowledge of orthography, form and meaning, and grammar. They were asked to mark their answers on a Likert scale. Likert-Scale was with three responses varying from 1 to 3 (1 for “agree”, 2 for “disagree”, 3 for “neutral”). The findings of the scale analysis for the validity of the tests demonstrated by 9 teachers out of 10 that the data collection tool was highly valid. To test the reliability of the vocabulary tasks, Cronbach’s Alpha was used. The pleasing results for Cronbach’s Alpha values were achieved. The summary of the vocabulary tests can be seen below:

3.8.3.1. *Receptive knowledge of orthography*

The multiple-choice test was adapted from Webb (2009) and was administered to assess the recognition of the correct spelling of the word. The learners were asked to find accurate spelling among the distracters that were designed as orthographically and phonologically similar to one another.

3.8.3.2. *Productive knowledge of orthography*

This part measured learners’ spelling production. In the light of Webb’s (2009) Productive Knowledge of Orthography, the test was designed to see whether they could write the target words in 15 seconds. All the target words were pronounced twice, and spelling mistakes were not tolerated.

3.8.3.3. *Meaning and form*

In the vocabulary research area, the distinction between active and passive knowledge is associated with listening and reading as comprehension of the word and creating meaning and speaking and writing that requires the production of a spoken or written word forming a new meaning (Laufer and Goldstein, 2004). While active knowledge of a word represents ‘productive’ knowledge, passive knowledge of a word represents ‘receptive’ knowledge. (Meara, 1990; Nation, 2001). There is no clear-cut consensus between terms. It can be seen that they are used interchangeably in the articles. Two types of tests are used to measure active and passive word knowledge: recall and

recognition (Takala, 1984; Waring, 1997). According to Laufer and Goldstein, four degrees of knowledge of meaning make categorization for vocabulary knowledge. Based on hierarchy it can be supplied in either form for a given meaning or meaning for a given form. The other dichotomous distinction is whether the word can be recalled or only be recognized from the form being the meaning of the word by choosing options.

3.8.3.4. *Active recall*

To prevent learners from writing non-target words the first letter of L1 words was given and they were assigned to write L2 target words by choosing from L1 translation equivalents among 52 L1 words.

3.8.3.5. *Passive recall*

The participants were asked to supply an L1 translation of the words by looking at the first letter of the L2 word as a prompt. It was measured to see whether they could recall the L2 meaning and write L1 translations.

3.8.3.6. *Passive recognition*

In a set of four options, the participants were asked to choose L1 (Turkish) translations of L2 (English) word meanings. The distractors were taken from the Vocabulary Familiarity test that the learners were already familiar with.

3.8.3.7. *Active recognition*

Four options of L2 words were given and were asked to recognize L1 target words among L2 translations. The distractors were selected from the words that were used in the passive recognition test.

3.8.3.8. Receptive knowledge of grammatical functions

The task in the receptive knowledge of grammatical function test adapted from Webb (2009) was to choose the grammatically correct sentences in a multiple-choice test.

3.8.3.9. Productive knowledge of grammatical functions

To prove active knowledge of grammatical functions a sentence construction test (adapted from Webb, 2009) was designed. They were asked to produce 52 grammatical accurate sentences.

3.9. The Implementation of the Voice Recording Test

Participants' responses to the target words were recorded digitally with a special microphone so that there could not be any misjudges or doubts between the raters. The recording was analyzed by a native speaker of English secondary school English teacher who has been teaching English for 8 years and lived and studied abroad. The school library was preferred to maintain silence and decrease noise levels and the best sound insulation. Twenty-six 9th participants were recorded and evaluated with 52 target words in terms of segmental and suprasegmental features of pronunciation. Every 52 words were not given isolation to prevent any feeling of the stress of the upcoming word. The target example sentences were received from Cambridge online dictionary on <https://dictionary.cambridge.org/tr/>, <https://www.merriam-webster.com/> and Oxford online dictionary on <https://www.oxfordlearnersdictionaries.com/> and were modified according to the level of students. Some examples of the sentences that the participants encountered during the recording were provided in Table 3.8.

Table 3.8. *The target words and the sentences for recording*

No	Sentences
1	I love the ancient sites of Turkey
2	It is almost 2 feet in height.
3	The Taj Mahal is a UNESCO World Heritage site.
4	His book is a masterpiece.
5	Skyscrapers are beautiful structures.

Segmental features mean consonant and vowel sounds. Also, stress was analyzed under suprasegmental features of pronunciation. Since they were beginner levels and as the researcher followed the curriculum, it was decided that it would be impractical to test all other suprasegmental features. Hahn (2004) indicates improperly stressed words and phrases can cause confusion and misunderstanding. Hence, to impede a delay misunderstanding and confusion of participants' speaking stress were analyzed in the study.

After data collection procedures, the researcher found the most problematic words and categorized them based on pronunciation errors. The most frequently mispronounced words were shown and explained in detail in the next chapter.

3.10. Interview Questions

A semi-structured interview was conducted to measure the effect of the online tool on students' motivation. The interviews were recorded and transcribed for content analysis. The interview was carried out in Turkish since the use of English may hinder to expressing true feelings or opinions, and the interview was transcribed and translated. The translation was also investigated by another researcher in the field of ELT. The questions were developed based on related literature. Two ELT instructors examined the questions and provided feedback. The questions were centered on finding out whether they thought they learned through an app or not, what they liked from various features of the app, which features were useful, and whether they would prefer to use it as a learning tool in the future.

The following questions were sought to answer. At this point, the following probing questions were asked to learners according to the given answers.

- 1) What is the effect of Quizlet on learning new words?
- 2) What is your favorite feature of the Quizlet to study vocabulary?
- 3) How can we improve Quizlet? What is your opinion?

3.11. Quizlet as an Instructional Material

In the current study, a widely used technology-based flashcard application, Quizlet, was employed as instructional material. Learners can create a free account and join the class. Quizlet has several capabilities: Flashcard page, Spell page, Learn page, Test page,

and Quizlet Live. Figure 3.2. shows the screenshot of the browser-based version of the Class page

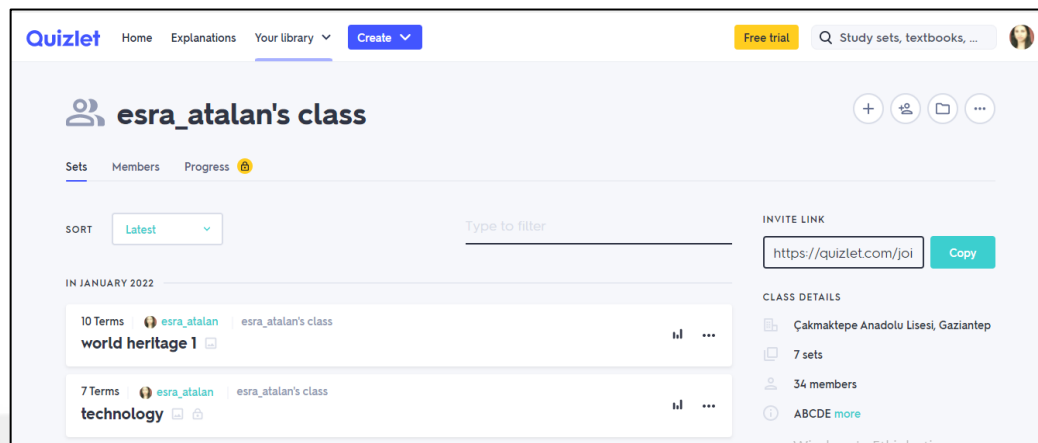


Figure 3.2. Quizlet class page

Figure 3.3. shows a screenshot of the browser-based version of the Flashcard page. The Flashcard page is where learners review the words through definitions, pictures, or audio. It gives options to determine which side(s) of the cards can be shown. ('flip or flow'). Learners can access the other side of the card by clicking when it is chosen to show only one side of the card. They can also hear the pronunciation of the word (audio on/off). In this study, both L1/L2 definition and example sentences were used when preparing each target word. Crandell (2017) suggests that providing a sentence for a word improves receptive and productive knowledge of a word.



Figure 3.3. Flashcards mode on the quizlet website

Figure 3.4. displays a screenshot of the browser-based version of Learn page. The Learn page is where learners are asked to type the text of the other side after seeing one side of the card or to select the correct option from multiple choice. Learners' correct and incorrect answers are kept by a tally. When the learners answer incorrectly, the target word will appear more frequently until correct answers are provided successfully.

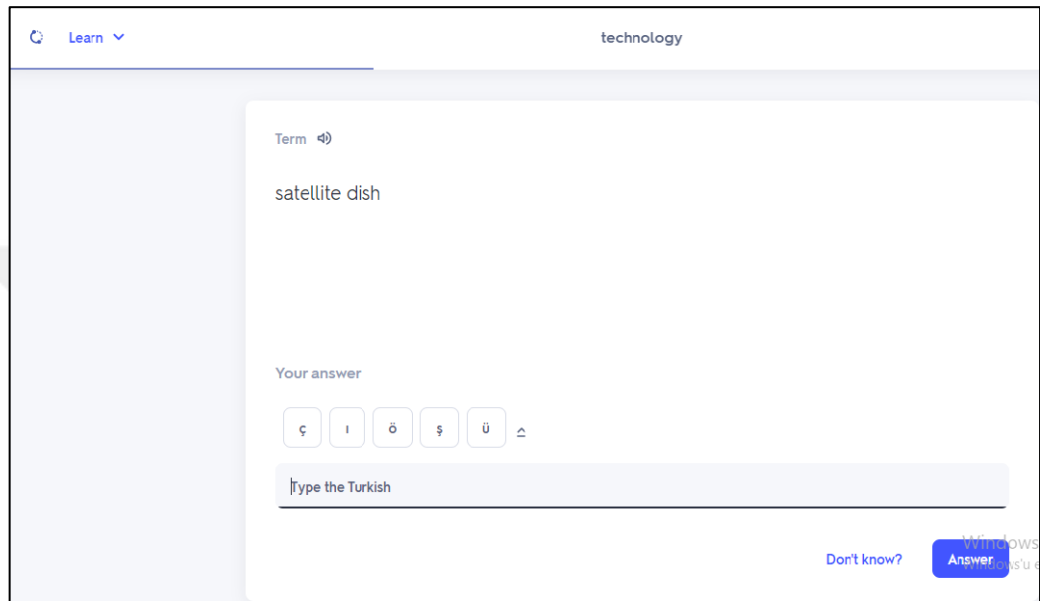


Figure 3.4. Learn mode on the quizlet website

On the Write mode seen in Figure 3.5., learners practice target words by typing the term based on a given picture, definition, or example sentence.

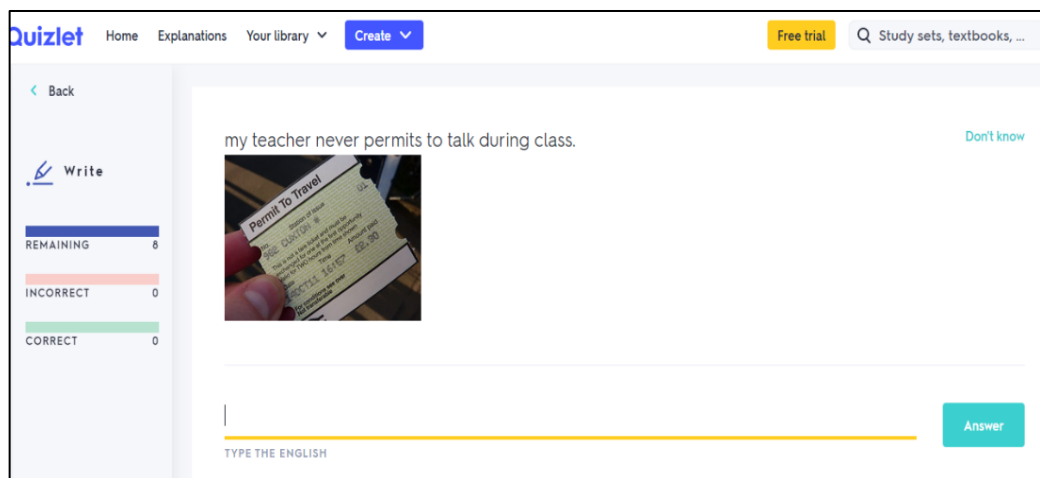


Figure 3.5. Write mode on the quizlet website

As seen in Figure 3.6., Spell mode enables learners to practice the target term after they listen to the audio. Quizlet makes it possible for learners to choose which side of the cards they practice spelling of the word. Once they complete the study mode, they can check the other side of the card.

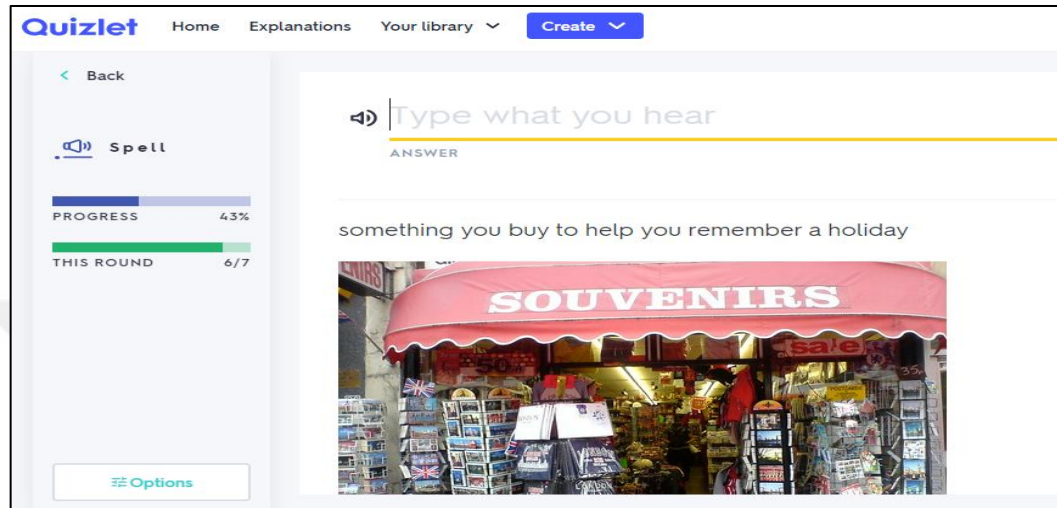


Figure 3.6. Spell mode on the quizlet website

Figure 3.7. is a screenshot of the browser-based version of Test mode. After the sets were studied, written, true or false, matching, multiple-choice types of questions were randomly selected based on the words on the sets. Once the test is completed, learners can take the test again or check their correct and incorrect answers.

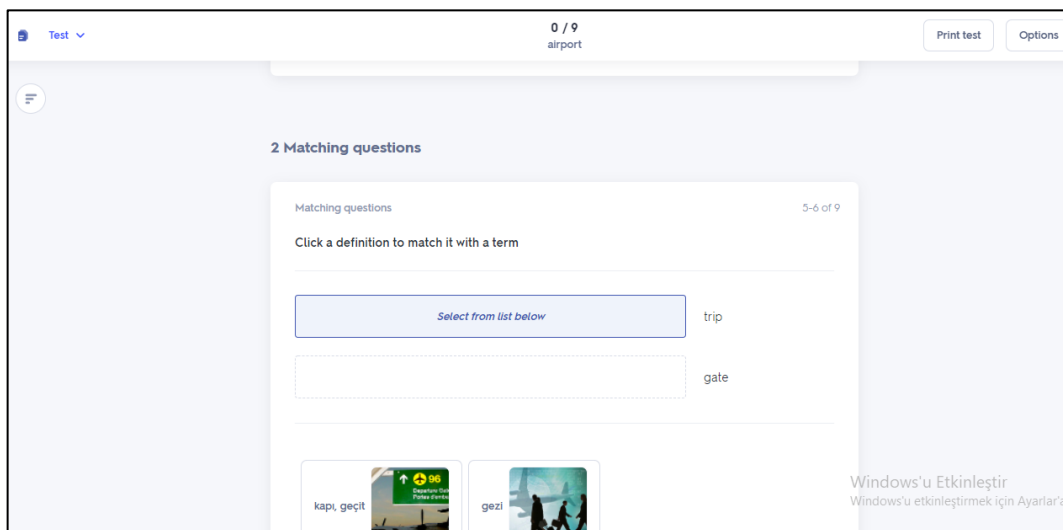


Figure 3.7. Test mode on the quizlet website

As shown in Figure 3.8., the Match game is offered by Quizlet and the aim is to drag corresponding sides of the flashcards to make tiles disappear as quickly as possible. Learners try to break other users' time records or to get a better score from their previous scores.

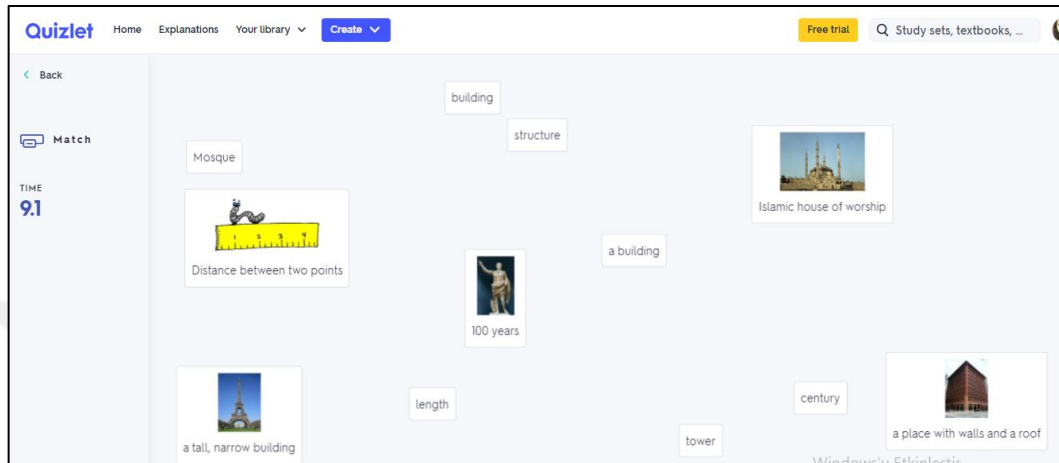


Figure 3.8. Match game on the quizlet website

On the Gravity Game seen in Figure 3.9, the opposite side of the flashcards from the sets must be typed correctly before falling asteroids destroy the planet. As the game continues, asteroids become faster and fall more frequently. Thus, learners need to be quick to type opposite sides of the terms before they reach the ground. The more they destroy asteroids, the more they get points.

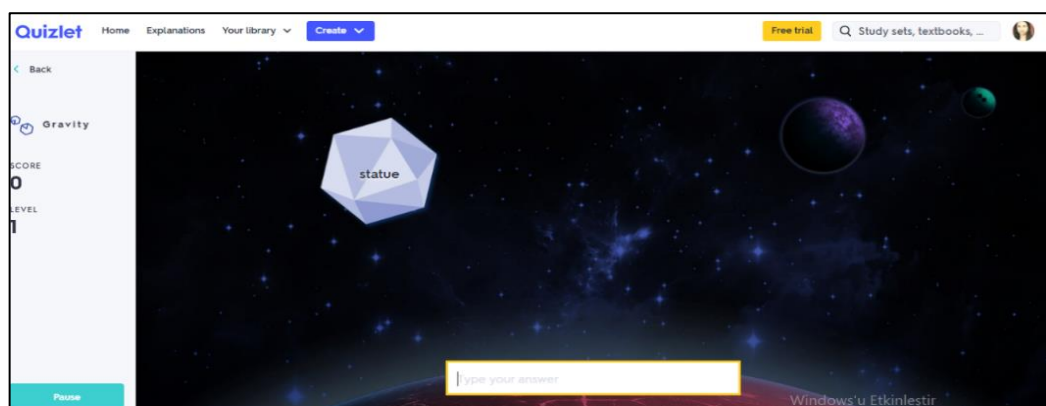


Figure 3.9. Gravity game on the quizlet website

Quizlet Live game in which learners get interacted and work together in groups or individually as displayed in Figure 3.10 It can be accessed via smartphones, tablets, or

laptops. Once the instructor goes to Quizlet Live, the players are set up by the instructor. Each group member belonging to the same group works together to match the word with the other side of the card. If one of the group members gives a wrong answer, the group will be sent back to the startup. At the end, when the game ends, the instructor can see the results that learners are confused. The regularly missed words can be reviewed.

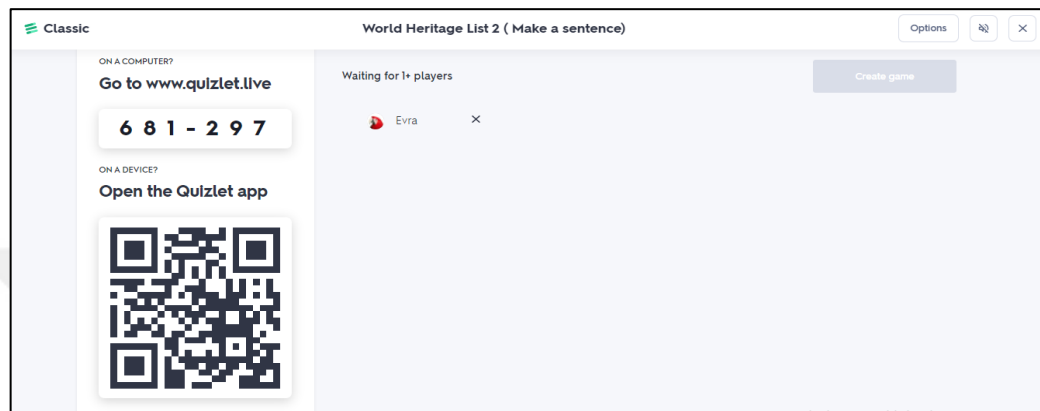


Figure 3.10. *The quizlet live game*

3.12. Raters

The pre-and post- vocabulary tests were scored by the researcher. With an intent to raise the reliability of scoring for the voice recordings of the words, the recordings of the participants were rated by another native speaker of English who is a secondary school English teacher and has been teaching English for 8 years at a private school in Kayseri. Moreover, the recordings were scored by another native-like teacher to assure the raters score similarly. Inter-rater reliability was measured between the raters. The reliability between the raters was determined as 0.977 (See Table 3.9.). The reliability was calculated by comparing the scores of the raters.

Table 3.9. *Cronbach's alpha statistics for raters*

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.976	0.977	2

4.RESULTS

4.1. Introduction

This chapter shows the results of the data analysis to investigate the research questions of the study. Several statistical analyses were used to examine data via SPSS. Firstly, the chapter explores whether the students who work with a Quizlet online digital tool achieve better vocabulary than students who learn only with regular class methods over six weeks. To answer this, 52 participants in two different groups were selected to take part in the study. The Quizlet group received treatment with an online flashcard tool that lasted eight weeks and the other group did not use any tool (no-tool group). Secondly, this chapter presents the findings on whether using an online language learning tool improves the success of Quizlet group students' learning a foreign language in English in terms of vocabulary. Thirdly, the chapter explores whether using an online language learning tool improves the success of students learning a foreign language in English in terms of pronunciation. Finally, the chapter reports the findings of the opinions of the students who learn English as a foreign language on the effect of the Quizlet on their vocabulary and pronunciation studies. A semi-structured interview was applied to present qualitative analyses of the current study. As stated in the first chapter, the study aimed to find out how Turkish learners of English use Quizlet with regard to vocabulary and pronunciation practice.

4.2. The Difference in the Vocabulary Tests According to the Groups

Research Question 1: What is the effect of Quizlet on the 9th grade EFL students' vocabulary learning? To answer this question, an independent t-test was utilized to explore whether there were statistically differences in the pre and posttest scores of vocabulary tests according to the groups. Descriptive findings regarding pre and post-test differences were presented at first, and then inferential findings related to pre and post-test differences for 8 different vocabulary tests were introduced. Means and standard deviations for each set of scores received from the experiment and regular class on all assessments were measured. For the aim of the study, a significance level of $p < .05$ was used to make all determinations of statistical significance. Table 4.1. below presents the mean scores of the regular and Quizlet groups and time (immediate and post-test).

Table 4.1. Mean scores of regular and quizlet group with respect to pre and post-test

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Orthography Receptive test	52	15.38	96.15	61.4273	17.85186
Pre-Orthography Productive Test	52	3.85	90.38	48.4838	23.04305
Pre-Passive Recall	52	.00	80.77	29.8821	16.33308
Pre-Active Recall	52	.00	59.62	20.6733	17.00045
Pre-Passive Recognition	52	13.46	90.38	50.7390	16.18522
Pre-Active Recognition	52	23.08	90.38	55.2885	16.77291
Pre-Receptive Knowledge of Grammatical Functions	52	13.46	75.00	40.4954	15.27348
Pre-Productive Knowledge of Grammatical Functions	52	.00	67.31	16.1983	18.13311
Post-Orthography Receptive test	52	32.69	98.08	81.1754	15.74951
Post-Orthography Productive Test	52	42.31	100.00	79.0315	15.87348
Post-Passive Recall	52	1.92	100.00	49.9260	33.89251
Post Active Recall	52	.00	100.00	76.1094	24.00817
Post-Passive Recognition	52	53.85	100.00	89.3494	12.08738
Post-Active Recognition	52	38.46	100.00	90.6058	12.61127
Post Receptive Knowledge of Grammatical Functions	52	26.92	100.00	54.5115	16.71265
Post Productive Knowledge of Grammatical Functions	52	3.85	100.00	51.1465	25.25835

Examination of the data in the table above demonstrates that each group had vocabulary gains from the beginning of the study to the post-test. The largest difference between the pre-test scores was identified as 45.2 ($61.4273 - 16.1983 = 45.229$) between the Orthography Productive and Productive Knowledge of Grammatical Functions tests. The largest difference between the post-test scores was found to be 40.6 between the Passive Recognition and Active Recall test. ($90.6058 - 49.9260 = 40.6798$). Each group also produced a gain in scores for the posttest after the treatment.

4.2.1. The difference in the mean scores of the orthography receptive test

To assess the effect of the Quizlet on vocabulary gain, an independent sample t-test was utilized concerning their groups. (Quizlet and control). In the current study,

vocabulary scores were determined as the dependent variable. An independent t-test was conducted to compare the mean scores of the pre and post-test of the Orthography Receptive vocabulary test to find out the effect of the Quizlet tool on learners' vocabulary gain. The mean scores of the pre-Orthography Receptive test for groups were 64.571 and 58.283 respectively. The difference was in favor of the Quizlet group. (M=64.571, SD=16.508). The difference between the Pre-Orthography Receptive Tests scores of the groups was found to be 6.2 (64.571-58.283) with the Quizlet group scoring higher than the regular class. (M=58.283, SD=18.896). The findings revealed no statistically significant difference between the treatment and regular classes in the pre-Orthography test. ($t(50)=1.278$, $p>0.207$, $d=0.354$). According to the post Orthography Receptive test scores, the treatment group averaged 83.801, and the regular class identified a mean of 78.550 vocabulary words correctly. The difference between groups in terms of post-test scores was identified as 5.2 (83.801-78.550). The results yielded that there was no statistical difference between the Quizlet and regular classes in terms of post orthography tests ($t(50)=1.208$, $p>0.203$, $d=0.335$) as displayed in Table 4.2. While both groups experienced increases in vocabulary scores in the post-test, the difference between study groups decreased as seen in the p values ($p>0.207$; $p>0.233$).

Table 4.2. Pre-post orthography receptive test scores

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-Orthography Receptive	Quizlet	26	64.571	16.508	1.278	50	0.207	0.354
	Regular class	26	58.283	18.896				
Post-Orthography Receptive	Quizlet	26	83.801	14.122	1.208	50	0.233	0.335
	Regular class	26	78.550	17.095				

When it comes to investigating the difference between pre-Orthography Receptive and post Orthography Receptive test scores, the Quizlet group averaged 19.2. To be more specific, the difference between pre and post-test for the Quizlet group was 19.2, which means the Quizlet group increased their vocabulary scores at the end of the study. On the other hand, the regular class group averaged slightly higher than (M=20.266, SD=11.981) for the Quizlet group and the difference between pre and post-test for the regular class group was 20.2 showing that their vocabulary scores increased at the end of the study.

Even though the regular class increased their difference between pre and post-test more than the Quizlet group, post-test scores were in favor of the Quizlet group. Finally, according to the results of pre and post-test differences in Orthography Receptive between the Quizlet and regular class, the results produced non-significant results ($t(50)=-0.342$, $p>0.734$, $d=-0.095$). This posits that they gained almost similar vocabulary scores, but as can be seen in Table 4.3., the regular class group obtained more scores in terms of the Orthography Receptive test.

Table 4.3. *Difference between pre-post orthography receptive test*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Pre-posttest Differences of Orthography Receptive	Quizlet	26	19.230	9.745	-0.342	50	0.734	-0.095
	Regular class	26	20.266	11.981				

4.2.2. The difference in the mean scores of the orthography productive test

An independent t-test was conducted to compare mean scores of Pre-Orthography Productive test results to analyze whether the groups had the same ability for the test or not. The Quizlet group obtained 55.1 and the Regular class group averaged 41.8. The difference was in favor of the Quizlet group ($M=55.104$ $SD=23.728$). The difference between pre Orthography Productive test scores of the groups was 13.2 ($55.104-41.864$) with the Quizlet group scoring higher than the regular class group. The data demonstrated that both groups had almost equal knowledge of this test at the beginning of the study. To investigate the significance of mean scores of the pre-Orthography Productive tests between groups, an independent sample t-test was carried out. The findings indicated that there was a statistically significant difference between the pre-test scores of Quizlet and the regular class group. ($t(50)=2.143$, $p<0.037$, $d=0.594$). To verify the recall rate of acquired vocabulary by the participants, a posttest was administered to both groups. The results showed that the Quizlet group with a mean score of 84.2 outperformed the regular class and scored an overall mean of 73.8 as it can be seen in Table 4.4. The results revealed that there was a statistically significant difference between pre and post-test. ($t(50)=2.486$, $p<0.016$, $d=0.690$). Even though the Quizlet group had higher scores in the

post-test comparing the regular class, the difference decreased between the groups (84.246-73.817=10.429) meaning that the regular class increased their scores a little more than the Quizlet group in the post Orthography test.

Table 4.4. *Pre-post orthography productive test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-Orthography Productive	Quizlet	26	55.104	23.728	2.143	50	0.037	0.594
	Regular class	26	41.864	20.713				
Post-Orthography Productive	Quizlet	26	84.246	14.402	2.486	50	0.016	0.690
	Regular class	26	73.817	15.812				

An independent samples t-test was performed to measure the difference between the pre and post Orthography Productive tests for both the Quizlet and regular classes. Both groups increased their post-test scores, however, the difference was in favor of the regular class group (M=31.953, SD=14.896). The Quizlet group produced a mean of 29.1, which means the group only increased their vocabulary score average by 29.1 from the beginning to the end of the study. Even though the Quizlet group gained higher scores in the post Orthography Productive test, the difference between mean scores decreased since the regular class increased their scores more in the post-test. There was not a statistically significant difference when investigating the significance of the difference between pre and post Orthography Productive tests. ($t(50)=-0.675$, $p>0.503$, $d=-0.187$). The result of the comparison of the mean scores on tests for individual groups is presented in Table 4.5.

Table 4.5. *Difference between pre-post orthography productive test*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-posttest Differences of Orthography Productive	Quizlet	26	29.142	15.120	-0.675	50	0.503	-0.187
	Regular class	26	31.953	14.896				

4.2.3. The difference in the mean scores of the passive recall test

An independent test was run to examine the difference between pre-and post-Passive Recall vocabulary tests between the Quizlet and regular class groups. The data presented that both groups had different mean scores for the pre-test that was administered before the treatment. The Quizlet group had a mean of 55.1 while the regular class had a mean of 41.8. The difference was in favor of the Quizlet group ($M=55.1$, $SD=23.728$). The difference between pre-tests scores was 13.2 ($55.1-41.8=13.24$). To investigate whether there was a significant difference between pre-tests; an independent sample t-test was performed. The analysis of the t-test yielded a statistically significant difference between groups. ($t(50)=-2.091$, $p<0.042$, $d=0.580$) as displayed in Table 4.6. When it comes to analyzing the post-Passive Recall test result, Quizlet scored higher ($M=84.246$, $SD=14.402$) than the regular class ($M=73.817$, $SD=15.812$). The difference between posttests was found to be 11. ($84.246-73.817=11$). Independent t-test results revealed that there was a statistically significant difference in the result of the posttests between the groups ($t(50)=-2.61$, $p<0.012$, $d=0.721$). Even though there was still a difference, the difference decreased between the groups meaning that the regular class increased their pre-test scores more in the post-test. Moreover, as can be seen in the p values of pre and post-test considering that the difference decreased between the scores ($p<0.042$; $p<0.012$), the participants in both groups had almost similar knowledge of recognition of English words with L1 distractors in the post-test.

Table 4.6. Pre-post passive recall test scores

	Group	N	Mean	SD	t-test			Cohen's d
					t	df	p	
Pre Passive Recall	Quizlet	26	55.104	23.728	-2.091	50	0.042	0.580
	Regular class	26	41.864	20.713				
Post Passive Recall	Quizlet	26	84.246	14.402	-2.61	50	0.012 ^a	0.721
	Regular class	26	73.817	15.812				

^a Levene's test is significant ($p < .05$), suggesting a violation of the equal variance assumption

As can be seen in Table 4.7, the difference between the pre-and post-Passive Recall test was in favor of the regular class ($M=54.215$, $SD=19.401$) still, the Quizlet group gained a higher score in the post-test and the difference between the pre-and post-Passive

Recall test for Quizlet group was identified a mean of 52.4. The results indicated that both groups made improvements in the vocabulary test as seen in the table, however, there was not a statistically significant difference between the groups. ($t(50)=-0.352$, $p>0.727$, $d=-0.1098$).

Table 4.7. *Pre-post differences of passive recall*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-posttest	Quizlet	26	52.440	16.919				
Differences of Passive Recall	Regular class	26	54.215	19.401	-0.352	50	0.727	-0.1098

4.2.4. The difference in the mean scores of active recall

An independent t-test was conducted to compare the mean scores of the pre-Active Recall vocabulary test to find out whether participants in both groups had similar vocabulary knowledge before treatment or not. The Quizlet group had a mean of 55.1 while the regular class had a mean of 41.8. The difference was in favor of the Quizlet group. The mean score of the Quizlet group was higher than the regular class in terms of the pre-active recall test. The difference in the pre-active recall test was ($55.104-41.864=13.24$). An independent t-test was run to discover whether there was a significant difference in the result of the pre-Active Recall test, and the results indicated that there was a statistically significant difference between the groups in the pre-test ($t(50)=5.004$, $p<.001$, $d=1.388$). Moreover, to find out whether the Quizlet training helps develop students' vocabulary recall or not, a post- Active Recall vocabulary test was performed. Results of the test revealed that the Quizlet group had a higher mean score ($M=84.246$, $SD=14.402$) than the regular class ($M=73.817$, $SD=15.812$). When it comes to comparing the mean scores of the Post Active Recall test between groups, the findings revealed that there was a statistically significant difference between the Quizlet and regular class concerning their Post-Active Recall test ($t(50)=-1.113$, $p<0.271$, $d=-0.309$). Even though the Quizlet group was 14 points ahead in the pretest, the difference decreased after the posttest groups since the regular class scored more in the post-test. To examine the effectiveness of the Quizlet digital group, the difference between the mean scores was measured. The results produced non-significant findings ($t(50)=-1.113$, $p>0.271$, $d=-0.309$) as displayed in Table 4.8. To be more specific, there was not a statistical difference between the groups regarding post-Active Recall.

Table 4.8. *Pre-post active recall test scores*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Pre Active Recall	Quizlet	26	55.104	23.728	5.004	50	<.001 ^a	1.388
	Regular class	26	41.864	20.713				
Post Active Recall	Quizlet	26	84.246	14.402	-1.113	50	0.271	-0.309
	Regular class	26	73.817	15.812				

^a Levene's test is significant ($p < .05$), suggesting a violation of the equal variance assumption

Although the Quizlet group had a higher post-test score, the difference between the pre and post-test was in favor of the regular class obtaining a mean of 68.8. The Quizlet group had a mean of 42.0. The fact that measured of central tendency of difference ($M=68.860$, $SD=20.132$) for both immediate and post-test in the regular class were higher than the Quizlet group's difference between the tests ($M=42.012$, $SD=23.216$). When it came to comparing the mean scores of differences between the groups, there was a statistically significant difference between the Quizlet and the regular class ($t(50)=-4.555$, $p < .001$, $d=-1.236$) as shown in Table 4.9.

Table 4.9. *Differences between pre-post active recall*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Pre-posttest Differences of Active Recall	Quizlet	26	42.012	23.216	-4.455	50	<.001	-1.236
	Regular class	26	68.860	20.132				

4.2.5. The difference in the mean scores of passive recognition

An independent test was conducted to find out whether there was a statistically significant difference between the pre-Passive Recognition Test for both groups. The results indicated that there is not a statistically significant difference between the Quizlet and the regular class ($t(50)=1.123$, $p > 0.267$, $d=0.312$). The Quizlet group identified a mean of 53.2 vocabulary terms correctly while the regular class averaged 48.2. The difference between the mean scores of the pre-test was 5.03 ($53.254-48.224=5.03$). With an intent to test the recall of the words, the post-Passive Recognition test was employed. It was understood that the mean was 88.5 for the Quizlet group and considering the mean score of the pretest, the Quizlet group had a vocabulary recall after the intervention

period. In the case of the regular class, the mean score for the Passive Recognition test was higher in the post-test ($M=90.163$, $SD= 10.454$). As a result of the analysis, there was also no statistically significant difference between the groups ($t(50)=-0.482$, $p>0.632$, $d=-0.134$) as displayed in Table 4.10.

Table 4.10. *Pre-post passive recognition test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-Passive Recognition	Quizlet	26	53.254	16.425	1.123	50	0.267	0.312
	Regular class	26	48.224	15.858				
Post-Passive Recognition	Quizlet	26	88.536	13.689	-0.482	50	0.632	-0.134
	Regular class	26	90.163	10.454				

When it comes to comparing the difference between the pre and post-test mean scores, there was no statistically significant difference between the groups ($t(50)=-1.455$, $p>0.152$, $d=-0.404$). However, the difference was in the favor of the regular class group ($M=41.9$, $SD=17.0$). The students made the highest improvement as pre-test scores rose from 48.2 to 90.1. On the other hand, the Quizlet only rose their scores by 35.2 points as displayed in Table 4.11.

Table 4.11. *Differences between pre-post passive recognition test*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-posttest Differences of Passive Recognition	Quizlet	26	35.282	15.968	-1.455	50	0.152	-0.404
	Regular class	26	41.938	17.003				

4.2.6. The difference in the mean scores of active recognition

To evaluate the difference between the mean scores regarding the Active Recognition test, an independent t-test was run. In the beginning, the Quizlet group scored higher ($M=60$, $SD=14.809$) than the regular class. ($M=50.5$, $SD=17.5$). The difference in the pre-Active Recognition test was found to be 9.5 ($60.059-50.518=9.541$). When the scores were compared on the pre-test, a statistically significant difference occurred. ($t(50)=2.120$, $p<0.039$, $d=0.588$). When the increase in their mean scores was compared to the

post-test, as seen in the table, there is a slight difference between the post-test scores according to the groups. ($90.754-90.457=0.297$). The regular class made the highest improvement on the posttest ($M=90.457$, $SD=11.513$) rising from 50.518 to 90.457 even though the Quizlet scored higher than the regular class. As clearly shown in Table 4.12, the difference between the scores of the post-test, there was not a statistically significant difference between the groups ($t(50) = 0.084$, $p>0.933$, $d=0.023$).

Table 4.12. *Pre-post active recognition test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-Active Recognition	Quizlet	26	60.059	14.809	2.120	50	0.039	0.588
	Regular class	26	50.518	17.529				
Post-Active Recognition	Quizlet	26	90.754	11.513	0.084	50	0.933	0.023
	Regular class	26	90.457	13.851				

The results of the post-test that were carried out throughout the treatment period showed the expected progress for both groups as shown in Table 4.13. The difference between the pre-and post-test difference for the Quizlet group was 30.6 whereas the regular class had a mean of 39.9. The difference was in favor of the regular class however the results yielded that there was not a statistically significant difference between the groups ($t(50)=-1.898$, $p>0.063$, $d=-0.526$).

Table 4.13. *Differences between pre-post active recognition test*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre-posttest Differences of Active Recognition	Quizlet	26	30.695	13.127	-1.898	50	0.063	-0.526
	Regular class	26	39.940	21.083				

4.2.7. The difference in the mean scores of receptive knowledge of grammatical functions

To evaluate the participants' vocabulary recall rate, the number of words both groups learned was measured. An independent sample t-test was then administered to

compare the results of the immediate test against the posttest for both groups. Table 4.14. summarized the statistics for pre-test and post-test for both Quizlet and regular class groups. The data presented that both groups had a different mean score for the pre-test that was administered before the treatment which is 45.5 for the Quizlet group and 35.4 for the regular class group. The difference between the pre-tests was 9.1 (45.562-35-429=9.133). The difference was in favor of the Quizlet group. Investigation of the significance of mean scores and the difference between the groups' pre-test yielded that there was a statistically significant difference between the groups ($t(50)=2.514$, $p<0.015$, $d=0.697$).

The expected progress on the posttests for both groups reflected participants' recall rate of the 52 items they were tested on. The results indicated that there was an improvement in the post-test for both groups, however, the difference was in favor of the Quizlet group ($M=64.719$, $SD=14.482$) scoring higher than the regular class. ($M=44.304$, $SD=11.973$). The significance of the mean scores and the difference between the groups produced significant results. To be more specific, there was a statistically significant difference between the groups on the post-test. ($t(50)$, $p<.001$, $d=1.536$). The difference between the pre-and post-test, as seen in both p values, decreased meaning that both groups had a vocabulary gain from pre-test to post-test as displayed in Table 4.14.

Table 4.14. *Pre-post receptive knowledge of grammatical functions test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Pre Receptive Knowledge of Grammatical Functions	Quizlet	26	45.562	16.541	2.514	50	0.015 ^a	0.697
	Regular class	26	35.429	12.202				
Post Receptive Knowledge of Grammatical Functions	Quizlet	26	64.719	14.482	5.540	50	<.001	1.536
	Regular class	26	44.304	11.973				

^aLevene's test is significant ($p<.05$), suggesting a violation of the equal variance assumption

When it comes to analyzing the difference between the tests for both groups as shown in Table 4.15, the Quizlet group made the highest improvement by gaining a 19.1 mean score. On the other hand, the regular class group only increased their mean score by 8.8 points between pre and post Receptive Knowledge of Grammatical Functions.

Table 4.15. Differences between pre-post receptive knowledge of grammatical functions

	Group	N	Mean	SD	t-test			Cohen's d
					t	df	p	
Pre-posttest Differences of Receptive Knowledge of Grammatical Functions	Quizlet	26	19.157	11.518	3.107	50	0.003	0.862
	Regular class	26	8.875	12.334				

4.2.8. The Difference in the mean scores of productive knowledge of grammatical functions

In the light of pre-Productive Knowledge of the Grammatical Functions test findings, there was a statistically significant difference between the Quizlet and regular class group ($t(50) = 2.468$, $p < 0.017$, $d = 0.685$). The difference was in favor of the Quizlet group ($M = 22.116$, $SD = 20.089$) when compared to the students in the regular classes ($M = 10.280$, $SD = 13.941$). That indicated that each group did not obtain similar scores on the pre-test. Furthermore, the Quizlet group was superior ($M = 66.346$, $SD = 19.636$) to the regular class group (35.947) on the post-test after treatment in terms of Productive Knowledge of Grammatical Knowledge. As can be seen in Table 4.16, there was a statistically significant difference in the posttests of the Quizlet and regular class.

Table 4.16. Pre-post productive knowledge of grammatical functions test scores

	Group	N	Mean	SD	t-test			Cohen's d
					t	df	p	
Pre-Productive Knowledge of Grammatical Functions	Quizlet	26	22.116	20.089	2.468	50	0.017 ^a	0.685
	Regular class	26	10.280	13.941				
Post-Productive Knowledge of Grammatical Functions	Quizlet	26	66.346	19.636	5.410	50	<.001	1.500
	Regular class	26	35.947	20.866				

^aLevene's test is significant ($p < .05$), suggesting a violation of the equal variance assumption

When it came to their pre and post Productive Knowledge of Grammatical Functions tests differences according to Quizlet group and regular classes, as a result of the analysis, there was a statistically significant difference ($t(50) = 3.617$, $p < .001$,

d=1.003). The difference was in favor of the Quizlet group students engaged in a digital app (M=44.230, SD=19.985) when compared to the students in the regular class group (M=25.667, SD=16.895) as displayed in 4.17.

Table 4.17. *Differences between pre-post productive knowledge of grammatical functions*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Pre-posttest Differences of Productive Knowledge of Grammatical Functions	Quizlet	26	44.230	19.985	3.617	50	<.001	1.003
	Regular class	26	25.667	16.895				

4.3. The Impact of Quizlet on the Quizlet Group

Research Question 1: What is the effect of Quizlet on the 9th grade EFL students' vocabulary learning? To answer this question, firstly, with an intent to explore the relationship between pre and post-test scores in the Quizlet group, a paired-samples t-test was run. Secondly, a Raincloud Plot provided from JASP and a Repeated Measures ANOVA with repeated measures were utilized. Raincloud plot was analyzed to obtain rich information and to visualize the difference between pre and post-test in time. Each pair is connected with lines highlighting the different scores of each learner. A one-way ANOVA with repeated measures was conducted to compare the means scores of pre and post vocabulary tests to find out whether using an online tool affects vocabulary retention rate. A repeated-measures ANOVA test was performed using the mean scores of 8 pre-tests and the mean scores of 8 post-tests.

4.3.1 The relationship between test scores (pre and post-test) and orthography receptive

Firstly, in order to investigate the effect of Quizlet regarding Orthography Receptive, a paired samples t-test was utilized. As seen in Table 4.18, there was a statistically significant difference ($t(25) = -10.062$, $p < .001$, $d = -1.973$) between the pre and post-test.

Table 4. 18. *The relationship between pre-post orthography receptive test scores*

					<i>t-test</i>			Cohen's d
	Group	N	Mean	SD	t	df	p	
Orthography Receptive Test	Quizlet-Pre	26	64.571	16.508	-10.062	25	<.001	-1.973
	Quizlet-Post	26	83.801	14.122				

4.3.2 The relationship between test scores (pre and post-test) and orthography productive

A paired-samples t-test was conducted to compare the mean scores of the pre-test and post-test of Orthography Productive to find out whether the Quizlet training facilitates the developing production of correct spelling or not. As seen in Table 4.19, the findings indicated that there was a statistically significant difference between the pre-test (M=55.104, SD=24.04) and post-test (M=84.246, SD=14.40) scores with regard to the vocabulary tests ($t(25) = -9.828$, $p < .001$, $d = -1.927$).

Table 4. 19. *The relationship between pre-post orthography productive test scores*

					<i>t-test</i>			Cohen's d
	Group	N	Mean	SD	t	df	p	
Orthography Productive Test	Quizlet-Pre	26	55.104	23.728	-9.828	25	<.001	-1.927
	Quizlet-Post	26	84.246	14.402				

Note. Student's t-test.

4.3.3. The relationship between test scores (pre and post-test) and passive recall

A paired samples t-test was run to compare the mean scores between pre-test and post-test to investigate the effectiveness of use of Quizlet online application in the Passive Recall test. As seen in Table 4.20, the results indicated that there was a statistically significant difference between pre-and post-Passive recall test scores ($t(25) = -15.804$, $p < .001$, $d = -3.099$).

Table 4.20. *The relationship between pre-post passive recall test scores*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Passive Recall	Quizlet-Pre	26	25.296	13.319	-15.804	25	<.001	-3.099
	Quizlet-Post	26	77.736	18.197				

Note. Student's t-test

4.3.4. The relationship between test scores (pre and post-test) active recall

In order to investigate the effect of Quizlet regarding Active Recall, a paired samples t-test was run. As displayed in Table 4.21, the Quizlet group with a mean score of 30.0 on the pre-test and 72.4 on the post-test showed a statistically significant difference between the pre-test and the post-test ($t(25) = -9.227$, $p < .001$, $d = -1.810$). It could be claimed that Quizlet improved the Quizlet group's vocabulary retention rate significantly at a 95% level of confidence.

Table 4.21. *The relationship between pre-post active recall test scores*

	Group	N	Mean	SD	<i>t-test</i>			Cohen's d
					t	df	p	
Active Recall	Quizlet-Pre	26	30.399	16.245	-9.227	25	<.001	-1.810
	Quizlet-Post	26	72.412	26.813				

Note. Student's t-test.

4.3.5. The relationship between test scores (pre and post-test) passive recognition

A paired samples t-test was administered to compare the mean score of pre-test and post-test of passive recognition to find out whether the Quizlet training helped improve Quizlet groups' vocabulary recall or not. As shown in Table 4.22, the Quizlet group increased their scores from the immediate test ($M = 55.254$, $SD = 16.425$) to post-test ($M = 88.536$, $SD = 13.689$). The findings yielded that there was a statistically significant difference between the groups ($t(25) = -11.266$, $p < .001$, $d = -2.210$).

Table 4.22. *The relationship between pre-post passive recognition test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Passive Recognition	Quizlet-Pre	26	53.254	16.425	-11.266	25	<.001	-2.210
	Quizlet-Post	26	88.536	13.689				

Note. Student's t-test.

4.3.6 The relationship between test scores (pre and post-test) and active recognition

When it came to comparing the pre and post-test scores of the Quizlet group to find out the effect of the Quizlet on the recognition of Turkish words with target language distractors, a paired-samples t-test was utilized. While the Quizlet group had a mean of 60 on the pretest, they had a mean of 90.7 on the post-test. The results yielded that there was a statistically significant difference between the tests scores concerning the Active Recognition test as seen in Table 4.23.

Table 4.23. *The relationship between pre-post active recognition test scores*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Active Recognition	Quizlet-Pre	26	60.059	14.809	-11.923	25	<.001	-2.338
	Quizlet-Post	26	90.754	11.513				

Note. Student's t-test.

4.3.7. The relationship between test scores (pre and post-test) and receptive knowledge of grammatical functions

A paired samples t-test was employed to compare the mean scores of the pre-test and post-test to present the vocabulary gain of the group. Sums of the mean, therein, were given as well in Table 4.24 additionally. It was proved that there was a statistically significant difference between pre and post-test ($t(25)=-8.481$, $p<.001$, $d=-1.663$).

Table 4.24. *The relationship between receptive knowledge of grammatical functions*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Receptive Knowledge of Grammatical Functions	Quizlet-Pre	26	45.562	16.541	-8.481	25	<.001	-1.663
	Quizlet-Post	26	64.719	14.482				

Note. Student's t-test.

4.3.8. The relationship between test scores (pre and post-test) and productive knowledge of grammatical functions

Lastly, in order to investigate the effect of Quizlet regarding Productive Knowledge of Grammatical Functions tests, a paired samples t-test was employed. The results regarding the difference between the pretest mean score (M=22.116, SD=20.089) and post-test mean score (M=66.346, SD=19.636) portrayed that there was a statistically significant difference between the tests ((t₂₅), p<.001, d=-2.213) as seen in Table 4.25.

Table 4.25. *The relationship between productive knowledge of grammatical functions*

	Group	N	Mean	SD	<i>t-test</i>			
					t	df	p	Cohen's d
Productive Knowledge of Grammatical Functions	Quizlet-Pre	26	22.116	20.089	-11.285	25	<.001	-2.213
	Quizlet-Post	26	66.346	19.636				

Note. Student's t-test.

4.4. A Brief Summary of the Results of Quizlet Group

The results of the comparisons of mean scores based on pre-post vocabulary tests over time using one-way repeated measures of ANOVA were presented in Table 4.26, there was a statistically significant difference between the pre-test (and post-test with regard to vocabulary test scores in time (F=387.220, p<.001).

Table 4.26. Tests of within subjects effects for quizlet group

Cases	Sum of Squares	df	Mean Square	F	p
Time	15360.148	1	15360.148	387.220	<.001
Residuals	991.694	25	39.668		

Note. Type III Sum of Squares

According to the findings, the mean vocabulary scores were M=44.5, (SD=14.03) in the pretest. In the posttest, the mean vocabulary scores were computed to be M=78.9 (SD=13.2). The mean scores of pre and post-test scores seemed to indicate an increasing trend over time as displayed in Table 4.27.

Table 4.27. Findings of the averages of mean scores with respect to pre-post test mean scores of participants in quizlet group

Time	Mean	SD	N
pretest	44.545	14.030	26
posttest	78.919	13.299	26

To summarize all the findings by given representation to figure out the impact of Quizlet on learners' vocabulary development, based on the results of pre and post-test scores of the Quizlet group, a Raincloud Plot was presented to explore how the Quizlet group improved their scores in terms of pre and post vocabulary tests.

When the pre-test and post-test scores ranges were examined, it was observed that the students' scores increased over time. The scores from the pre-test range from 20 to 60 while the scores from the post-test range from 52 to 100. In the pre-test, the distribution of scores in the bar plot was wide, on the other hand, the bar plots of the post-test were narrowed revealing that the vast majority of students had approximately the same scores. As seen in Figure 4.1. Raincloud Plot, although all students increased their scores on the post-test at almost the same rate, some students whose scores range from 20 to 30 were unable to increase their scores as much as others on the post-test. In addition, the pre-test average was also found to be relatively low for these participants. Scores of the students who scored slightly lower on the pre-test were compared with scores obtained from their post-test and these students were detected and possible reasons were analyzed in the results of the qualitative data section.

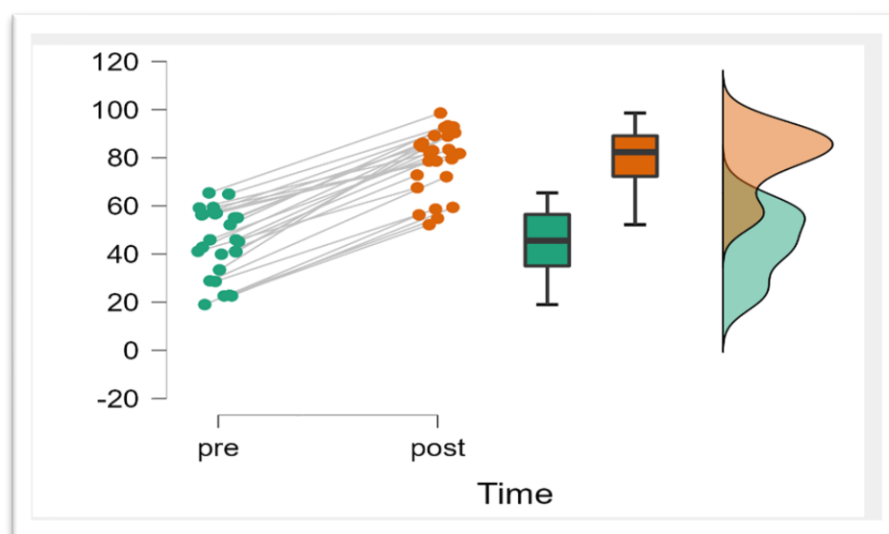


Figure 4.1. Raincloud plot for pre-post test scores of the quizlet group

4.5. Differences in Pronunciation Qualities

Research Question 2: What is the effect of Quizlet on the 9th grade EFL learners' pronunciation?

- a) What are the words commonly mispronounced and pronounced correctly by the subjects after using Quizlet?

To evaluate the pronunciation of learners, a specifically designed rubric on a scale from 1 to 10 was utilized. A rubric was formed based on two aspects after evaluation of many speaking rubrics in the literature and an expert opinion from the ELT department and English teachers' opinion from the research school were taken. The rubric was divided into 3 scales portraying the segmental features (vowel quality, consonant quality) and suprasegmental feature of the pronunciation (word stress) of the 52 target words. The statistical analysis of the pronunciation qualities (vowel quality, consonant quality and word stress) is displayed in Table 4.28.

In the first scale, consonant quality showed the highest mean of 5.2. Then, it was followed by vowel quality ($M=5.0$) and word stress ($M=4.987$, $SD=0.205$) respectively. From the table, it might be seen that by far the greatest number was for consonant quality. In general, the learners were the most successful in consonant quality and they were the least successful in word stress. The success at the vowel quality existed between the consonant quality and word stress.

Table 4.28. *Total Descriptive statistics of vowel, consonant quality, and word stress*

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Vowel quality	1352	2	9	6808	5.0	1.4
Consonant quality	1352	2	9	6969	5.2	1.4
Word stress	1352	2	9	6662	4.9	1.3
Valid N (listwise)	1352					

4.5.1. The Scores of the Individual Words

The mean scores of each target word were analyzed by averaging the consonant and vowel quality and word stress of the word to find out the difference between the scores of each word. The descriptive statistics of the average scores for each word are shown in Table 4.29.

Table 4.29. *Descriptive statistics of average scores of each word*

Words	N	M	SD	SE	Min	Max	Words	N	M	SD	SE	Min	Max
Trip	26	7.4	1.1	0.2	5	8.7	Remote control	26	5.0	1.0	0.2	3	6.7
Architecture	26	5.9	0.9	0.2	3.7	8	Check-in	26	5.0	0.7	0.1	4	6.3
Delay	26	5.8	0.9	0.2	3.7	7.3	Soft drinks	26	5.0	1.1	0.2	3	7.3
Gate	26	5.7	1.3	0.2	3.7	7.7	Entertain	26	5.0	0.8	0.2	3.7	7
Refuse	26	5.7	0.9	0.2	4	7.7	Masterpiece	26	4.9	0.7	0.1	3.3	6
Port	26	5.6	1.4	0.3	3	8.3	Satellite dish	26	4.9	0.7	0.1	3.7	6.3
Tower	26	5.6	0.6	0.1	4.3	6.7	Civilization	26	4.8	0.7	0.1	3.3	6
Board	26	5.6	1.2	0.2	3.3	8.3	Tradition	26	4.8	0.6	0.1	3.7	6
Accept	26	5.6	1.0	0.2	4	7.3	Structure	26	4.8	0.6	0.1	3.7	6
Turn on	26	5.5	1.1	0.2	3.7	7.7	Height	26	4.8	0.5	0.1	4	6
Historic	26	5.4	0.8	0.2	3.7	6.7	Farewell party	26	4.8	0.8	0.2	4	6.7
Prediction	26	5.3	0.8	0.2	3.7	6.7	Heritage	26	4.8	0.7	0.1	3.3	6
Guidebook	26	5.3	0.7	0.1	3.7	6.7	Length	26	4.7	0.8	0.2	2.7	6
Username	26	5.3	1.0	0.2	3.7	7.7	Invitation	26	4.6	0.6	0.1	3.3	6
Station	26	5.2	1.0	0.2	3.7	7.3	Graduation party	26	4.6	0.6	0.1	3.7	6
Internet access	26	5.2	0.5	0.1	4.3	6	Disagree	26	4.6	0.6	0.1	3.3	6
Security	26	5.2	0.6	0.1	4	6.7	Opening party	26	4.6	0.5	0.1	3.7	5.7
Permit	26	5.2	0.8	0.2	4	6.7	Souvenir	26	4.5	0.5	0.1	3.7	5.3
Century	26	5.2	0.6	0.1	4.3	6.7	Reject	26	4.5	0.6	0.1	3.3	5.7
Addict	26	5.1	0.6	0.1	4	6.3	Statue	26	4.5	0.8	0.2	3.3	6.3
Candle	26	5.1	1.0	0.2	3.3	7.7	Agree	26	4.5	0.6	0.1	3.3	5.3
Log in	26	5.1	0.9	0.2	4	7	Housewarming party	26	4.5	0.6	0.1	3.3	6
Documentary	26	5.1	0.8	0.2	3.3	6.7	Underground	26	4.4	0.6	0.1	3.3	6
Follow the news	26	5.1	0.7	0.1	4	6.3	Ancient	26	4.4	0.4	0.1	3.7	5.3
Baggage	26	5.1	0.9	0.2	4	6.7	Mosque	26	4.4	0.7	0.1	3	6
High definition	26	5.0	0.5	0.1	4	6.3	Suggest	26	4.1	0.5	0.1	3.3	5

The word ‘trip’ had the highest rate of 7.4 regarding the mean score and the maximum score was 8.7 out of 10 for this word. The word ‘suggest’ had the lowest rate of 4.1 regarding mean scores while the maximum score was 5 out of 10 for ‘suggest’. The overall quality rates and the statistics of each score of each word are given in Tables 4.30, 4.31 and 4.32.

According to the mean scores, out of 26 participants, the word ‘height’ was observed the most challenging word for vowel pronunciation quality having a mean of 3.4. On the other hand, ‘mosque’ and ‘souvenir’ also could be categorized as problematic words as having a mean of 3.7 and 3.8 respectively. The word ‘trip’ was the most properly pronounced one with an overall 7.4 mean score. The word ‘historic and delay’ were the next words pronounced correctly with an overall 6.4 and 6.3 respectively (See Table 4.30).

Table 4.30. *Descriptive statistics of vowel quality*

Words	N	M	SD	SE	Min	Max	Words	N	M	SD	SE	Min	Max
Trip	26	7.4	1.1	0.2	4	9	Satellite dish	26	5.1	1.1	0.2	3	8
Historic	26	6.4	1.3	0.2	4	8	Guidebook	26	5.1	1.2	0.2	3	7
Delay	26	6.3	1.3	0.3	4	8	Structure	26	5.0	1.2	0.2	3	7
Refuse	26	6.0	1.2	0.2	4	8	Check-in	26	5.0	1.1	0.2	3	7
Turn On	26	6.0	1.6	0.3	3	8	Century	26	5.0	0.8	0.2	3	7
Port	26	5.9	1.7	0.3	3	9	Civilization	26	4.9	1.1	0.2	3	7
Length	26	5.8	1.8	0.3	2	8	Remote control	26	4.8	1.7	0.3	2	8
Architecture	26	5.7	1.1	0.2	4	8	Masterpiece	26	4.8	1.3	0.2	3	7
Gate	26	5.7	1.5	0.3	4	8	Invitation	26	4.8	1.0	0.2	3	7
Permit	26	5.7	1.6	0.3	3	9	Farewell party	26	4.7	1.0	0.2	3	7
Station	26	5.7	1.2	0.2	4	8	Tradition	26	4.7	1.3	0.3	3	7
Accept	26	5.7	1.3	0.3	3	9	Statue	26	4.5	1.2	0.2	3	7
Board	26	5.6	1.5	0.3	3	8	Reject	26	4.5	1.1	0.2	3	6
Heritage	26	5.5	1.1	0.2	4	8	Entertain	26	4.5	1.3	0.3	3	7
Soft drinks	26	5.4	1.6	0.3	3	8	Opening party	26	4.4	1.0	0.2	3	6
Follow the news	26	5.4	1.3	0.3	3	8	Graduation party	26	4.3	1.4	0.3	2	7
Prediction	26	5.3	1.3	0.3	3	8	Agree	26	4.3	1.0	0.2	2	6
Log in	26	5.3	1.3	0.2	3	7	Housewarming party	26	4.2	1.0	0.2	2	6
Documentary	26	5.3	1.8	0.4	2	8	Suggest	26	4.2	0.8	0.2	3	6
High definition	26	5.2	0.7	0.1	4	7	Underground	26	4.1	1.0	0.2	2	6
Security	26	5.2	1.2	0.2	3	8	Ancient	26	4.0	0.9	0.2	2	6
Username	26	5.2	1.7	0.3	2	8	Disagree	26	4.0	0.9	0.2	3	6
Candle	26	5.2	1.5	0.3	2	8	Tower	26	4.0	1.1	0.2	2	7
Addict	26	5.2	1.1	0.2	3	7	Souvenir	26	3.8	1.2	0.2	2	6
Baggage	26	5.1	1.0	0.2	3	7	Mosque	26	3.7	1.1	0.2	2	6
Internet access	26	5.1	1.3	0.3	3	7	Height	26	3.4	0.9	0.2	2	5

The one which was the most mispronounced was the word ‘length’, the average mean score of the participants was 3.8. The words ‘suggest, housewarming party, heritage and opening party’ with a mean score of 4.0, 4.2, and 4.3 followed respectively. According to the statistical analysis shown in Table 4.31., the word ‘trip’ indicated as the most properly pronounced word with an overall mean of 7.5. Given the overall results, the word ‘height’ was the second properly pronounced word with a mean of 6.4 (See Table 4.31.).

Table 4.31. *Descriptive statistics of consonant quality*

Words	N	M	SD	SE	Min	Max	Words	N	M	SD	SE	Min	Max
Trip	26	7.5	1.2	0.2	5	9	Candle	26	5.0	1.3	0.3	2	8
Height	26	7.2	0.8	0.2	6	8	Documentary	26	5.0	1.3	0.3	3	8
Tower	26	6.4	1.1	0.2	4	8	Permit	26	5.0	1.1	0.2	3	7
Delay	26	6.2	1.3	0.3	3	8	Underground	26	5.0	1.3	0.3	3	7
Gate	26	5.9	1.5	0.3	4	8	Follow the news	26	5.0	1.2	0.2	3	7
Accept	26	5.9	1.3	0.3	4	8	High definition	26	5.0	0.8	0.2	4	7
Century	26	5.8	0.9	0.2	4	8	Refuse	26	5.0	1.4	0.3	3	8
Architecture	26	5.8	1.5	0.3	3	9	Farewell party	26	5.0	1.0	0.2	4	7
Disagree	26	5.8	1.0	0.2	4	8	Masterpiece	26	4.9	1.3	0.3	2	7
Board	26	5.7	1.3	0.3	3	8	Graduation party	26	4.8	1.0	0.2	3	7
Port	26	5.6	1.8	0.4	2	9	Soft drinks	26	4.8	1.4	0.3	2	8
Mosque	26	5.5	1.1	0.2	4	8	Tradition	26	4.8	1.3	0.3	3	7
Prediction	26	5.3	1.2	0.2	3	8	Check-in	26	4.8	1.3	0.2	3	7
Station	26	5.3	1.4	0.3	2	8	Ancient	26	4.7	0.8	0.2	3	6
Internet access	26	5.3	1.1	0.2	3	7	Historic	26	4.7	1.3	0.3	2	7
Remote control	26	5.3	1.3	0.3	3	7	Satellite dish	26	4.7	1.0	0.2	3	7
Turn on	26	5.3	1.4	0.3	3	8	Structure	26	4.7	1.1	0.2	2	7
Username	26	5.3	1.5	0.3	3	8	Souvenir	26	4.6	0.8	0.2	3	6
Civilization	26	5.3	1.1	0.2	4	7	Statue	26	4.5	1.5	0.3	2	7
Addict	26	5.2	1.1	0.2	3	7	Invitation	26	4.5	1.2	0.2	3	6
Agree	26	5.2	1.5	0.3	2	8	Reject	26	4.3	1.1	0.2	3	6
Entertain	26	5.2	1.2	0.2	3	7	Opening party	26	4.3	1.2	0.2	2	7
Baggage	26	5.2	1.7	0.3	2	8	Heritage	26	4.2	0.9	0.2	3	6
Guidebook	26	5.2	0.8	0.2	4	7	Housewarming party	26	4.2	1.0	0.2	3	6
Security	26	5.2	1.1	0.2	3	7	Suggest	26	4.0	0.9	0.2	2	6
Log in	26	5.1	1.2	0.2	3	8	Length	26	3.8	1.1	0.2	2	6

On the ground of the stress rules in Turkish, the word stress was analyzed on the vowels, not the sentence. One word indicates only one stress, and it could only be stressed by the vowels. As the result was considered, it was understood that the most problematic

word regarding word stress was ‘height’. It scored only 3.8 mean scores. The second challenging words concerning their stress were ‘mosque and disagree’ averaged only 3.9. When the results were considered, it was depicted that the word ‘trip’ had the highest mean score, and the word ‘tower’ ranked as the second one with an overall mean of 6.4. (See Table 4.32.).

Table 4.32. *Descriptive statistics of word stress*

Words	N	M	SD	SE	Min	Max	Words	N	M	SD	SE	Min	Max
Trip	26	7.3	1.4	0.3	4	9	Baggage	26	4,9	1.5	0.3	3	7
Tower	26	6.4	1.0	0.2	5	8	Addict	26	4,9	0.9	0.2	3	7
Refuse	26	6.0	1.2	0.2	4	8	Satellite dish	26	4,8	1.7	0.3	2	9
Architecture	26	6.0	1.2	0.2	4	8	Log in	26	4,8	1.4	0.3	3	7
Guidebook	26	5.7	1.2	0.2	4	8	Follow the news	26	4,8	1.0	0.2	3	7
Gate	26	5.5	1.4	0.3	3	7	Permit	26	4,8	1.4	0.3	3	8
Board	26	5.5	1.7	0.3	3	9	Structure	26	4,8	1.3	0.2	3	7
Username	26	5.3	1.5	0.3	3	8	Farewell party	26	4,8	1.1	0.2	3	7
Port	26	5.3	1.6	0.3	3	8	High definition	26	4,8	0.8	0.1	4	6
Prediction	26	5.3	1.1	0.2	4	7	Station	26	4,7	1.3	0.3	2	8
Check-in	26	5.2	1.2	0.2	3	7	Soft drinks	26	4,7	1.4	0.3	2	8
Internet access	26	5.2	1.1	0.2	3	7	Century	26	4,7	0.7	0.1	4	6
Security	26	5.2	1.0	0.2	4	7	Heritage	26	4,6	1.3	0.3	2	7
Entertain	26	5.2	1.5	0.3	3	8	Reject	26	4,6	1.1	0.2	3	7
Turn on	26	5.1	1.6	0.3	2	8	Graduation party	26	4,5	0.9	0.2	3	6
Accept	26	5.1	1.5	0.3	2	7	Invitation	26	4,5	0.9	0.2	3	6
Delay	26	5.1	1.3	0.3	3	7	Length	26	4,4	0.8	0.1	3	6
Souvenir	26	5.1	1.3	0.3	3	7	Statue	26	4,4	1.1	0.2	3	6
Masterpiece	26	5.0	1.0	0.2	3	7	Ancient	26	4,3	0.7	0.1	3	6
Historic	26	5.0	1.4	0.3	2	8	Civilization	26	4,3	1.1	0.2	2	6
Candle	26	5.0	1.1	0.2	3	7	Suggest	26	4,2	0.7	0.1	3	5
Opening party	26	5.0	1.2	0.2	3	7	Agree	26	4,0	0.8	0.2	3	5
Housewarming party	26	5.0	1.2	0.2	3	7	Underground	26	4,0	0.9	0.2	3	6
Tradition	26	5.0	1.2	0.2	3	7	Disagree	26	3,9	1.0	0.2	3	6
Documentary	26	4,9	1.1	0.2	3	7	Mosque	26	3,9	1.4	0.3	2	8
Remote control	26	4,9	1.4	0.3	3	7	Height	26	3,8	0.9	0.2	2	5

Ultimately, the participants were the most successful at the consonant quality and the least successful at word stress as displayed in Table 4.29. While the most well-pronounced target word was ‘trip’, the word ‘suggest’ had the lowest mean scores of all 52 target words. As seen in Table 4.30. ‘trip’ scored 7.4. for the vowel pronunciation quality percentage, 7.5 for the consonant quality, and averaged 7.3 for the word stress. In

addition, the word ‘height’ appeared as the least successful word for the vowel quality and ‘length’ averaged only 3.8 for the consonant quality. As seen in Table 4.32, the word ‘height’ also scored only 3.8 for the word stress.

4.6. Results of Qualitative Data: Interview for the Quizlet Group

In this section, the data obtained from 26 participants from the Quizlet group by means of the semi-structured interview were analyzed via content analysis. The third research question asking, “What are the viewpoints of 9th-grade EFL learners about the impact of Quizlet?” was answered from data gathered from Quizlet group participants’ responses to the interviews at the end of the study.

To begin with, to investigate the learners’ perceptions of using the Quizlet tool, interview questions were designed based on the related sources in the literature. While preparing interview questions, two English instructors examined the questions and provided feedback.

In the second place, the transcription of the conversations was translated into English and checked by an ELT expert. Thirdly, for the content analysis of the interviews, the coding method was applied. Categories and codes were determined by the researcher and another research assistant based on common patterns and counted. Among 81 codes, interrater reliability was 91.7% between the raters. The percentage agreement between the researchers was calculated. Finally, the analysis of the interview data revealed two themes: positive findings and negative findings.

In order to investigate the impact of Quizlet on students’ vocabulary learning, the first question was asked ‘What is the effect of Quizlet on learning new words?’ The summary of the responses is given in Table 4.33.

Table 4.33. *Learners’ overall opinions on the effects of quizlet on their vocabulary and pronunciation studies*

Categories of Positive Findings	<i>n</i>
Effectiveness of using Quizlet	10
Satisfaction of using Quizlet	6
Appropriateness of the Quizlet on vocabulary learning	5
Memorability of the words	5
Success of the Learners	3

THEME 1: Positive Findings of the Semi-Structured Interview

Effectiveness of the Quizlet:

With respect to Table 4.33. 10 students out of 26 participants (38.4%), of all applications they have used so far to learn English, Quizlet was the first app they did not give up so easily. They stressed that more or less other apps could also help them to learn the words, however, they were not monitored by the teacher until now. They indicated that they were more eager to try study and game modes because they knew that the teacher could check their progress and give feedback weekly on what they did or not. They suggested that even if they could download the application on their phones and work on it individually, they got the most out of it when they were working in the lab with their teacher and friends. Student 21 stated that “Though whiteboards are crucial for classrooms, these tools should also be integrated into lessons, especially in English and German classes” (Student 21).

Since English is not written as it is read, 6 of the participants also agreed that the ‘Spell’ mode of the app, helped them especially improve pronunciation and how to write a word correctly. Student 20 responded that “Quizlet got my attention. It worked well by increasing my attention. I never thought a new teaching tool had a positive effect on my English apart from computer games (Student 20)”. Student 17 explained as follows:

Student 17: I have always struggled to hear and write an English word. My middle school English teacher always practiced dictation activities in English lessons, and I always failed. I did not believe that I could spell a term fully correct. At the end of the test, I could see what I missed and correctly spelled. I got used to the app in time and now I can feel self-confident to study English again (Student 17).

Satisfaction of using Quizlet:

Creating study sets was another most frequently reported effect of the Quizlet by the six participants out of 26 participants (23%). It was reported that when they were given homework on using words in a sentence, they were asked to create study sets and write sentences through the ‘Create Study Set’ feature increased their attention. Student 2 also briefly elaborated on the relationship between creating study sets and the effectiveness of doing tasks through Quizlet as:

If I was asked to write the same sentences in a notebook, I would get bored and I would not, but I knew my friends would see my study sets and maybe study my own sets. I was creating them carefully and was making the changes immediately with the corrections of my teacher, which I think I never do for a usual homework (Student 2).

E9 and E11 put forward that they always kept vocabulary notebooks when they were studying for the LGS but never be able to remember those words even though they encountered them in the 9th grade English coursebook. However, Quizlet increased their vocabulary gain and motivation to learn the vocabulary in the reading passages.

Student 9: I was always motivated to improve my English, but I was always got stuck to remembering new words. Even I was so frustrated that I did not even remember the word I have encountered before. Now I understood that using the digital application and using technology in the class affected my vocabulary learning process (Student 9).

Student 11: I have a creative vocabulary notebook that I draw some pictures to recall a word and write definitions. Later I noticed that it got started tedious for me. I was spending so much time preparing everything and, in the end, I was not even checking the notebook. With the help of Quizlet, everything was ready-made, Quizlet had a positive effect on my learning (Student 11).

Another reported element as to the effect of Quizlet on vocabulary learning was seeing study sets on the games. Three students emphasized that for some sets, the instructor created sets not only by providing L1 or L2 meanings but used in a sentence for practicing. Seeing these sets playing the Gravity game was perceived as a positive effect on vocabulary learning. Student 14 explained as follows:

In the gravity game, you have to be quick, and your score depends on how fast you act. Playing the Gravity game with Turkish or English definition sets did not help me recall the words but reading sentences with target words and deducing the meaning as fast as I might be the only thing for me to give my attention to the target words and helped my vocabulary learning (Student 14).

Appropriateness of the Quizlet on vocabulary learning:

Five participants out of 26 participants (19%) considered that using Quizlet digital application was appropriate for the way they learn English outside of the classroom. Hence, using a digital tool and integrating the English class appealed to them. Four of them stressed that when the Covid-19 pandemic came into their lives, it led them to have more motivation toward learning through technology. In addition, a student asserted that English is a world language, and the learners cannot be separable from the digital era. On the account of being good at and into computer games made it easier to learn vocabulary and keep up with studies in the Quizlet application. Student 4 explained that “I am very into computer games. I wish we could have studied other courses through Quizlet

(Student 4)”. One of the comments of participants about the appropriateness of the Quizlet in their vocabulary learning process is as follows:

Student 5: Everyone was so depressed during Covid-19; however, I never missed an online class during those times. And my teacher said we were going to use the Quizlet application for some studies. It was really beneficial for me to learn vocabulary and play games there (Student 5).

Memorability of the words:

Five students out of 26 (19%) in the Quizlet group unanimously agreed that they had numerous flashcards with different topics set and clicking on the ‘Audio on’ button and the chance to see the picture of the word made it possible for them to remember the words. They stated that ‘flip and flow’ made enabled them to recall words covered in the class. One of them attributed to the efficiency of Quizlet on timesaving during vocabulary learning. One of the comments of participants about the memorability of the words through flashcards modes is as follows:

Student 15: I was always checking different dictionaries to check meaning and pronunciation and I was getting bored, but it was more fun through Quizlet. It was so organized that I could reach everything whenever I wanted. It was really helpful to have access to everything through an application (Student 15).

Moreover, participants pointed out that they remembered the words well when they saw the words in any other texts because they encountered definitions, synonyms, antonyms, and thanks to prerecorded pronunciations and visuals. Student 2 emphasized that “I was so surprised to see my improvement in vocabulary and pronunciation skills while I was reading a passage after the third week. I was so determined to follow everything on Quizlet, and I believe it worked well for me (Student 2)”.

Success of the Learners:

Another common thought shared by the three students (11%) was their success in vocabulary and pronunciation. They put forward that Quizlet digital application tool facilitated their vocabulary learning process to gain more vocabulary. Some comments of the learners about the benefits of Quizlet on their English language are as follows:

Student 24: I noticed that whenever I finished a word set, I actually learned more than that word. I have learned possible synonyms, antonyms, and how to use that word correctly in a

sentence. For some sets, our teacher did not give the meaning of the words but used that word in a sentence in the flashcards. It really improved my English (Student 24).

Student 23: I think it improved my overall English speaking and reading skills ability because I could not even remember the words I knew before but now I can recall a word weeks later. I think I feel more successful in English now (Student 23).

In order to investigate the participants' comments on their favorite features in the Quizlet app, the participants were asked 'What is your favorite feature of the Quizlet to study vocabulary?' The summary of the responses is given in Table 4.34 below.

Table 4.34. *Learners' overall opinions of the features of the quizlet*

Categories of Positive Findings	n
Focus	11
Game elements	7
Fun and Enjoyment	6
Frequency	3

THEME 1: Positive Findings of the Semi-Structured Interview

Focus:

With respect to Table 4.34., 11 students out of 26 in the Quizlet group (42 %) agreed that typing words after they heard was their favorite feature among all others, which was consistent with the Orthography Receptive and Productive test results that they had increased their scores in both tests. They reported that the 'Spell' mode made enabled them to get progress reports and see the total number of words they learned fully, partially learned, and yet to be learned words. They also said that it was the most needed skill because they wanted to pronounce the words correctly and be skillful when spelling words if they wanted to be proficient users of English.

When they were asked which of the options from dictation, matching, or games options were useful for them, the most common answers are Spell and Write modes. Student 1 mentioned she realized that learning a word's meaning is not sufficient alone. She was so sure of the meaning of the word, but she could not type it correctly or pronounce it. She was also asked to what extent she got the most out of the Quizlet. She reported that hearing the pre-recorded audio with visuals at the same time and then working on Spell mode helped her progress a lot.

Student 1: I was quite focused on how to say and write the words correctly. I realized that I was following the wrong routine to learn the meaning of the words. I always tried memorizing them at first. However, when my teacher said even the exact word, I couldn't recognize it or

when I needed to pronounce it, my pronunciation did not satisfy me at all. I could learn the meaning of the word anywhere on the Internet; however, I quite enjoyed how the Spell and Write section progressed my improvement for the specific word set (Student 1).

Game Elements:

Game elements appeared to be another most common answer to this question. Seven out of twenty-six students in the Quizlet group (26%) answered they always played some popular games but not the purpose of learning a language. Racing against time and one another was something new for them. Such, as one student points out that competitiveness encouraged him to learn all the words. Another student points out that Quizlet Live was the game he realized what he knew or did not know. Since it created a rivalry between the classmates, Quizlet Live made vocabulary learning more fun. Moreover, the Gravity game became one of the outstanding modes among the others by the participants. Based on their progress on Quizlet and their attributions to the game, it was observed during the data collection procedure that the majority of the learners engaged mostly in this game. Student 15 commented on the games of the Quizlet by saying that: “Whenever I see my name on the leaderboard after playing Gravity many times to become a winner of the week, I never felt bored (Student 15)”. Additionally, Student 16 added that “When the teacher announced that we would play the Quizlet Live game, I was studying study sets again to make my group the leader. It makes you feel proud (Student 16)”.

Fun and Enjoyment:

Six students out of 26 in the Quizlet group (23%) also emphasized that they did not want to engage in English class most of the time. They were not fully concentrated on the words in the reading passages. However, when it was added fun and excitement to exercises, which they were doing on paper before, they increased their engagement and helped to be more self-confident in answering questions in a text. Student 3 emphasized that “I think using a digital applicant can make even a tedious class more fun (Student 3)”.

Student 14: Normally I play games even in English without fully comprehending the situation. However, this time I knew what I was doing. I was so eager to finish other study modes and then move on to Gravity. I really liked the usability of Quizlet. Even if you move

in the direction of the games, it is nearly impossible to be a winner without completing other modes. (Student 14).

Student 3: I was on the leaderboard for about a week. Having a winning title made me so proud. Everyone in the class concentrated to be the winner that week but they could not be successful. On week fourth, I worked really hard on that week's flashcard set. And I have downloaded the mobile Quizlet app on my mobile phone. I remember I always played for at least 10 minutes to do my best score. Even the seconds mattered in Gravity game (Student 3).

Frequency:

Regarding Table 4.34. the students were then asked how often they used features they have interacted with most in the Quizlet. Three participants (11%) replied that they knew the teacher had the chance to follow their progress. For this reason, they always completed every study section to achieve better scores on the *Test* and *Games of the Quizlet*. Another student described this reason that it would not make any sense to skip a study mode because they were all connected and the more you fully mastered studying online flashcards, the more you would be successful in *Test* mode or *Write and Spell*. Student 13 highlighted that “Even though I did not have any Quizlet assignment for that week, I regularly checked my Study Flashcard sets to brush up on my previous knowledge of the vocabulary sets (Student 13).

In order to investigate the participants' comments on how Quizlet digital tool can be improved, the participants were asked ‘How can we improve Quizlet? What is your opinion?’ The summary of the responses is given below in Table 4.35.

Table 4.35. *Learners' overall opinions on the improvements in quizlet*

Categories of Negative Findings	n
Recording voice	9
Infrastructural-Incompetence	8
Inappropriateness	5
Unfamiliarity	4
Satisfaction	5

THEME 2: Negative Findings of Semi-Structured Interview

Recording voice option:

Table 4.35 represents the overall responses of the learners on the difficulties they had using Quizlet. Many of the answers were about the recording of their voice. 9 students

out of 26 in the Quizlet group (34.6%) preferred to be recorded after they listened to the audio especially when they worked on flashcards. They suggested that Quizlet always showed their progress and that kept them updated. It would be more useful if it recorded their voices and rated them. Moreover, 3 students added that when they worked individually after school, they were not sure whether they pronounced correctly or not. Two of them responded that they were monitored by the teacher in the class, however, it was problematic not to record each word set. Student 10 expressed his concern by saying that:

I don't feel self-confident when I need to read a passage after the teacher or in fact, I have concerns about how I pronounce a word. I feel insecure and have feeling my friends will make fun of me. Before we use the Quizlet application, I already started using Cake, which has voice recording options. When your recording did not satisfy the expectations, you need to practice again until you are done. However, Cake does not have what Quizlet has at the same time. I wish we could combine all beneficial features in one app (Student 10).

Student 7: I believe I would benefit from the Quizlet more if there could be any chance to record my voice then listen to my recording again and again. Some of my friends recorded their voices via a mobile phone, but I did not have that chance and why would I do that instead of using an application? (Student 7).

This technical drawback of Quizlet was mentioned by the other three participants saying that there should be a specific feedback scoring system regarding their mistakes. Additionally, two students complained about the loudness in the classroom caused the ineffectiveness of understanding the pronunciation of the words in the Spell mode. Student 15 and Student 19 put forth that: "We did not have enough headphones. I think we should study this tool as an individual work because using Quizlet and audio option in a crowded classroom where the sound effect is noisy caused us not to receive voice accurately (Student 15 and 19)".

Infrastructural-Incompetence:

8 out of twenty-six students (30%) shared that they were more disadvantageous than their peers in terms of their technology use. When the scores pre and post-tests of these participants were tracked, it was seen that they were the ones who had relatively lower scores than others. It was observed that even though they increased their scores in the post-test, that increase was not as much as other participants. Those eight students expressed a variety of reasons for their development of the Quizlet app. They commented

that they could only have access to the Quizlet application in the school during or after class, or if they needed, the teacher provided her devices for revision. However, their peers had access to the internet constantly and at least had a technological device. Their technological device opportunities and internet habits were asked to these eight learners to find out how this affected their overall success in vocabulary tests. It was noted that five of them did not have any computers, phones, or tablets. When they were asked how often they reviewed the words, they addressed that they completed their sets in the school lab since they did not have internet access or any technological devices at their home. Student 4 commented on the using Quizlet for English studies at school by saying that “I believe this is not fair. My friends were racing one another at home all time on the Gravity game to become the winner. I cannot even check previous weeks’ study sets because I needed to complete weekly sets (Student 4)”. Another student added on that “I wish we could have more computers in our school. I might get most out of Quizlet more (Student 17)”. Some comments of the participants as follows:

Even if my teacher tried to support me, not anyone in my family had a phone, so I could not keep up with my friends. I love English class, so I still feel content that I met this tool. At least I tried something new at school. However, I believe being in an ordinary class appeals to me most and is more convenient for me (Student 10).

I never used any tools before to learn English and unfortunately, I can only spend less than an hour on the Internet in a week but my I know some of my friends could practice words in their extra time. I believe if you are eager to learn English, I can take advantage of our books as well (Student 12).

Even if I liked Quizlet a lot and increased my attention to new words and I think games are so fun, I would prefer the way we learned before. I hope we can go back to what we used to because the school lab was not enough for me to practice and at home, I don’t even have any devices to use for my other classes (Student 7).

Another opinion discussed by participants was about the internet connection of the school. 3 of them reported that sometimes the Wi-Fi connection provided by the school was low. They needed to race against time for Gravity and Match games. Even if the teacher sometimes provided her internet connection hotspot Wi-Fi from time to time, it affected their performance and motivation. Student 13 emphasized that “Even if it did not affect my overall progress, it affected the Quizlet Live game on the lessons. I was feeling frustrated when the internet connection affects my game score on the Match and Gravity (Student 13)”.

Satisfaction:

Another technical drawback of the Quizlet app was that the mobile application of the Quizlet did not support the Gravity game. Considering that the vast majority of the learners downloaded the mobile app version of the Quizlet and attributed that Gravity was one of the modes they liked and motivated them to learn words, this drawback reveals an imperative infrastructural shortcoming of the Quizlet app. Five participants out of 26 in the Quizlet group (19.2%) shared their unpleasant feelings about being reluctant to study other study modes when they needed to study via mobile phone. One participant complained about how this shortcoming affected his overall satisfaction to learn the words through Quizlet. One of the student's comments was presented as follows:

I was so reluctant to study other modes without playing the Gravity game. It was the only feature I practiced the words, however, if we were not in the school lab, studying words through Quizlet did not satisfy me at all (Student 1).

Another participant also commented that seeing only the definitions was not enough to recall the words. Besides, he reported that seeing a variety of examples would increase memorability. The participant emphasized that he forgot the words when there was no example sentence which made him reluctant to study through Quizlet. Some remarks made by one participant are as follows:

If my teacher had not provided an example sentence for each word, I would not have remembered many of the words. I forgot so easily when only definitions were given. However, Quizlet did not provide extra sentences and made me so reluctant to study words (Student 17).

Other than that, three of them commented that the target words did not appeal to them and were challenging for them to acquire. They indicated that they would prefer to study the words they decided on. One of the remarks made by Student 4 participant is that "I felt so bored when I had to learn the words in a specific order. I would prefer being more independent (Student 4)".

Inappropriateness:

When asked whether they would use Quizlet in their future studies, they expressed their beliefs by indicating that they were willing to use Quizlet software in their future studies. However, it appeared that 5 of the participants (19.2%) were uncertain that learning and practicing vocabulary with an online application tool were appropriate for

their way of learning. When they were asked which ways, they like most when they practice vocabulary, they responded that digital applications were not like regular class methods. Student 7 added on by saying that “I also never attended any Zoom or EBA lessons during the pandemic. It seemed so artificial to keep up with everything on screen. (Student 7)”. They would prefer to write in their notebooks and take notes. Moreover, two of them indicated that they never left keeping notebooks with given target words on the Flashcard mode. One of the participants stated that “I cannot deny that Quizlet was useful, but I feel more secure when I write everything in my notebook (Student 2)”. Similarly, two of the participants expressed that while they were completing modes, they jotted down all the meanings of the words in their notebooks beforehand to complete the Quizlet study modes. Three of the participants expressed that they both used their notebooks and Quizlet flashcards at the same time. One of the participants explains this by saying that “I am so used to writing a word ten times to remember. I felt I would have failed in the class if I had not kept a notebook. I took advantage of both Quizlet and my notebook (Student 26)”.

Four of them put forward that they could easily forget the words if they did not review daily. Additionally, two of them mentioned another digital flashcard tool they interacted with before. Unlike Quizlet, Anki gives options for the learners to categorize the words in terms of difficulty levels. If you choose a word as a difficult one, you encounter that more often, which Quizlet does not offer for the users. Since the users could not review the words at increasingly spaced intervals to get benefit from the application in long-terms, spaced repetition was identified as another drawback of the Quizlet application. Regarding that Student 3 stated that:

I know it was our responsibility to review previous weeks’ words, but even if my teacher kept track of my progress, I did not review them again. I was so sure I have learned them; however, I could not recall some of the words on the test (Student 3).

Student 7 specified that “I believe all digital applications are waste of time. It looks efficient when the teacher instructs the class, but I would not use any applications in my spare time (Student 7)”. Moreover, another response was about the game element. Although most of them found it useful, Student 12 complained that “I perceived the Match and Gravity just for fun, I did not remember focusing on exact vocabulary. The application did not make any improvements to my vocabulary. I would expect to see more reading texts and sentences (Student 12)”. Another student added that “I believe

everything I mean all the activities should be completed in the classrooms not outside of the classroom. I do not need to practice words in different places other than classrooms (Student 8)".

Unfamiliarity:

Four of the participants (15.3%) indicated that they were not sure they would use Quizlet in the future in their self-studies since they never engaged in any digital tools before. They did not feel they could keep up the work regularly. Student 12: "I never used any teaching tools before, and I was not familiar with how to work on English efficiently through an application. I would stick to my exercises in the coursebook. I think they are safer for me (Student 12)".

To sum, it can be seen from the students' statements the socioeconomic status of the students, readiness level, technology use opportunities, and learning style preferences shaped their experiences with the Quizlet application.

4.7. Discussion of the Findings

The primary aim of this current research was to explore the effect of integrating a digital web tool (Quizlet) into the EFL high school classroom to investigate whether it had any effects on learners' vocabulary and pronunciation achievement. To achieve this aim, an experimental mixed-methods research design was run to provide triangulation through a combination of both qualitative and quantitative methods to obtain more in-depth insight and a better portrayal of the links between the findings.

The findings of the current study were displayed under the four headings according to four research questions: The overall performance of the Quizlet group compared to the regular class, the overall vocabulary performance of the Quizlet Group, the overall pronunciation performance of the Quizlet group, and the perceptions of the Quizlet group learners on Quizlet.

4.7.1. Discussion of findings for RQ1: the overall vocabulary performance of the quizlet group comparing the regular class

The present study attempted to answer whether the students who work with the Quizlet web tool achieve better vocabulary than the students who work with regular class

methods. To answer the first question, an independent t-test was run to explore whether there were statistically differences in the pre and post-test scores of vocabulary tests according to the groups. The findings of the analyses of students' vocabulary test scores before and after Quizlet were introduced, and pre and post-test scores for all test groups indicated significant improvement for the Quizlet group. The same improvement was verified for the regular class as an expected outcome due to the effect of instruction. Both the Quizlet group and the regular class made improvements at different rates. The vocabulary gains obtained within each group yielded significant differences in terms of Orthography Productive, Passive Recall, Receptive Knowledge of Grammatical Functions, and Productive Knowledge of Grammatical Knowledge post-test scores were compared. Furthermore, when analyzing the difference between pre and post-test scores of each test, Active Recall, Receptive Knowledge of Grammatical Functions, and Productive Knowledge of Grammatical Knowledge test scores significantly differed.

In the OP test, the learners were asked to listen to the words pronounced and then write them correctly. The Quizlet group with a mean score of 84.2 outperformed the regular class and scored an overall mean of 73.8, however, the fact remains that the regular class gained slightly higher scores in the post-test. The difference between mean scores decreased. Regarding the Passive Recall test, the participants provided the Turkish meaning of English words. Quizlet scored higher than the regular class when post-Passive Recall test scores were compared. The difference between the pre-and post-Passive Recall test for each group did not significantly differ as in the same case on the OP test which means that the groups had almost the same knowledge of vocabulary. Lastly, when post-test scores were compared with respect to RKGF and PKGF, an investigation of the significance of mean scores revealed significant differences between the regular class and the Quizlet group. The findings showed that Quizlet facilitated the Quizlet groups' recognition and production of the L2 words with grammatical accuracy because there was a statistically significant difference between the Quizlet and the regular class.

Regarding the differences between pre and post-test scores, significant differences were observed in the Active Recall, Receptive Knowledge of Grammatical Functions, and Productive Knowledge of Grammatical Knowledge tests. When the participant's vocabulary recall was measured whether they would provide the L2 words given Turkish words, the Quizlet group obtained more scores. Interestingly, the difference was in the favor of the regular class even though the Quizlet had higher scores in the post-Active

Recall test. The regular class increased its Active Recall post-tests scores more. On the other hand, the difference between RKGF and PKGF pre and post-test scores was in favor of the Quizlet group. This finding confirms that Quizlet provides more PV tasks for users (Dizon and Tang, 2017). It can be concluded that the Quizlet group made progress during the Quizlet implementation.

Finally, according to the analysis of pre-and post-Passive Recognition test results, it can be deduced that although all the participants increased their scores in the post-test and there was a slight difference between the post-test means scores. The regular class managed to give the more correct answers in the post-test. Regarding the Active Recognition test, it can be concluded that both groups had almost similar scores on the post-test. Whereas the Quizlet group had higher scores in the post-test, non-significant results were obtained between the pre and post-test.

The finding of the present study partially supports Çınar and Arı's (2019) research study conducted with seventy-one ninth-grade students. The researchers found out that the recall of the words revealed a significant increase in the post-test as seen in the current study. Contrary to the current study, the regular class's post-test scores were lower than the Quizlet group. In the current study, a significant difference was not found for each post-test. However, the researchers only asked the learners to write the Turkish meanings of the words called Passive Recall. The result in this respect showed parallelism with the findings of the current study. Regarding the Passive Recall test, there was a statistical difference between the pre and post-test scores of the groups.

Similar to this research, Dizon and Tang (2017) compared the impact of digital flashcards and paper-based flashcards to enhance receptive and productive L2 vocabulary. Furthermore, they found that the vocabulary gains compared to digital tools and a regular class method did not significantly differ. On the account of the fact that the striking findings of the regular class are attributable to using the same materials, activities, and course books they are used to. Contrary to similar research studies which compare the efficacy of digital and paper-based flashcards confirm that regular class forms of vocabulary learning were not as efficient as DFs (Azabdaftari and Mozaheb, 2012; Başoğlu and Akdemir, 2010; Kiliçkaya and Krajka, 2010). Even though paper-based flashcards were not implemented in the study, the effect of instruction was observed in the vocabulary scores of the regular class. It is evident to indicate that it is likely that regular class methods can improve vocabulary acquisition as well as online vocabulary

learning tools. In a similar vein, in a study carried out by Özer and Koçoğlu (2017) there were no significant differences among Quizlet, notebook, and regular classes. Improvements were found between pre and post-test between Quizlet and the vocabulary notebook group.

Quizlet learners' vocabulary gain on each post-test score indicated a vocabulary recall. This coincides with the claims of Laufer, Meara, and Nation (2005) that integrating flashcards in vocabulary learning was an efficient way for learners to improve their vocabulary size. To illustrate, Bilcan's research study (2019) yielded significant differences in immediate and post-test scores of the learners. Furthermore, the learners engaged with the Quizlet tool by practicing words with flashcards, retyping tasks, matching, true-false, multiple-choice, and games. It is attributable to the increase in the scores in the post-test, which was also stated by Mayer (2005) that "People learn better from words and pictures than from words alone" (p.31). Mayer (2005) claimed in the generative theory of multimedia learning that encoding verbal and visual information simultaneously increases the possibility of recalling the information. This theory is parallel with the results of the current study since the Quizlet group practiced the target words in both verbal and imagery coding systems.

To sum up, some external variables such as individual differences, motivation, learner preferences and strategies, and attitudes to learning the language might play an important role in the study (Brown, 2000; Gardner and Lambert 1972; Lombaard, 2006; Saville-Troike, 2006). External factors that might have affected the results are discussed under research question three.

4.7.2. Discussion of findings for RQ1: the overall vocabulary performance of the quizlet group

This research question was set out to explore the relationship between pre and post-test scores of the Quizlet group. The data were analyzed through a paired-samples t-test. Examination of the data yielded that Quizlet group learners had significant vocabulary gains for all test scores from the beginning of the study to the post-test. The results fully sustain the positive effect of Quizlet on learners' vocabulary learning (Dizon, 2016; Tosun, 2015; Waluyo and Bucol, 2021).

The largest difference between the pre and post-test scores was found to be 52.44 for the Passive Recall test. It can be concluded that the digital application tool, Quizlet, had a significant effect on the understanding of the L2 word meaning when they were required to write Turkish meaning of English words. Regarding Orthography Receptive and Productive test scores, it can be concluded that the use of digital flashcards in vocabulary teaching was found to be useful for developing recognition and production of correct spelling, and also confirmed by the participants during the interviews that Spell and Write mode were indicated as their favorite mode on Quizlet and it helped their pronunciation and spelling. The multimedia capabilities of the Quizlet tool provide visual and auditory options for words by helping get the meaning with the correct pronunciation (Özer and Koçoğlu, 2017). Contrary to current research findings and Özer and Koçoğlu's research (2017), Altiner's research studies (2011) underlined that Anki, the computer-based flashcard program, would be preferred by the participants if it was supported by pronunciation and example sentences.

Moreover, the findings demonstrated that pre-Receptive and Productive Knowledge of Grammatical Functions test scores were lower comparing their post-RKGF and PKGF test scores, which means that the participants' receptive and productive levels of vocabulary knowledge significantly increased. The Quizlet application focuses only on form-mean connections; however, the parts of speech and example sentences were provided by the researcher through Flashcard mode. Furthermore, the learners were asked to use the 'create study sets' option using target words in a sentence. On the other hand, Nation (2001) alleged that it is essential to form a sentence for a word to be competent and motivated to use this information. Crandell (2017) put forward that productive and receptive knowledge of the words can be enhanced by providing sentences. This result of the study provides full support to Dizon and Tang's (2017) study confirming that digital flashcards like Quizlet increased learners' productive knowledge significantly.

It can be postulated from the findings that the participants tended to give the more correct answers on the post-test after the implementation of Quizlet. This result is in the line with the findings of previous studies by Hu and Kawaguchi (2021), Bilcan (2019), Özer and Koçoğlu (2017), and Kalecky (2016). In line with Hu and Kawaguchi's research study (2021), post-test scores of the participants from Quizlet group were found to be affected positively by Quizlet training, too. Supporting their findings, Özer and Koçoğlu (2017) concluded that the Quizlet group obtained slightly better scores than the

vocabulary notebook group compared to pre and post-test results and pre and delayed-post-test results. The visual and verbal modalities in Quizlet improved learning and retention of the words by reporting the positive effect of intentional vocabulary learning on vocabulary learning and recall. Bilcan (2019) found that learners performed better and showed significant differences between immediate and post-test scores. Kalecky (2016) highlighted that Quizlet provided long-term retention of words as the progress of the learners compared to the learning outcomes.

Finally, it can be concluded that the online digital flashcard program was found to have a significant effect on improving the ability to retrieve and use the words correctly with the help of immediate feedback on study modes, visuals, and audio options.

4.7.3. Discussion of findings for RQ2: the overall pronunciation performance of the quizlet group

The second sub-question of the research was intended to explore whether the Quizlet digital web tool impacts 9th-grade students' English pronunciation skills or not. The researcher aimed at identifying the words that are commonly mispronounced and pronounced correctly in terms of segmental and suprasegmental elements of pronunciation. The Quizlet group learners heard each target word through Quizlet Flashcard mode offered by 'Audio on' button. The 'Audio on' option was accessible for all Quizlet study modes. Although the Quizlet application did not offer any pronunciation scoring systems, the researcher provided feedback on the pronunciation of the words when needed. Fifty-two target words were given in a sentence and the participants' responses were recorded digitally. Afterward, the participants were rated on a 10-point scale from 1 to 10 in terms of vowel and consonant quality and word stress.

In the current study, a pronunciation rubric was designed, and segmental features (vowel-consonant quality) and a suprasegmental feature (word-stress) were evaluated by two raters. The reliability between the raters was 0.977 which means the raters scored similarly. The statistical analysis of the scores revealed that the participants achieved better scores in consonant quality with a mean of 5.2 and scored slightly lower in vowel quality (M=5.0). The learners were least successful in the suprasegmental feature which is the word stress averaging 4.9. According to the average scores of each word, the word *trip* had the highest mean score of 7.4 having an 8.7 maximum score out of 10 (See Table

4.29). On the other hand, the word “*suggest*” scored only 4.1 having a 5 maximum score out of 10.

4.7.3.1 Vowel quality

The present study identified five problematic words for the 9th grade Turkish EFL learners that are: height /haɪt/, mosque /mɒsk/, souvenir /,su:vən'ɪər/, tower /taʊər/, disagree /,dɪsə'gri:/ (See Table 4.30).

/aɪ/:

It is explicit that /aɪ/ was the most problematic vowel to produce in the target word ‘height’. Since the Turkish language does not have diphthong except for borrowed words and the Turkish dialects, the learners replace /aɪ/ diphthong with a vowel /e/.

/ɒ/:

The second commonly mispronounced vowel sound was /ɒ/ for the word ‘mosque’. The learners replaced /o/ instead of /ɒ/. The sound systems’ differences between Turkish and English phonology prevent learners to distinguish the correct sound. Since the English vowel system is unsteady (Cruttenden, 1994), each /o/ vowel is pronounced differently as it can be seen in the words prove, come, and alone.

/u:/, /ə/, /ɪə/:

The third common pronunciation error was the word ‘souvenir’. The participants substituted /o/ for /u:/ and /e/ for /ə/ as they pronounce their own native language. Since the Turkish language has a lack of diphthongs, the participants tended to replace /ɪə/ with vowel /ɪ/.

/a/, /ʊə/

The fourth common vowel error was the /a/, /ʊə/ sound in the word ‘tower’. The vowel /a/ was pronounced as /o/ in its written form. Turkish learners tend to pronounce the words in their written form due to “the mother tongue’s influence (Aktuğ, 2015, p. 111)”.

/ə/, /i:/

The last commonly mispronounced word in terms of its vowel sound was ‘disagree’ /,dɪsə'gri:/. The participants used the short form of the second vowel i: instead of the long

form. Despite the English phonology, there are no short or long vowels in Turkish phonology.

4.7.3.2. Consonant quality

The most problematic five words regarding consonant quality were as follows: length /leŋθ/, suggest /sə'dʒest/, housewarming party /'haʊs.wɔ:.mɪŋ/ /'pɑ:ti/, heritage /'herɪtɪdʒ/, opening party /'əʊpənɪŋ/ /'pɑ:ti/, and reject /rɪ'dʒekt/. The challenging phonemes are respectively, /θ/, /dʒ/, /ŋ/ (See Table 4.31).

/θ/

The first problematic consonant sound was /θ/ that does not exist in Turkish phonology as displayed in Table 4.31. The participants replaced it with /t/. As Kaçmaz (1993) provided results in support of this finding, the researcher suggested that 46% of his Turkish EFL learners did not pronounce the / θ/ sound. Moreover, Varol (2012) concluded that the English interdental consonants cause difficulty due to the absences in the mother tongue of the learners.

/dʒ/

The second challenging consonant that posed a serious problem was the /dʒ/ phoneme for the 'suggest, heritage, and reject'. While the word 'suggest' had a mean of 4.0, the words 'heritage and reject' had a mean of 4.2 and 4.3 respectively. Even though the Turkish language has the same affricative consonant, it is not seen at the final position. Hence, the participants replaced it with other sounds.

/ŋ/

The final challenging words were 'opening party and housewarming party'. They had an average mean of score 4.3 and 4.2 respectively. When the Turkish and English consonant system compared, the nasal sound / ŋ/ is one of the differences. The nasal sound was pronounced as plosive /k/ by the participants.

4.7.3.3. Word stress

Thompson (2002) indicates that the rhythmic pattern of English, with its stretched-out syllables and hurried unstressed syllables with their reduced vowels, is unusual and

difficult for Turkish EFL learners. No matter how the learners pronounce the segmental features correctly when the learners put the stress in the wrong syllable, that results in communication breakdown (Celce-Murcia, Brinton and Goodwin, 2008). Word stress usually exists on the last syllable in the Turkish language. Regardless of the length of the word and the weight of the syllables, Turkish has a simple rule to apply, unlike English. In the current study, the word stress was analyzed at the word level. In the nature of English stress structure, only the vowels can be stressed and only one stress exists in one word.

According to the results of the current study, common word stress errors committed by the 9th grade EFL learners were as follows: height /hart/, mosque /mɒsk/, disagree /ˌdɪsə'ɡri:/, underground /'ʌndəgraʊnd/, agree /ə'ɡri:/, suggest /sə'dʒest/ (See Table 4.32).

height /hart/

According to Table 4.32. which demonstrates the statistics of the word stress scores, it was observed that 'height' was the most problematic word regarding word stress having a mean of 3.8. Since the participants misplaced the diphthong which is /aɪ/ for this word and put /e/ instead of it and there is only one syllable, the learners put the stress on the first syllable /h/ or last syllable /t/. The main reason was that they mispronounced the vowel as seen in Table 4.31. The word 'height' was investigated as the most problematic word in terms of vowel quality.

mosque /mɒsk/

The next commonly made mistake was 'mosque /mɒsk/' with a mean of 3.7. As in the case of the word height /hart/, the participants mispronounced the vowel /ɒ/ by replacing /o/. They failed to put the stress on the right place assuming that the word was two-syllable as they read in Turkish.

disagree /ˌdɪsə'ɡri:/

The other second challenging word in terms of its stress was 'disagree /ˌdɪsə'ɡri:/'. It had an overall 3.9 mean score. In Turkish phonology, there are not any long or short vowels, and the stress is on the first syllable for this word. Hence the participants mispronounced the vowel /i:/ and replaced it with pure /i/. The word was pronounced by participants like a two-syllable word.

underground /'ʌndəgraʊnd/

The third problematic word was ‘underground /'ʌndəgraʊnd/'. It had an overall 4.0 mean score as displayed in Table 4.32. The stress of the word underground is on the first syllable starting with the vowel 'ʌ. However, the participants who mispronounced the first vowel /u/, /e/, and also /ou/ sound failed to put the stress on the right place.

agree /ə'gri:/

The fourth problematic word in terms of its stress was agree /ə'gri:/ as displayed in Table 4.32. The participants averaged 4.0 overall. The stress is on the second syllable here /'gri:/ starting with the consonant /g/. The participants already mispronounced the /a/ sound, and the stress has been lost in the word.

suggest /sə'dʒest/

The last problematic word that could not be stressed correctly was the word ‘suggest /sə'dʒest/'. The word ‘suggest’ also has one of the problematic phonemes as observed in vowel quality analysis. The participants struggled to pronounce the /u/ sound as vowel /ə/. The stress is on the second syllable starting with the consonant /dʒ/. However, the participants who mispronounced the vowel /u/ put the stress in the wrong place.

The results of the analysis of the participants’ pronunciation scores to find out the effect of Quizlet on their pronunciation provided full support for the errors that Turkish EFL learners had difficulties with. The findings are supported by Aktuğ (2015), Saka (2015), Türker (2010), Çelik (2008) and Kaçmaz (1993). In their studies, Saka (2015), Çelik (2008) and Türker (2010) counted the voiceless interdental fricative /θ/ as the phoneme that Turkish learners had difficulty with most. Similarly, the phoneme /ŋ/ was also found as a problematic consonant phoneme in Türker’s study (2010). The affricate sound /dʒ/ was determined as the second challenging phoneme in the present study. This result is in line with the findings of the study which claims that the phoneme /dʒ/ is one of the problematic phonemes of English that lead to confusion for Turkish EFL learners (Aktuğ, 2015).

Another result arose from the study that /aɪ/, /ɒ/, /u:/, /ə/, /ɪə/, /a/, /ʊə/, /i:/ were determined as phonemic mistakes in terms of vowel quality. This result is in line with the findings of studies confirming that /ɒ/, /ə/, /ʊə/, /aɪ/, /ɪə/, /a/ appeared to be among the most problematic sounds that Turkish learners mispronounced (Aktuğ, 2015; Bekleyen, 2011; Türker, 2010).

Even though there have been studies focused on the effects of Quizlet on vocabulary teaching-learning in particular (Bilcan, 2019; Franciosi, 2017; İnci, 2020; Lander, 2016; Özer and Koçoğlu, 2017), none of these studies investigated the effect of the Quizlet digital tool in terms of pronunciation skill.

Although the age factor to learn a target language is seen to have a prominent role in the improvement of pronunciation (Piper and Cansin, 1988; Thompson, 1991) and insufficient focus on pronunciation in Turkey's foreign language education context (Aktuğ, 2015), listening and spelling the target words through Quizlet study modes reinforced memorization of spoken forms of the words as stated by the majority of the participants in the interviews.

Taking into consideration participants' age to start learning English, limited duration of lessons (40 minutes each) and restricted amount of feedback on pronunciation given for each participant from middle school to high school due to time constraints, Quizlet training in the current study gave insight on determining which sounds they had difficulties and they scored well to provide appropriate training for the participants even though the software is not designed specifically for pronunciation training.

Neri, Mich, Gerosa, and Giuliani (2008) found that a computer-assisted pronunciation training (CAPT) system improved young learners' pronunciation compared to traditional teacher-oriented training. Similarly, other CAPT software programs were investigated to improve the pronunciation skills of learners. Comeau (2011) investigated the impact of EnglishCentral on EFL college learners. The learners indicated that the software was fun, useful, and engaging despite the ineffective scoring system of the tool. Alternatively, Baradaran and Davvari (2010) expressed that Pronunciation Power 2 had a positive impact on EFL learners' pronunciation with respect to its feedback feature. Similar results were concluded by Khoshsima, Saed and Moradi's research study (2017) that Clear Pronunciation 2 improved participants' intonation, connected speech, word stress, and sentence stress, and the EFL learners added that the tool was helpful and practical to use. Other than that, the effect of Automated Sound Recognition (ASR) technology was incorporated into pronunciation teaching (Seferoğlu, 2005). One of the well-known ASR software MyET provides holistic feedback to its users on different pronunciation features. Liu and Hung (2016) revealed that MyET was an effective tool by instructing users to record real-life dialogues. According to the results of the study, the pronunciation scores of the learners' improved significantly. Unlike

Quizlet software, MyET supports users with conversations and dialogues, however, words are given isolated and without a context in the Quizlet tool. Still, in the current study, the researcher inserted sentences into the flashcards during the intervention, and the target words were recorded at a sentence level as the way Liu and Hung (2016) addressed the target words in their study. Additionally, Celce-Murcia, Bret et al., (1996) suggested giving the words in a context instead of in isolation enlarges learners' knowledge of pronunciation.

Given the fact that Quizlet is a digital flashcard tool and differs from given ASR and CAPT software programs, it still includes the spoken form of the words. Regarding its deficiencies, an instructor can create study sets to enhance learners' pronunciation skills in the segmental aspect. More precisely, the Quizlet software with its engaging environment positively affected learners' attitudes toward improving their pronunciation regardless of the short time frame of 8 weeks. The analysis of the semi-structured interviews endorsed these findings. According to the interview results, learners indicated that Spell study mode and the Audio button helped their pronunciation. Furthermore, it was reported that they increased their scores in the post-Orthography Productive test by listening and writing correct pronunciation. As supported by Mayer's Dual Coding Theory (2005), the Quizlet application enabled them to process information through auditory and visual channels.

Still, it is a fact that there is a need for improvements in the nature of feedback and the recording of voice of learners. Additionally, an eight-week time period is relatively short to assess the overall improvement of pronunciation. However, it is noteworthy that the Quizlet training helped determine 9th-grade learners' problems with individual phonemes.

Like aforementioned studies and the present study's interview results support that educational technology in pronunciation teaching motivates learners. This is significant, as it presents teachers and administrators with a rationale for increasing the use of digital technology tools to teach pronunciation, as they are considered positively by the Quizlet group learners as. On the other hand, a teacher needs to keep track of learners' common pronunciation errors and give instruction on both segmental and suprasegmental levels for a good command of pronunciation by evaluating a digital technology before implementing it to decide whether it is an answer for learners' needs.

4.7.4. Discussion of findings for RQ3: the perceptions of the quizlet group learners on quizlet

Twenty-six students' perceptions of the effects of Quizlet on their overall vocabulary and pronunciation improvements were gathered through semi-structured interviews. According to the similar responses of the participants, given responses were categorized under various sub-heading, and positive and negative viewpoints of the students were determined as themes of the interview and listed in the current study. While the negative theme was categorized as satisfaction, recording of the voice, inappropriateness, unfamiliarity, and infrastructural incompetence, the positive theme was categorized as focus, effectiveness of using Quizlet, memorability of the words, appropriateness of the Quizlet on the vocabulary learning, fun and enjoyment, frequency, satisfaction of using Quizlet, game elements, the success of the learners.

The participants were asked about the effect of Quizlet on learning new words, their favorite features of Quizlet, and how we could improve Quizlet. Taking the results of the participants' responses, it may be deduced that the participants in the Quizlet group benefitted from the Quizlet tool to learn vocabulary. Five participants asserted that using Quizlet increased the memorability of the words (See Table 4.33). Inserting visuals and audio to the flashcards and being able to 'Flip and flop' the cards as their preference order increased the effectiveness of the tool. Some participants (n=5) attributed that they could recall the words when they see them in other contexts. Even though keeping vocabulary notebooks used to be a method for their previous vocabulary studies, they recalled the words more after using Quizlet. There were still two participants who prefer using vocabulary notebooks for their future studies. Besides, some participants (n=5) stated that they were familiar with using digital tools since they were already engaged in technological tools and any digital technology tool. Hence, the teaching method was appropriate the way they learn (See Table 4.33). Hence it was easier for them to use Quizlet to learn vocabulary. The results of this study along with the previous studies suggest that Quizlet facilitated vocabulary learning and retention (Bilcan, 2019; Çınar and Arı, 2019; Dizon, 2016; Ho and Kawaguchi, 2021; Kalecky, 2016; Wright, 2016).

As the participants worked on Quizlet modes, they indicated that their success in vocabulary and pronunciation increased. The vocabulary success was in the line with aforementioned studies nevertheless there were not many studies addressing pronunciation teaching. Ho and Kawaguchi (2021) suggested that a new Quizlet mode

giving diagnostic feedback like other study modes would be useful for L2 learners. Kalecky (2016) found out that learners indicated that Quizlet supported their spelling and pronunciation. Additionally, this result was in line with the current study. When the learners were asked their favorite feature in the Quizlet app, they put forward that they enjoyed working with Spell and Write mode. Most of them (n=11) agreed that prerecorded audios and visuals improved their vocabulary learning and spelling as indicated in Table 4.34.

Furthermore, with respect to Table 4.33. most of them (n=10) have already tried other language learning applications, however, they gave up so easily since they were not monitored by the teacher. They were aware that the teachers kept track of their progress to give feedback, which kept them focused and motivated. According to the results of interviews, having positive and negative instant feedback on the words learned fully, partially learned, and yet to be learned kept them updated. This finding seems to be along with current literature (Ashcroft and Imrie, 2014). The study administered by Ashcroft and Imrie (2014) yielded that Quizlet supports learners with its immediate feedback feature and improves their performance.

Another common response repeated by the participants was the game elements as displayed in the Table 4.33. (n=7). The gravity game was liked most and found enjoyable and competitive among the learners. Learners' perception and attitudes toward vocabulary learning by the sense of achievement changed positively. Similar to this finding, the learners in Çınar and Arı's study (2019) found the English lessons more fun, and their interest and motivation increased.

They were also asked what kind of improvements were needed for Quizlet. The voice recording option and space repetition were the outstanding responses. Four students put forward that they should have encountered previous words more often in study modes so that they could review the words at increasingly spaced intervals.

In conclusion, the reasons for not having the same results in line with some Quizlet studies in the literature in terms of not having a significant difference between the regular class and Quizlet group except for OP, PR, RKGF, and PKGF post test scores might include the individual differences of learners and inappropriateness of the learning material that is Quizlet for this current study. The individual differences of the learners are an important element in ICT-supported activities (Kawaguchi, 2016). Although all the participants were A2 level during the study, it was noted that eight students identified

in the study had slightly lower scores in the pre-test and could not increase their scores as much as other participants. Some learners stated that they could not attend any of the English classes during the COVID-19 pandemic because of the lack of technical infrastructure. Therefore, the results might have been affected by these language level differences. Furthermore, it was confirmed that five students were uncertain to study English with any digital tools as displayed in Table 4.35. They asserted that they would prefer regular class methods like keeping notebooks. Different learning styles of the learners might have affected their motivation during the implementation. Another reason might be related to the unfamiliarity with any instructional technology. Eight out of twenty-six students attributed that they were more disadvantageous than other participants in terms of their opportunities in technology use and readiness to learn through instructional technology since they were not into using any technological tools and never engaged them before. (See Table 4.35). Dreyer (2014) uncovered that the learners gained more vocabulary scores when they spent more time practicing words on Quizlet. The use of Quizlet requires different experiences and needs compared to the regular class group, the impact of socio-economic background and technology opportunities have been important factors that may affect the result of the findings. Hence, it can be postulated that the aforementioned reasons might have affected the overall findings.

5. CONCLUSION

5.1. Introduction

In this chapter, a brief summary of the findings will be given first, and then pedagogical implications, suggestions for further research, and limitations will also be provided.

5.1.1. An overview of the current study

Eight different vocabulary tests were designed to conduct the present study which aimed to find out the impacts of a digital web tool on the vocabulary and pronunciation improvement of 26 EFL 9th grade learners at a state school. To assess the efficiency of the Quizlet web tool, the present study had a regular class consisting of 26 EFL high school learners. Fifty-two target words were chosen from the English coursebook with a vocabulary familiarity test to test the participants' vocabulary gain and pronunciation improvement after the Quizlet intervention. The Quizlet group studied target words through Quizlet modes and the regular class group only completed tasks provided by the class coursebook.

The vocabulary tasks adapted from Laufer, and Goldstein (2004) and Webb (2009) were as follows: Orthography Receptive, Orthography Productive, Passive Recognition, Active Recognition, Passive Recall, Active Recall, Receptive Knowledge of Grammatical Functions, and Productive Knowledge of Grammatical Functions.

To measure vocabulary gain, pre and post-tests were run. The scores obtained from these tests were analyzed to investigate the effects of the Quizlet digital tool on participants' vocabulary acquisition. Then to assess pronunciation improvement, a rubric was designed, and the Quizlet group learners were asked to read the target words in a sentence for recording. Afterward, the study investigated the perceptions of learners towards the Quizlet application to analyze the results from a broad perspective.

5.1.1.1. Quizlet group versus regular class group

The current study asked whether learners in the Quizlet group achieved better vocabulary than students who learn only with regular class teaching methods. According to statistical analyses, both groups had vocabulary gains regardless of the intervention.

The effect of instruction on the regular class and the Quizlet digital tool on the Quizlet group had positive effects on the vocabulary acquisition of L2 learners. There might be concerns about the Quizlet application that does not improve productive knowledge of a word since it does not provide example sentences in a context, however, there was a significant difference between the two groups for the Receptive and Productive Knowledge of Grammatical Knowledge tests. Even though this digital flashcard might be more appropriate for receptive knowledge of a word with its features (Crandell, 2017), the teacher can design study sets with example sentences containing contexts as appeared in the present study. Moreover, the participants were encouraged to practice L2 definitions first in Flashcard mode, and ‘Spell’ mode was repeated more than other modes by the participants, which contributed to their Orthography Productive test results which yielded a significant result between pre and post-test.

5.1.1.2. *The effect of quizlet on quizlet group*

All in all, the mean scores yielded that there was clear development in the scores of the Quizlet group. The difference between the Quizlet group’s pre and post-test mean scores was proved significant by the pair samples t-test. The gains obtained by the Quizlet group participants was 34.43. Given the findings into account, the efficacy of using Quizlet in vocabulary acquisition can be safely assumed. As an e-learning application, Quizlet can have an augmenting role by providing various types of study modes and gamifying the vocabulary learning process.

5.1.1.3. *The pronunciation performance of quizlet group*

The present study presents average pronunciation scores of 52 target words and finally revealed the most problematic sounds for the 9th grade Turkish EFL learners. First, the learners struggled most with these five words in terms of vowel quality: height /haɪ/, mosque /mɒsk/, souvenir /ˌsuːvənˈiər/, tower /taʊər/, disagree /ˌdɪsəˈɡriː/ respectively. The problematic phonemes were determined as /aɪ/, /ɒ/, /uː/, /ə/, /ɪə/, /a/, /ʊə/, /ə/, /iː/. The complex and inconstant vowel system of English made it difficult for learners to pronounce the words properly. Second, after the implementation of the Quizlet application for 8 weeks, the most problematic words were revealed regarding consonant

quality. The most challenging consonants to pronounce were respectively, length /leŋθ/, suggest /sə'dʒest/, housewarming party /'haʊs.wɔ:.mɪŋ/ /'pɑ:ti/, heritage /'herɪtɪdʒ/, opening party /'əʊpənɪŋ/ /'pɑ:ti/, and reject /rɪ'dʒekt/. It is a fact that the diversity of the English phonology system cause difficulties for Turkish EFL learners. Finally, height /haɪt/, mosque /mɒsk/, disagree /,dɪsə'gri:/, underground /'ʌndəgraʊnd/, agree /ə'gri:/, suggest /sə'dʒest/ were determined as the words scored least with regard to word stress. Unlike the Turkish language, word stress is unpredictable and stress placement should take special training in the classrooms. In the current study, when the learners mispronounced the vowels, they put the stress in the wrong syllable. They shifted the stress as they place it in Turkish. The participants of this study need to have appropriate command of segmental features to place word stress properly.

Especially high school English teachers, in general, could benefit from these findings to have an overall insight into which sounds learners have difficulties with and may give them insight into how instructional media like visuals and auditory materials facilitates spelling and pronunciation of the words since it was indicated by 9th grade Turkish EFL learners that Listen and Write Spell modes were their favorite study modes. In conclusion, the learners should be trained by the English phonology system paying attention to L1 and L2 differences between languages and the teacher might get help with digital tools mentioned in the current study to facilitate the process. The Quizlet digital flashcard tool which is the implementation tool of the current study can be one of those tools to see the written and spoken forms of the words. Extra pronunciation study mode addition to this digital tool will increase the effectiveness of the application.

5.1.1.4. *The attitudes of the quizlet group on the quizlet digital tool*

Students' perceptions of the effects of Quizlet on their vocabulary and pronunciation were also investigated and responses were analyzed according to positive and negative themes in the study. The findings revealed that a great number of students took advantage of the Quizlet app within the bounds of opportunities. Designing a vocabulary learning instruction through Quizlet transformed learning into a playful context with Quizlet Live and Gravity game and the learners created study sets that scaffolded learner autonomy. Except for a few students, they found the interactive Quizlet digital flashcard tool beneficial and appealing for their vocabulary and pronunciation. As

appeared from the findings, Quizlet digital flashcard tool established a positive impact and promoted collaborative learning for more than half of the participants in the Quizlet group and most of them agreed that they would use Quizlet in the future. Only a few participants indicated that digital tools did not impact their language improvement in particular.

In the case of low-level students, a monitoring system is needed. Due to the flexibility and varieties of digital flashcards over paper-based flashcards (Waluyo and Bucol, 2021), those with low proficiency levels can be let to work on their own self-paced. Program developers and designers of Quizlet, and foreign language teachers, in general, could benefit from these findings to improve and increase the impact of Quizlet on English courses.

5.2. The Pedagogical Implications

After the results of the study and the related research on the impact of Quizlet on vocabulary and pronunciation improvement, the following implications were drawn up for English language teaching and learning.

Ever since technology manifested itself in the education field, it has been a crucial issue for teachers to meet the needs of digital natives and immigrants who are inclined to lose their motivation and may have a negative perception of the vocabulary learning process. In that sense, gamified student response applications and other digital tools can be adopted as learning resources for today's learners as digital natives and digital immigrants. The teachers first need to understand and acquire some skills to integrate technology into the classroom. It is a serious issue for effective vocabulary teaching to know how to engage and integrate with the tool. The teachers need to introduce the tool on using and practicing vocabulary items in terms of the skills used, spaced repetition, and recycling of the difficult words (Stroud, 2014).

First, one of the notable results of the current study is that the Quizlet group made a significant difference between pre and post-tests. This demonstrates that the Quizlet tool as a digital flashcard tool is sufficient to expand vocabulary knowledge. On the other hand, there was not a significant difference between the regular class group and the Quizlet group for some tests and some of the interviewees from the Quizlet group indicated that the software did not meet their expectations with the way it works. Besides

that, in countries like Turkey in which learners have limited opportunities to have English native speakers' input. Hence, another study mode with feedback on pronunciation would make a huge impact on EFL learners, that is to say, the teachers and the material designers should take these deficiencies for granted. Other digital tools that build vocabulary along with engaging learners with customizable vocabulary learning activities specifically to build productive vocabulary knowledge by using words in a correct sentence structure should be analyzed with certain criteria before any implementations. At this juncture, Kahoot!, Socrative, Quizizz, Quiz Game, and Anki have been one of the tools studied in much research (Ciaramella, 2017; Çakır, 2019; Kayseroglu and Samur, 2018; Yapıcı and Karakoyun, 2017). The teachers can evaluate and try these tools as to the needs of their learners. For Digital Flashcard tools, Nakata's Digital Flashcard Criteria (2001) can be utilized for evaluating any instructional tool.

In the present study, the target words they studied through the Quizlet application were not determined by the participants. Instead, the researcher chose the words they would practice. Some of the students shed light on they felt bored and were not autonomous enough, which made the vocabulary learning process boring and challenging for them. Furthermore, some of the interviewees from the Quizlet group indicated that target words were challenging and did not appeal to them. McCarthy (1990) and Schmitt and Schmitt D. (1995) advocated that when the learners structure their notebooks, the words they prefer to study should be decided by them. That notion can be applied to digital flashcard tools that the learners might decide what words they include and what information they want to note down in their self-studies. In that sense, learner autonomy can be promoted as Quizlet offers with its Flashcard creation feature. The teachers can give extra vocabulary tasks or projects for learners to create flashcard sets based on themes they study. Accordingly, Kalecky (2016) put forward that Quizlet could be an effective tool to improve learner autonomy since learners can study in their self-paced self-study by creating their sets, searching for ready-made sets and they can go through the difficult items determined by them. For instance, the teachers can assign the learners to create flashcards with unit words at the beginning of the units to make a presentation at the classroom. With other Web 2.0 tools, students can prepare contents with scheduled themes for a longer period of time, and the prepared contents can be collected in the form of assignments, projects and portfolios. Quizlet is an appropriate digital tool to incorporate inside and outside the classroom so that the teachers can create authentic in-

class vocabulary activities within authentic context for both vocabulary growth and pronunciation practice. Instead of using Quizlet in isolation from content and curriculum, the teachers can integrate inside the classroom once a week.

Different digital gamified applications with their game elements such as badges, points, and leaderboards might be part of the examination system and the curriculum as they can boost students' motivation and engagement. The importance of feedback and feeling of competency may be supported by these game elements, however, it is less likely that individuals' high value is maintained over time. Intrinsic motivation should be increased with some rewards including real objects (Zichermann and Cunningham, 2001).

All in all, it is, therefore, that governments need to take action to facilitate educational technologies in and outside the classrooms and to enhance innovative learning opportunities for the learners. During COVID-19, providing tablets for the students became one of the first actions taken by the Ministry of Education. Through this implementation, more commercially available language teaching software, programs, and tools need to be allowed for free for the learners.

Second, the study uncovers the most problematic sounds for the 9th grade Turkish EFL learners. Learners and teachers who are in the same level of EFL environment can get benefit from the implications. The teachers can be fully aware of learners' common errors and be conscious of learners' difficulties. This enables teachers to be cautious of learners' pronunciation and makes the teachers eliminate fossilized pronunciation errors. Additionally, being cautious about pronunciation errors and difficulties that the learners struggle with makes learners more careful about their pronunciation. As put forward by Binturki (2001); Derwing (2003); and Mettler (1989) communication breakdown can be prevented when the students become more cautious about pronouncing words better. When considered from this point of view, the needs of the learners will be met with pronunciation exercises provided by the teachers. Especially high school teachers can get benefit from the results of this thesis in terms of pronunciation teaching. After implementing Quizlet for 9th-grade learners to investigate the commonly mispronounced words, it was understood that some remedies should be taken into consideration. From the pedagogical perspective, making use of CALL or with the help of tools like Quizlet in the classrooms can be a gateway to practicing pronunciation, but it is not always possible to integrate into real classrooms. Hence, firstly, the most crucial problem that should be dealt with urgently is the revision of the coursebook. Currently, English is 4

hours per week for the 9th-grade number of the classes is insufficient to dedicate sufficient time for pronunciation. Priority is on the other language areas. According to Aktuğ's (2017) investigation of the reasons for the common pronunciation errors of secondary level students, the teachers put forward that insufficient coursebooks and insufficient curriculum content are one of the main problems of pronunciation errors. The English coursebooks only have one part for pronunciation skills which makes it hard to teach and improve the existing level of the learners or to emphasize the fossilized errors. On the other hand, according to the results and as the learners stated orally in the current study, pronunciation education should be a prerequisite for EFL learners. The curriculum and the coursebooks can be revised or redesigned by policymakers, curriculum designers, and material developers. Recently, the Ministry of Education has agreed that the assessment of English examinations should be done for each skill, and it should not be conducted only on paper. The teachers should get benefit from this opportunity and during a speaking examination based on their learners' needs, they can give individual pronunciation instruction and include diagnostic feedback on pronunciation. Considering the infrastructures of their schools CAPT and ASR software such as MyET, EnglishCentral, Clear Pronunciation 2, and Pronunciation Power 2 can be augmented by using voice recording or recognition tasks. In addition, other presentation applications can be implemented. Consequently, the new directions in pronunciation teaching currently have been employing Computer-assisted instructional technology, and some other different language teaching techniques such as drama, psychology, or speech pathology (Celce-Murcia, Brinton, and Goodwin, 2010) are applied for pronunciation teaching.

Another implication of the study might be related to audiobooks. As Quizlet offers for learners, learners should be supported with audio-visual content adding to the pronunciation studies when the coursebook is revised. Audiobooks can be integrated into classrooms as pronunciation teaching practices instead of regular class practices. The impact of audiobooks on university-level students were investigated on both sound recognition and pronunciation level by Saka (2015). It was proven that audiobooks have been an effective tool for pre-intermediate level students. As most of the students indicated that they want to have a native-like speaking ability, audiobooks can be selected to pay attention to the learners' interest because it is more likely that listening to an audiobook takes a longer time than other language learning-oriented activities. Learners

can listen to audiobooks based on their interests and pace out of the classroom through computers, smartphones, or similar devices. Assigned audiobooks can be presented in five minutes presentations or group discussions can be supported. The teachers can initiate some question-answer sessions or direct learners to present alternative endings for the chapters.

Even though pronunciation software programs are assets for teaching pronunciation, most software programs cannot give feedback to learners for their production or do not give accurate feedback. The users need to notice the difference between the model utterance and their production. On another note, it is the weakest aspect of the Quizlet tool that does not give any corrections and recording advice. Until the instructional technology improves fully, the teacher can create a response time for errors. Errors can be noted on a checklist or any inexpensive pocket camcorders can be used for video recording to review.

Finally, in the last quarter-century, pronunciation teaching has been taught with the multi-model method in that sounds are implemented visually, auditorily, kinesthetically, and in a tactile manner. That is to say, the teachers show sensitivity to students' autonomy, personality, ego, and identity in a learner-centered environment (Celce-M. et al., 2010). Several researchers like Thompson, Taylor, and Gray (2001) alleged that the Multiple Intelligence technique can be implemented to teach pronunciation of the target language in accord with learners' intelligence types. Whereas rubber bands, balls, balloons, and body language can be applied for bodily-kinesthetic intelligence learners, card games and wall charts aid the visual/spatial intelligence of the learners. In the current study, the learners were the least successful at word stress, which may indicate that the teachers should attach more importance to suprasegmental features of pronunciation by instructing with an explicit teaching. List of target words can be given with underlined stressed syllable and when the teacher utters the words, the learners can clap. Likewise, the teacher may start with listening discrimination activities such as "contextualized minimal pairs, intonation patterns for tag questions, identification exercises by using songs, comic strips, nursery rhymes, limericks, and poems. Audios, technological tools, and videos serve as valuable resources" (Celce-Murcia et al., Teaching English as a Second or Foreign Language, 2008: p. 148).

Pronunciation training could be presented to beginner level learners through Fraser's (2001) theory of conceptualizing in the classrooms. Phonemic awareness in the

young ages would help learners grasp target language. In the second stage, learners should be instructed to notice the difference in L1 and L2. The third stage of CT, cognates can be utilized to show the difference between target and native language pronunciation. To teach the right sound variations, role plays, and dialogues can be implemented. This way, the teacher would address the suprasegmental features of pronunciation. To make learners internalize phonemes and other lexical phonemes authenticity in teaching affects conscious level of learners.

Consequently, even though the learners' use of a digital flashcard web tool was explored in this study, the efficiency of digital tools for four main skills of foreign language learning should also be explored.

5.3. Recommendations for Future Research

To start with, it may be useful to employ different gamified student response applications to have more accurate and generalizable results about CALL and digital learning. In addition, it might be better to support both teachers, instructors, and students with in-service training for digital applications before any implementations since the growing needs and interest of CALL make educators have the necessary skills and strategies for educational technology use.

As for the second suggestion, there is a need for some concrete results to compare and interpret participants' interview comments more comprehensively and thoroughly so that implementation of the Intrinsic Motivation survey helps prospective practitioners in their research. For further research, the intrinsic motivation of the Quizlet group can be investigated since their inner feelings have a link to the way they engage with a task or activity. Under self-determination theory, three intrinsic needs that are autonomy, relatedness and competence can be searched for as crucial factors of motivation (Rigby and Ryan, 2018).

Furthermore, similar research can be carried out with a larger population of participants from different proficiency levels. In the shed of this idea, it might give better results to carry out the study with higher-level students. Likewise, it is most likely that some of the participants can be excluded from the study due to several reasons like their absences. To collect more extensive data in building vocabulary knowledge with the aim of more insight into different levels and institutions with larger populations could be

included. Additionally, expanding the duration of the treatment may assist to acquire the segmental features of pronunciation. In the shed of this, future studies can consider long target language exposure time on the recognition and production of the segmental and suprasegmental features of pronunciation to see how online applications with audios may be important elements in vocabulary development. According to the findings of the study segmental and suprasegmental aspects of the pronunciation presented in the study revealed the errors committed by the EFL high-school learners. The reasons behind these errors can be tracked and teacher interviews conducted to provide more reasonable results. It would be noteworthy if a future study could administer the Quizlet app with the same level of the EFL environment to see the effect of audios on their pronunciation and detect common errors. Lastly, it is likely to be the case that there might be other factors that cause the progress of the learners in the Quizlet group such as the practice effect. For further studies, the design of the study can be implemented with the same participants and can be attributed to the improvement of digital web tools.

5.4. Limitations of the Study

There are several limitations of the present study.

To begin with, this study is only limited to two classes (26 were in the Quizlet group, and 26 were in the regular class.) Because of its limited number of students, the results cannot be generalized to a larger student population.

In the second stage, in the present study, a delayed posttest was not administered to observe any possible effects on retention and vocabulary learning due to time considerations. A longitudinal study that investigates retention over a long period would present more reasonable results on the validity of the web tool. Additionally, the present study only covered the 52 vocabulary items selected from three units in the coursebooks and skills book that the Ministry of Education recommended on the EBA platform over 6 weeks. The target words selected from coursebooks with a certain number and variety might not be overgeneralized.

In the final stage, another limitation of the study was the technological infrastructure of the school. During an 8-week duration, free wi-fi access was provided by the school, and some technical problems of the computers were problematic at school from time to time because of that the students were assigned to work on words through

applications or websites at home. That might have caused some unfair competition since some students did not have an internet connection or any devices. The researcher provided wi-fi and her devices for the participants to prevent unfair circumstances if something unexpected happened during the implementation.



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APPENDICES

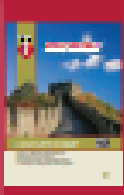
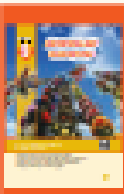
APPENDIX-1. Contents of the Main Coursebook and A Example of Syllabus

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Theme	Function	Grammar
Theme 1 STUDYING ABROAD  A. TWO BIRDS WITH ONE STONE B. GREAT TO BE HERE (pp. 13-24)	Meeting new people and introducing oneself and family Talking about possessions Asking for and giving directions	• The Verb to Be • Subject Pronouns • Possessive Adjectives • Have got / Has got • Imperatives
Theme 2 MY ENVIRONMENT  A. CAN I COME IN? B. MY NEIGHBOURHOOD (pp. 25-36)	Talking about locations of things Asking about and describing neighbourhood Making comparisons	• There is / There are • Prepositions of Place • Possessives • Object Pronouns • Demonstratives • Singular and Plural Nouns
Theme 3 MOVIES  A. YOU ARE WHAT YOU WATCH B. DO WHAT YOU LOVE! (pp. 37-48)	Talking about likes / dislikes, hobbies and free time activities Expressing opinions Making preferences Telling and asking about the time and the date Inviting and refusing / accepting an invitation	• The Present Simple Tense • Wh- Questions • Like, love, hate + -ing
Theme 4 HUMAN IN NATURE  A. ALLOW NATURE TO TAKE ITS COURSE B. LIVE ON THE EDGE (pp. 49-60)	Describing daily routines Talking about abilities Talking about frequencies of activities	• Adverbs of Frequency • Can / Can't • Adverbs of Manner
Theme 5 INSPIRATIONAL PEOPLE  A. THE CRÉMÉ DE LA CRÉMÉ B. YOUR PERSONALITY, YOUR POWER (pp. 61-72)	Asking about and describing people's appearances and characters Comparing characteristics and appearances Expressing opinions (Agreeing, disagreeing, etc.) Talking about current activities	• The Present Continuous Tense • Making Comparisons

Vocabulary	Listening & Reading	Speaking & Writing	Pronunciation
Countries & nationalities Jobs Personal belongings Family members Adjectives describing places Idioms of the week	Listening to a teacher meeting his students Reading short texts about jobs, nationalities and countries Reading an e-mail	Introducing yourself and your family members Asking and answering about your personal belongings Asking for and giving simple directions Writing an ID card Writing a postcard	Contracted forms of am, is, are and have / has
Object pronouns Parts of a house Furniture and room objects Prepositions of place Places in a city Adjectives describing a city Idioms of the week	Listening to teens talking about their rooms Listening to a conversation about one's neighbourhood Reading a short text about a teen's room Reading an e-mail about a new neighbourhood	Describing your room Comparing rooms Describing your neighbourhood Writing an e-mail Writing a descriptive paragraph about different environments	Differentiating /ɪ/ sound from /i:/ sound
Movie types Adjectives describing movies Words related to hobbies Idioms of the week	Listening to a conversation about movies Listening to a radio show Reading a blog on movies Reading a film review	Expressing opinions about movie types Making comments about movies Expressing opinions about free time activities Asking and telling the time and the date Acting out a dialogue about making, accepting and refusing an invitation Writing opinions about movies on a blog Writing short text messages to invite friends for a movie	Differentiating /t/ sound from /B/ sound
Geography words Words related to natural disasters Action verbs Jobs Idioms of the week	Listening to a quiz show on TV Listening to job ads on the radio Reading a text on natural events Reading a passage about an explorer	Interviewing about the frequencies of your daily activities Talking about abilities Talking about an explorer Writing about your friend's daily life activities Writing an opinion paragraph Writing an article about an explorer	Pronunciation of -s endings (in plurals & third person singular)
Words related to physical appearances and personalities Clothes Idioms of the week	Listening to a dialogue about the physical appearances of people Listening to a dialogue about the personalities of inspirational people Reading fan messages on social media Reading a text about an inspirational character	Comparing two pictures to find differences Expressing opinions about social media Talking about the qualities of your favourite inspirational people Expressing opinions about characteristics Writing an opinion paragraph comparing characteristics of people Writing a text describing your inspirational character	Pronunciation of /y/ sound

Theme	Function	Grammar
Theme 6 BRIDGING CULTURES  A. GLOBAL UNDERSTANDING B. FOUR CORNERS OF THE WORLD (pp. 73-84)	Asking about and describing cities Identifying cultural differences Talking about travel and tourism Ordering food	- The Present Simple Tense vs The Present Continuous Tense - Question Tags - Conjunctions: and, but, so, because
Theme 7 WORLD HERITAGE  A. ARTISTRY BEHIND THE WONDERS B. WORLD ITSELF IS THE WONDER (pp. 85-96)	Talking about past events Making inquiries Asking and answering questions in an interview	The Simple Past Tense
Theme 8 EMERGENCY AND HEALTH PROBLEMS  A- HEALTH: THE BEST WEALTH B- BETTER SAFE THAN SORRY (pp. 97-108)	Asking for and giving advice Giving and understanding simple instructions in case of emergency Talking about something happened recently Expressing obligations and prohibitions	- The Present Perfect Tense - Should / Had Better / Ought to - Must / Mustn't - Have to / Has to - Don't / Doesn't Have To
Theme 9 INVITATIONS AND CELEBRATIONS  A. LET'S THROW A PARTY! B. SHOP & FEAST (pp. 109-120)	Asking for and making suggestions Doing shopping Making requests Talking about future plans Making and answering phone calls	- Be going to - Countable / Uncountable Nouns - A / An / Some / Any / A lot of - How much? / How many?
Theme 10 TELEVISION AND SOCIAL MEDIA  A. DIGITAL DIET B. WHAT'S ON TV TONIGHT? (pp. 121-132)	Making predictions about the future Asking for and giving opinion (agreement, disagreement, etc) Interrupting someone in a conversation Gaining time in a conversation	- The Future Simple - Will / Be Going to / Present Continuous For Future

APPENDIX-2. Validity of Vocabulary Tests

Name/Surname:

Age:

Gender:

For parts A.1 to C.2, evaluate the questions by marking the appropriate number to match your opinion.

A.1) Orthography Receptive

Circle the correctly spelled words.

22. Tredition treadition tradittionn tradition
12. Length lenngth lenggth length

Note: This test measures participant's recognition of correct spelling.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

A.2) Orthography Productive

Listen to the words pronounced and then write it correctly.

1. -----
2. -----

Note: This test measures participants' production of correct spelling.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

B.1) Passive Recognition

Look at the English words given. Choose its meaning from among four Turkish options.

1. Century
a) gelecek b) ülke c) milliyet d) yüzyıl

7. Port
a) başkent b) şehir merkezi c) nüfus d) liman

Note: This test measures participants' recognition of English words with L1 distractors.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

B.2) Active Recognition

Look at the Turkish words given. Choose its meaning from among four English options.

49) Alt geçit			
a) airport	b) underground	c) map	d) documentary
43) Gezi			
a) building	b) trip	c) ticket	d) noise

Note: This test measures participants' recognition of Turkish words with target language distractors.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

B.3) Passive Recall

Please write the Turkish meaning of English words.

31	Civilization:	u
46	Souvenir:	h

Note: This test measures participants' understanding of the L2 word meaning.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

B.4) Active Recall

Please write the English meaning of Turkish words.

48. Heykel	s
50. Yükseklik	h

Note: This test measures participants' ability to provide the L2 word.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

C.1) Receptive Knowledge of Grammatical Functions

Please choose the grammatically correct answer.

26. Entertain:

- a) They entertained us.
- b) It is very entertain.
- c) It is entertain dinner

37. Gate:

- a) I walked to gately.
- b) I closed to gate.
- c) Gating is unlocked.

Note: This test measures participants' recognition of the L2 words with grammatical accuracy.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

C.2) Productive Knowledge of Grammatical Functions

Please make a grammatically correct sentence with the words given.

- 1. Permit:
- 2. Addict:

Note: This test measures participants' production of L2 words with grammatical accuracy or not.

AGREE	DISAGREE	NOT SURE
(1)	(2)	(3)

APPENDIX-3. An Example of a Lesson Plan

LESSON PLAN

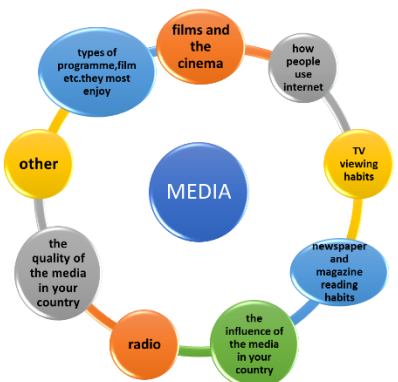
Dersin Adı	ENGLISH
Sınıfı	9/D-F
Ünitelerin Adı/No	TELEVISION AND SOCIAL MEDIA
Konu	Asking for and giving opinion
Önerilen Süre	2 hours

BÖLÜM 2

Öğrenci Kazanımları/ Hedef davranışlar	E9.10.L1. Students will be able to put the events in a TV broadcast in order. E9.10.S2. Students will be able to agree or disagree with others by giving their opinions.
Ünite Kavramları ve Sembolleri/Davranış Örüntüsü	Chat shows documentaries Live sports soaps Tabloids Agree remote control Disagree reports Current affairs programmes comics sitcoms high-definition phone-ins traffic
Güvenlik Önlemleri	
Öğretme-Öğrenme-Yöntem ve Teknikleri	YÖNTEM: Communicative Language Teaching TEKNİK: matching, listening for specific information, small group task(making an interview)
Kullanılan Eğitim Teknolojileri-Araç, Gereçler ve Kaynakça *Öğretmen *Öğrenci	Eba board book, interview chart, listening tracks and vocabulary worksheet- online Cambridge dictionary
Öğretme- Öğrenme Etkinlikleri	Today, we have an enjoyable topic. You are all actually very familiar with it. Do you wonder what we are going to deal with? Let's see then. I will show you some pictures. We will discuss. (The teacher shows pictures about types of media and asks questions such as do you buy magazines regularly, why do you go on the Internet, etc.) T: Can you guess what today's topic is? We talked TV programs, magazines/books, and radio programs. Think of them as a group? Any guesses? S: Possible answer. T: It is <i>media</i> and they are types of media. Today we will talk about media, types of media, and various aspects of media.

	T: Now, I have an activity about types of media. Work in pairs. Take one and pass the others. ‘Which group(s) below do the words in the box belong to?’ You have 2 minutes. (Then the teacher handouts an activity about types of media) (The teacher gets the answers) Which group(s) below do the words in the box belong to?										
	<table border="0"> <tr> <td>Tabloids</td><td>phone-ins</td></tr> <tr> <td>traffic reports</td><td></td></tr> <tr> <td>Current affairs programmes</td><td>Agree</td></tr> <tr> <td>high-definition</td><td>remote control</td></tr> <tr> <td>Disagree</td><td></td></tr> </table>	Tabloids	phone-ins	traffic reports		Current affairs programmes	Agree	high-definition	remote control	Disagree	
Tabloids	phone-ins										
traffic reports											
Current affairs programmes	Agree										
high-definition	remote control										
Disagree											
	1. Radio programmes 3. TV programmes 2. Magazines/newspapers T: Any problems? T: Which types do you most enjoy or are there any that you don’t like? Why? WHILE TEACHING T: Have ever been interviewed with a questionnaire and what was it about? S: Possible answers. T: Now, you will hear five people answering questions about various aspects of the media. It is like an interview. In each case, you will listen and write the question you think they were asked. I want you to take notes while listening? Okay? T: Questions? Can we start? (They listen five people one by one and the teacher pause the track in each speaker to get the possible question. The teacher discusses with students and asks which topic does each person talk about e.g. films and the cinema, radio, TV viewing habits.) T: Is everything clear? T: Do you want to also make an interview? (The teacher tells them what they are going to do one by one.) - First, work in pairs. (The teacher organizes pairs.) - You are going to prepare a questionnaire about one of the topics in your task cards. (The teacher shows topics on screen) - Choose a topic (or two related topics) and decide what general issue you want to find out about. (The teacher gives examples.) <u>For example Topic: films and the cinema.</u> <u>General issue: the cinema versus TV or DVD.</u> Okay? - Spend 5 minutes preparing 5 to 8 questions. - Interview other students individually using your questionnaire. Talk to as many of the class as you can, but do not answer the same questions twice! - Then compare your answers with your pair. Summarize your questionnaire to the										

	rest of the class, focusing on the things that are the most interesting. - Here are your task cards. There is a useful language for you and. (The teacher hangs task cards.) - The teacher checks their understanding. - Any problems? You have 5 minutes to prepare your questions. T: Did you prepare your questions? Stand up and start asking questions. (After summaries of their results rest of the class, the teacher asks a question?) T: Does anything they say surprise you from the results? T: Did you enjoy the activity? Any problems?
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Ölçme- Değerlendirme *Bireysel öğrenme etkinliklerine yönelik Ölçme-Değerlendirme *Grupla öğrenme etkinliklerine yönelik Ölçme-Değerlendirme *Öğrenme güçlülüğü olan öğrenciler ve ileri düzeyde öğrenme hızında olan öğrenciler için ek Ölçme-Değerlendirme etkinlikleri	Choose one of the topics below and write your own ideas. Share your report in class in the next lesson. TOPICS: ○ the cinema versus TV or DVD ○ What would you say is the most popular newspaper in your country? What are the reasons for its success? ○ Do you think people read less nowadays? Why do you think this is? ○ Which movie stars are popular and why? For example: <i>I believe that people don't read anymore because of TV and films. I think it is much easier to see a 2-hour movie than to read an entire book, which can take days....</i>  Topic: films and the cinema General issue: the cinema versus TV or DVD Students in the Quizlet group go to the computer lab and study the target words on Quizlet during and after class time.
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Ölçme-Değerlendirme : (Quizlet)

APPENDIX -4. An Example Screenshot of Pronunciation Scoring

[illegible]

APPENDIX-5. Student Consent Form

STUDENT CONSENT FORM

This study entitled as ‘The Use of Quizlet in Teaching Vocabulary to 9th Grade EFL Students’ aimed at improving learners’ vocabulary and pronunciation knowledge and assessing whether Quizlet has an impact on their vocabulary knowledge. The study will be conducted by Esra ATALAN, a graduate student of the Anadolu University English Language Teaching Program and it is aimed to shed light on the development of studies to be carried out in this field.

- Participation in this study is completely voluntary and volunteers can withdraw from the study at any time.
- There will be no questions/requests that may cause you to feel discomfort during the data collection process. Still, if you feel uncomfortable, you may withdraw at any time without consequences of any kind and there is no penalty if you withdraw from the study
- Any data that is no longer required will be destroyed or erased in a safe and secure way
- In accordance with the purpose of the study; data will be collected by conducting a Word Achievement Test, audio recording and interviewing students after the study.
- The names of the participants in the study will be kept anonymous.
- The data collected within the scope of the research will only be used for scientific purposes and will not be used in any other research. If needs, it will not be shared with others without your (written) permission.
- You have the right to review the data collected from you if you wish.

Thank you for the time you have taken off to read and evaluate the voluntary participation form. If you have any questions about this research, you can ask the researcher.

Researcher Name-Surname:

Address:

Phone Number:

I understand what is involved in this research and I agree to participate in the study.

Participant Name-Surname:

Signature:

Date:

APPENDIX-6. Parental Consent Form

PARENTAL CONSENT FORM

This study entitled as ‘The Use of Quizlet in Teaching Vocabulary to 9th Grade EFL Students’ aimed at improving learners’ vocabulary and pronunciation knowledge and assessing whether Quizlet has an impact on their vocabulary knowledge. The study will be conducted by Esra ATALAN, a graduate student of the Anadolu University English Language Teaching Program and it is aimed to shed light on the development of studies to be carried out in this field.

- Participation in this study is completely voluntary and volunteers can withdraw from the study at any time.
- There will be no questions/requests that may cause you to feel discomfort during the data collection process. Still, if you feel uncomfortable, you may withdraw at any time without consequences of any kind and there is no penalty if you withdraw from the study
- Any data that is no longer required will be destroyed or erased in a safe and secure way
- In accordance with the purpose of the study; data will be collected by conducting a Word Achievement Test, audio recording and interviewing students after the study.
- The names of the participants in the study will be kept anonymous.
- The data collected within the scope of the research will only be used for scientific purposes and will not be used in any other research. If needs, it will not be shared with others without your (written) permission.
- You have the right to review the data collected from you if you wish.

Thank you for the time you have taken off to read and evaluate the voluntary participation form. If you have any questions about this research, you can ask the researcher.

Researcher Name-Surname:

Address:

Phone Number:

I understand what is involved in this research and I agree to participate in the study.

Participant Name-Surname:

Signature:

Date:

APPENDIX-7. Interview Consent Form

INTERVIEW CONSENT FORM

Hello,

Thank you for helping me out in this study. For a while, we worked on our unite words and their pronunciation through Quizlet. I am curious about your feelings and thoughts on the activities we have done on Quizlet. For this reason, I will ask you some questions. You can answer as you wish. If you do not want to answer, that will not cause any problems. I am recording our interview. If you feel uncomfortable, I will not record it. You can tell what you think freely. Before starting, do you have anything to say or any questions? Shall we start our interview?

Esra ATALAN

DATE-TIME

INTERVIEW QUESTIONS

- 1- What is the effect of Quizlet on learning new words?
- 2- What is your favorite feature of the Quizlet to study vocabulary?
 - Which feature did you like the most when using the app?
 - Which of the options was more useful to you: listening and writing, matching or playing options?
- 3- How can we improve Quizlet? What is your opinion?

APPENDIX-8. An Example of Color Coding from the Quizlet Group's Semi-Structured Interview

Student E4

Codes	Category	Transcript
Not feel pleased, not satisfactory, not satisfied, reluctant, meaningless	Satisfaction	I already know online applications are so important these days but I have never engaged in learning something through an app. Maybe my friends might find Quizlet helpful, maybe it is, however, I did not <u>feel pleased</u> .
Winner, competitiveness, scoring, racing against time, feedback, badges, cooperation	Game Elements	I always play online games in English, and I felt I have learned English more through those games. I think the games in Quizlet really assessed what I have learned. However, you have to be really quick when <u>competing against other teams</u> during the Quizlet Live game.
Inadequate, limited, assessment voice, insufficient, not correcting errors, not giving feedback	Recording Voice Option	I liked how I hear the words. I would repeat them after hearing the words in flashcards. My teacher would correct me in the class, however, when I studied at home, I couldn't be sure whether I did correct or not. <u>It did not give any feedback.</u>
Important in vocabulary learning, positive effects, effective, important, improvement, positive attitudes in English	Effectiveness	Actually, Spell and Write has <u>a positive effect</u> on my typing. I could hear the word and write after the third week of working on the Quizlet.

APPENDIX-9. Piloting Study

PILOTING STUDY VOCABULARY TASKS

A) Orthography

A.1) Orthography Receptive: (5 min.)

Circle the correctly spelled words.

Trousers	Trosers	Troosers	Trouusers
Carefull	Careful	Ceraful	Caereful
Hert	Hutr	Hirt	Hurt
Spenn	Spend	Spiend	Spant
Occasionally	Occesionally	Occasionally	Ocasionally

A.2) Orthography Productive: (5 min.)

Listen to the words pronounced twice and then write it correctly.

1. _____

2. _____

3. _____

4. _____

5. _____

B) Knowledge of Meaning:

B.1) Passive Recall (5 min.)

Please write Turkish meaning of English words.

English	Turkish
Spend	_____
Trousers	_____
Occasionally	_____
Hurt	_____
Careful	_____

B.2) Active Recall (5 min.)

Please write English meaning of Turkish words

English

Turkish

C-----

Dikkatli

H-----

Acımak

O-----

Ara Sıra

T-----

Pantolon

S-----

Harcamak

B.3) Passive Recognition (5 min.)

Look at the English words given. Choose its meaning from four Turkish options.

1. Spend

- a) vermek b) yapmak c) harcamak d) sevmek

2. Careful

- a) Sevimli b) güvenilir c) tehlikeli d) dikkatli

3. Hurt

- a) acımak b) gülmek c) ağlamak d) üzme

4. Occasionally

- a) her zaman b) genellikle c) asla d) arada sırada

5. Trousers

- a) gömle

b) pantolon

c) elbise

d) ceket

B.4) Active Recognition (5 min.)

Look at the Turkish words given. Choose its meaning from four English options.

1. **Pantolon**

- a) Shoes b) Trousers c) Glasses d) Skirt

2. **Acımak**

- a) Feel b) Believe c) Come d) Hurt

3. **Arada Sırada**

- a) Occasionally b) Definitely c) Carefully d) Frequently

4. **Harcamak**

- a) Win b) Spend c) Help d) Write

5. **Dikkatli**

- a) Confident b) Stingy c) Careful d) Funny

C) Grammatical Functions:

C.1) Receptive Knowledge of Grammatical Functions (5 min.)

Please choose the grammatically correct answer.

1. **Careful**

- a) He is a very careful asistant.
b) I careful us
c) She writes careful

2. **Spend**

- a) It is a spend jacket.
b) She spends a lot of money.
c) Spend is funny

3. **Trousers**

- a) I am wearing a new trousers
b) I write trousersly
c) We are very trousers

4. **Occasionally**

- a) It is a occasionally food
b) Occasionally is true
c) I write him occasionally

C.2) Productive Knowledge of Grammatical Functions (5 min.)

Please make a grammatically correct sentence with the words given.

Hurt-

Trousers-

Occasionally-

Spend-

Confident-

APPENDIX-10. Vocabulary Familiarity Test

VOCABULARY FAMILIARITY TEST

Write Turkish meanings of the words below. You have 40 minutes to complete it.

ENGLISH

1. The news
2. Weather forecast
3. Talent show
4. Documentary
5. Cartoon
6. Satellite dish
7. Remote control
8. High definition
9. Internet access
10. Prime minister
11. Discuss
12. Take part
13. Take part in
14. Turn off
15. Entertain
16. Fall asleep
17. Turn on
18. Wonder
19. Banners
20. Soft drinks
21. Candles
22. Juice
23. Crisps
24. Opening party
25. Wedding party
26. Graduation party
27. Housewarming party
28. Birthday party
29. Imagine
30. Graduate
31. Decorate
32. Return
33. Reply
34. Select
35. Write back
36. Get ready
37. Celebrate
38. Prepare
39. Attend
40. Borrow
41. Order
42. Get married
43. Lighthouse

TURKISH

44. Mosque
45. Wall
46. Statue
47. Tower
48. Pyramids
49. Temple
50. Gods
51. Hunting
52. Close
53. Fight against
54. Centuries
55. Library
56. Yard
57. Meet friends
58. Tidy room
59. Go for a walk
60. Ride bike
61. Reviews
62. Horror
63. Action
64. Ghosts
65. Tickets
66. Plot
67. Director
68. Must-see
69. Talented
70. Rubbish
71. Landslide
72. Earthquake
73. Flood
74. Avalanche
75. Tsunami
76. Heavy rain
77. Cook
78. Draw
79. Sing
80. Shoes
81. Jacket
82. Socks
83. Trainers
84. Shirt
85. Coat
86. Skirt
87. Boots
88. Dress
89. Jeans
90. Gloves
91. Funny
92. Serious
93. Loud
94. Awful
95. Angry
96. Shy
97. Careful
98. Smart
99. Sensitive
100. National
101. Trip
102. Gate
103. Board
104. Capital
105. Fun
106. Time
107. Port
108. Delay
109. Station
110. Sights
111. Guests
112. Agency
113. Square
114. Underground
115. Museum
116. Souvenir shop
117. Passport
118. Guidebook
119. Rest
120. Faint
121. Hurt
122. Breathe
123. Pick
124. Slip

APPENDIX -11. Vocabulary Tests

PRE-TEST VOCABULARY TASKS

A.1) Circle the correctly spelled words. (10 min)

tower towner trowere towwerr	centurie centuury cantury century	acrhitecture architecture architekture architecteru	haeght height heightt heitght
heritage heritega haritage heretega	masterpiice mastarpeice masterpiece masterpieece	srttucture strakture stracture structure	statuue statue steatue staateu
length lenngth lenggh lentgh	moassque mosque mossque mosquue	histic hiistoric historic historik	invatation inviatotion invitation inviitotaon
gradaution party gruadiation party greduation party graduation party	ferawell party fareweell party farewell party faarewell party	sooft drinnks sofft drienks soft drinks soft drinks	candles canndless caendles candliess
openning party opening party openiing party oppenning party	suggesst saggest sugest suggest	agriie egree agree aggree	disagree dissagre disagree disgree
reect reject eject reeject	tredition treadition traditionn tradition	remotte control remote control remmote ceontrol remote kontrol	turn on tern on torn on tirn on
folloow the news folow the news follow the news foloww the news	internet acess internet access internet acces internet aecess	satellite dish satalliite dissh satellite dihs sateellite dish	haigh definetion haih defiinetion hiigh definition high definition
entertein entaerin entertain eantertain	log in logg in lag in loag in	predecton prediton preediction prediction	documentary documentary docuumentery doumentary
check-in cehcek-in hcheck-in cheeck-in	securiti sekurity security security	bagega baggege baggage beggege	username usarname userrnama ussername
permet pirmett permit perrmeit	addict addikct adicct addiictt	tirip trip tierp tripp	gatei gate gaeete geta
baard booard boarrd board	delay deley delaay dealay	staition station steition stationn	pert peort pord port
underground undergaound undargruond undergroound	soovunair sovuneir souveneir souvenir	guidebook guuidebook giuedebook guideebbook	anceent anceient anciennt ancient
civilization ciivilaztion civilization civalazation	housewarmig party housewarming party hausevarming party houssewwarming party	refuuse erfusee refuse refuyuse	akcept accept aceppt akceptt

A.2) Orthography Productive: (10 min.)

Listen to the words pronounced twice and then write it correctly.

- | | | |
|-----------|-----------|-----------|
| 1. ----- | 18. ----- | 35. ----- |
| 2. ----- | 19. ----- | 36. ----- |
| 3. ----- | 20. ----- | 37. ----- |
| 4. ----- | 21. ----- | 38. ----- |
| 5. ----- | 22. ----- | 39. ----- |
| 6. ----- | 23. ----- | 40. ----- |
| 7. ----- | 24. ----- | 41. ----- |
| 8. ----- | 25. ----- | 42. ----- |
| 9. ----- | 26. ----- | 43. ----- |
| 10. ----- | 27. ----- | 44. ----- |
| 11. ----- | 28. ----- | 45. ----- |
| 12. ----- | 29. ----- | 46. ----- |
| 13. ----- | 30. ----- | 47. ----- |
| 14. ----- | 31. ----- | 48. ----- |
| 15. ----- | 32. ----- | 49. ----- |
| 16. ----- | 33. ----- | 50. ----- |
| 17. ----- | 34. ----- | 51. ----- |
| 52. ----- | | |

B) Knowledge of Meaning:

B.1) Active Recall (10 min.)

Please Write English Meaning of Turkish

Turkish	English	Turkish	English
1. Mimari	a	27. Meşrubat	s
2. Şaheser	m	28. Uygarlık	c
3. Yüzyıl	c	29. Mum	c
4. Kule	t	30. Açılış partisi	o
5. Rehber Kitabı		31. Hoşgeldin partisi	h
6. Hediyelik eşya	s	32. Önermek	s
7. Altgeçit	u	33. Katılmak	a
8. Liman	p	34. Antik	a
9. İstasyon	s	35. Reddetmek, geri çevirmek	r
10. Ertelemek, gecikmek	d	36. Haberleri takip etmek	f
11. Binmek	b	37. Açmak	t
12. Kapı	g	38. Uzaktan kumanda	r
13. Gezi	t	39. Gelenek	t
14. Bağımlı olmak	a	40. Aynı fikirde olmamak	d
15. İzin vermek	p	41. Mezuniyet partisi	g
16. Kullanıcı adı	u	42. Veda partisi	f
17. Giriş yapmak	l	43. Davet	i
18. Bavul	b	44. Uzunluk	l
19. Tahmin	p	45. Miras	h
20. Belgesel	d	46. Cami	m
21. Güvenlik	s	47. Yapı	s
22. Kayıt yaptırmak	c	48. Heykel	t
23. Eğlendirmek	e	49. Tarihi	h
24. Yüksek netlik	h	50. Yükseklik	h
25. Uydu anteni	s	51. Reddetmek	r
26. İnternet erişimi	i	52. Kabul etmek	a

B.2) Passive Recall (10 min.)

Please write Turkish meaning of English words.

	English	Turkish		English	Turkish
1	Height:		27	Entertain:	
2	Heritage:		28	Log in:	
3	Masterpiece:		29	Prediction:	
4	Structure:		30	Documentary:	
5	Statue:		31	Civilization:	
6	Length:		32	Check-in:	
7	Mosque:		33	Security:	
8	Historic:		34	Baggage	
9	Invitation:		35	Username:	
10	Graduation party:		36	Permit:	
11	Farewell party:		37	Addict:	
12	Soft drinks:		38	Trip:	
13	Candles:		39	Gate:	
14	Opening party:		40	Board:	
15	Housewarming party:		41	Ancient:	
16	Suggest:		42	Delay:	
17	Agree:		43	Station:	
18	Disagree:		44	Port:	
19	Reject:		45	Underground:	
20	Tradition:		46	Souvenir:	
21	Remote control:		47	Guidebook:	
22	Turn on:		48	Tower:	
23	Follow the news:		49	Century:	
24	Internet access:		50	Architecture:	
25	Satellite dish:		51	Accept:	
26	High Definition:		52	Refuse:	

B.3) Passive Recognition (15min.)

Look at the English words given. Choose its meaning from four Turkish options.

1. Century	a) gelecek	b) ülke	c) milliyet	d) yüzyıl
2. Architecture	a) gökdelen	b) mimari	c) doktor	d) meslek
3. Tower	a) kule	b) özgürlük	c) havalimanı	d) deniz
4. Guidebook	a) kütüphane	b) gezi rehberi	c) harita	d) belgesel
5. Souvenir	a) hediyelik eşya	b) manzara	c) giyecek	d) yiyecek
6. Underground	a) havalimanı	b) uçak	c) altgeçit	d) otobüs
7. Port	a) başkent	b) şehir merkezi	c) nüfus	d) liman
8. Station	a) istasyon	b) iklim	c) uçak	d) haber
9. Delay	a) gecikmek	b) uzatmak	c) yürümek	d) davet etmek
10. Ancient	a) moda	b) modern	c) antik	d) yeni
11. Board	a) kullanmak	b) binmek	c) yürümek	d) inmek
12. Gate	a) koridor	b) pencere	c) yolcu kapısı	d) balkon
13. Trip	a) bilet	b) gürültü	c) altyapı	d) gezi
14. Addict	a) bağımlı olmak	b) seyahat etmek	c) kayıt olmak	d) cevap vermek
15. Permit	a) bağlanmak	b) takip etmek	c) izin vermek	d) kesmek
16. Username	a) medya	b) kullanıcı adı	c) çıkış	d) takip
17. Baggage	a) sözlük	b) bavul	c) kemer	d) kravat
18. Security	a) güvenlik	b) doktor	c) eczacı	d) mühendis
19. Check-in	a) imzalamak	b) kayıt yapmak	c) silmek	d) çıkış yapmak
20. Civilization	a) savaş	b) rakım	c) uygarlık	d) nüfus
21. Documentary	a) bilim kurgu	b) belgesel	c) aksiyon	d) korku
22. Prediction	a) tahmin	b) uygulama	c) yorum	d) onay
23. Log in	a) imzalamak	b) kayıt olmak	c) çıkış yapmak	d) oturum açmak
24. Entertain	a) kızdırmak	b) üzme	c) eğlendirmek	d) oyalamak
25. High definition	a) uygulama	b) kablo	c) çözünürlük	d) bağlantı
26. Satellite dish	a) alışkanlık	b) internet bağlantısı	c) uydu	d) radyo
27. Historic	a) edebiyat	b) şiir	c) tarihi	d) savaş
28. Mosque				

a) köprü	b) mimar	c) cami	d) gökdelen
29. Length			
a) uzunluk	b) yükseklik	c) yapı	d) mimari
30. Internet access			
a) anten	b) erişim	c) kablo	d) uydu
31. Follow the news			
a) üye olmak	b) bağımlı olmak	c) haberleri takip etmek	d) vakit harcamak
32. Turn on			
a) açmak	b) basmak	c) çıkış yapmak	d) oluşturmak
33. Remote control			
a) uygulama	b) uzaktan kumanda	c) uydu	d) çözünürlük
34. Tradition			
a) davetiye	b) tarihi	c) gelenek	d) toplum
35. Reject			
a) reddetmek	b) onaylamak	c) tercih etmek	d) katlanmak
36. Disagree			
a) üzmemek	b) kapatmak	c) nefret etmek	d) katılmamak
37. Agree			
a) katılmak	b) sevmek	c) çizmek	d) açmak
38. Suggest			
a) katılmamak	b) onaylamak	c) reddetmek	d) önermek
39. Height			
a) uzunluk	b) yükseklik	c) eğim	d) cetvel
40. Heritage			
a) tablo	b) kültür	c) harita	d) miras
41. Structure			
a) miras	b) yapı	c) merdiven	d) bahçe
42. Masterpiece			
a) banyo	b) müze	c) tablo	d) taş
43. Statue			
a) cami	b) vazo	c) heykel	d) köprü
44. Invitation			
a) davet	b) ziyaret	c) mektup	d) mezuniyet
45. Candle			
a) hediye	b) pasta	c) balon	d) mum
46. Opening party			
a) veda partisi	b) hoşgeldin partisi	c) açılış partisi	d) mezuniyet partisi
47. Graduation party			
a) doğum günü partisi	b) mezuniyet partisi	c) veda partisi	d) hoşgeldin partisi
48. Farewell party			
a) açılış partisi	b) yeni yıl partisi	c) doğum günü partisi	d) veda partisi
49. Soft drinks			
a) başlangıç	b) ana menü	c) tatlı	d) içecek
50. Housewarming party			
a) mezuniyet kutlaması	b) açılış partisi	c) hoş geldin partisi	d) veda partisi
51. Accept			
a) anlamak	b) zorunda olmak	c) kabul etmek	d) önermek
52. Reject			
a) geri çevirmek	b) öne sürmek	c) bıkmak	d) koparmak

B.4) Active Recognition (15 min.)

Look at the Turkish words given. Choose its meaning from four English options.

1 Yükseklik	a) ruler	b) length	c) slope	d) height
2 Miras	a) doctor	b) architecture	c) vision	d) job
3 Şaheser	a) painting	b) masterpiece	c) museum	d) stone
4 Yapı	a) architecture	b) garden	c) structure	d) ladder
5 Heykel	a) statue	b) bridge	c) vase	d) mosque
6 Uzunluk	a) building	b) height	c) architecture	d) length
7 Cami	a) architect	b) mosque	c) bridge	d) skyscraper
8 Tarihi	a) historic	b) literature	c) poem	d) war
9 Davet	a) graduation	b) letter	c) visitation	d) invitation
10) Mezuniyet Partisi	a) birthday party	b) opening party	c) graduation party	d) farewell party
11) Antik	a) modern	b) ancient	c) mountain	d) timetable
12) Mimari	a) job	b) doktor	c) architecture	d) skyscraper
13) Yüzyıl	a) nationality	b) century	c) country	d) future
14) Veda Partisi	a) housewarming party	b) opening party	c) graduation party	d) farewell party
15) Meşrubat	a) vegetable	b) letter	c) celebration	d) soft drinks
16) Mum	a) tie	b) guests	c) candles	d) gift
17) Açılış Partisi	a) horror party	b) opening party	c) housewarming party	d) wedding party
18) Kule	a) tower	b) liberty	c) airport	d) sea
19) Seyahat Rehberi	a) street	b) guidebook	c) library	d) map
20) Hoşgeldin Partisi	a) farewell party	b) opening party	c) engagement party	d) housewarming party
21) Önermek	a) enroll	b) suggest	c) reject	d) decline
22) Katılmak	a) agree	b) stand	c) clean	d) draw
23) Reddetmek	a) reject	b) confirm	c) prefer	d) put up with
24) Aynı fikirde olmamak	a) hate	b) disagree	c) turn off	d) get upset
25) Gelenek	a) society	b) historical	c) tradition	d) myth
26) Uzaktan Kumanda	a) satellite	b) device	c) application	d) remote controller
27) Açmak	a) put on	b) let off	c) put out	d) turn on
28) Haberleri takip etmek	a) follow the news	b) sign up	c) addict	d) waste

29) İnternet erişimi			
a) access	b) inventor	c) nail	d) store
30) Uydu			
a) satellite dish	b) device	c) button	d) access
31) Çözünürlük			
a) addiction	b) connection	c) high definition	d) cable
32) Eğlendirmek			
a) annoy	b) entertain	c) disappoint	d) tear up
33) Oturum açmak			
a) drop put	b) log in	c) reserve	d) sign in
34) Tahmin			
a) prediction	b) apps	c) comment	d) consent
35) Belgesel			
a) science-fiction	b) horror	c) historical	d) documentary
36) Kayıt yapmak			
a) delete	b) check-in	c) sign	d) log out
37) Güvenlik			
a) security	b) engineer	c) pharmacist	d) cook
38) Bagaj			
A) dictionary	b) baggage	c) belt	d) tie
39) Uygarlık			
a) war	b) civilization	c) population	d) level
40) Kullanıcı adı			
a) media	b) out	c) username	d) followers
41) İzin Vermek			
a) connect	b) permit	c) follow	d) cut
42) Bağımlı olmak			
a) addict	b) travel	c) check-out	d) drop
43) Gezi			
a) building	b) trip	c) ticket	d) noise
44) Yolcu Kapısı			
a) windows	b) ticket	c) crew	d) coast
45) Binmek			
a) invite	b) board	c) take on	d) put off
46) Gecikmek			
a) extend	b) walk	c) delay	d) invite
47) İstasyon			
a) news	b) climate	c) city center	d) station
48) Liman			
a) railway	b) port	c) capital	d) plane
49) Alt geçit			
a) airport	b) underground	c) map	d) documentary
50) Hediyelik eşya			
a) food	b) clothes	c) souvenir	d) sight
51) Kabul etmek			
a) order	b) prepare	c) mean	d) accept
52) Reddetmek, geri çevirmek			
a) lead	b) reject	c) catch	d) spread

C) Grammatical Functions:

**C.1) Receptive Knowledge of Grammatical Functions
(15 min.)**

Please choose the grammatically correct answer.

1. Height

- a) Jane is a woman of average height.
- b) I heighted this trousers.
- c) They are height same.

2. Heritage

- a) This tower is heritagely beautiful.
- b) It heritage this castle.
- c) Turkey has a rich heritage.

3. Masterpiece:

- a) His book is a masterpiece.
- b) She bought masterpiecedly vase.
- c) Masterpiece was Moby Dick.

4. Structure:

- a) It is structure tower.
- b) Newly structure is home.
- c) The structure was seventy feet long.

5. Statue:

- a) I saw statuedly
- b) The statue is 37 m in height.
- c) The statue small garden is excellent.

6. Length:

- a) Its length is 45 meter.
- b) The island was lengthly 16 meter.
- c) Length has a 35 meter.

7. Mosque:

- a) It mosque has a beautiful mosaic
- b) Her mosque was built in 1867.
- c) I am mosquing once a week.

8. Historic:

- a) They are the historic sites of the city.
- b) Historic is a building.
- c) She visited historic.

9. Invitation:

- a) She invitation to the party.
- b) This is his invitation card.
- c) She write invitationly.

10. Graduation party:

- a) The graduation party is next week.
- b) I like graduationly party.
- c) She is very graduation party.

11. Farewell party:

- a) He is farewell party.
- b) She farewellled party yesterday.
- c) It is my farewell party.

12. Soft drinks:

- a) I am softly drinks
- b) She soft drinks cola.
- c) She likes soft drinks.

13. Candle:

- a) His candle was at my hand.
- b) I put candlely on the washstand.
- c) I candled the party.

14. Opening party:

- a) The opening party is at 13.50.
- b) It opening party tomorrow.
- c) It is openingly party at the garden.

15. Housewarming party:

- a) She was very housewarmingly party.
- b) His housewarming party was yesterday.
- c) I housewarmed party at my home.

16. Suggest:

- a) He suggested me to buy this.

- b) Suggest is positive.
- c) I wrote suggestedly.

17. Agree:

- a) It is an agree idea
- b) Agree is a wise.
- c) I agreed to her.

18. Disagree:

- a) I have disagreedly to themç
- b) We have disagreed to the idea.
- c) Disagree is a nervous.

19. Reject:

- a) It is a reject book.
- b) She rejected to his opinion.
- c) Reject is a fun.

20. Tradition:

- a) It is almost tradition
- b) It is British tradition.
- c) It is family traditionly.

21. Remote control:

- a) She remoted control.
- b) I took her remote control.
- c) She used remotedly control.

22. Turn on:

- a) He will turn on the TV.
- b) It is a turn on heater.
- c) It is a careful turn on.

23. Follow the news:

- a) It is a follow the news Internet
- b) Follow the news are boring.
- c) I follow the news on social media

24. Satellite dish:

- a) It is quite satellite dish
- b) He paid for a 15-inch satellite dish
- c) He set satellitely dish TV.

25. High Definition:

- a) I watched highly-definition movie.
- b) It's a high definition TV series.
- c) I high definition the TV.

26. Entertain:

- a) They entertained us.
- b) It is very entertain.
- c) It is entertain dinner.

27. Log in:

- a) It is a logly-in password.
- b) You need to log-in.
- c) Log-in is difficult.

28. Prediction:

- a) Their predictions were correct
- b) He could prediction the future.
- c) She predictioned the game.

29. Documentary:

- a) English documentaries are amazing
- b) I documentaried this movie.
- c) This is very documentary.

30. Check-in:

- a) It is a checkly-in reception.
- b) I will check-in at the front desk.
- c) Check-in is a flight.

31. Security:

- a) He is security's president.
- b) I securited at the airport.
- c) We have a new security guard.

32. Baggage

- a) I bought a baggagely.
- b) I can buy her a baggage.
- c) I am baggaging this t-shirt.

33. Username:

- a) I will username this e-mail address.
- b) Username this account!
- c) Choose your username and password.

34. Permit:

- a) The school permits mobile phone
- b) Permit is never
- c) It is a permitting weather

35. Addict:

- a) I am addictedly to Internet
- b) It is an addict game.
- c) I am addicted to coffee.

36. Trip:

- a) Helen cancelled her tripped.
- b) Let's take a trip.
- c) We don't go on tripply.

37. Gate:

- a) I walked to gately.
- b) I closed to gate.
- c) Gating is unlocked.

38. Board:

- a) He boarded the ship.
- b) I am coming to boardly
- c) Tom boarding to plane.

39. Delay:

- a) Don't delay it!
- b) It is a delay flight
- c) Delay is error

40. Station:

- a) Take station to Julia.
- b) I am at the station.
- c) I am waiting stationly.

41. Civilization:

- a) Civilization ancient is interesting.
- b) I enjoy reading about Aztec civilization.
- c) Civilizations old are amazing.

42. Port:

- a) Their ship is in port.
- b) Kobe is a port famous city.
- c) Kobe is very port.

43. Underground:

- a) The New York underground is amazing.
- b) Small is a underground.
- c) His family lived in the undergroundly.

44. Souvenir:

- a) It is him souvenir from Los Angeles.
- b) Tom souvenired home.
- c) I went to a souvenir shop.

45. Guidebook:

- a) I bought a new guidebook.
- b) I wrote guidebookly.
- c) They are quite guidebook.

46. Tower:

- a) Tower built us
- b) That tower is in France
- c) I tower us

47. Century:

- a) They lived in the twenty-first century
- b) I write century
- c) We are very century.

48. Architecture:

- a) He is an architecture
- b) He architecture this building
- c) He studies architecture.

49. Ancient:

- a) I ancient this computer
- b) He talked about ancient Rome.
- c) Ancient is a building

50. Accept:

- a) Olivia accepts his request.
- b) He is accept it
- c) Well is accept

51. Refuse

- a) I will good refuse
- b) Refuse is them.
- c) He cannot refuse if you ask politely.

52. Internet access

- a) They have internet Access
- b) Hazel internet access free.
- c) Some brings internet accessive

C2) Productive Knowledge of Grammatical Functions (20 min.)

Please make a grammatically correct sentence with the words given.

- | | |
|-------------------------|-------------------|
| 1- Height: | 27- Entertain: |
| 2- Heritage: | 28- Log in: |
| 3- Masterpiece: | 29- Prediction: |
| 4- Structure: | 30- Documentary: |
| 5- Statue: | 31- Check-in: |
| 6- Length: | 32- Security: |
| 7- Mosque: | 33- Baggage |
| 8- Historic: | 34- Username: |
| 9- Invitation: | 35- Permit: |
| 10- Graduation party: | 36- Addict: |
| 11- Farewell party: | 37- Trip: |
| 12- Soft drinks: | 38- Gate: |
| 13- Candles: | 39- Board: |
| 14- Opening party: | 40- Delay: |
| 15- Housewarming party: | 41- Station: |
| 16- Suggest: | 42- Civilization: |
| 17- Agree: | 43- Port: |
| 18- Disagree: | 44- Underground: |
| 19- Reject: | 45- Souvenir: |
| 20- Tradition: | 46- Guidebook: |
| 21- Remote control: | 47- Tower: |
| 22- Turn on: | 48- Century: |
| 23- Follow the news: | 49- Architecture: |
| 24- Internet access: | 50- Ancient: |
| 25- Satellite dish: | 51- Refuse: |
| 26- High Definition: | 52- Accept: |

APPENDIX-12. An Example of Screenshots of CourseBook

4  **1:52** Listen to the dialogue again and choose the correct option.

1. The people at the cafe are not talking because...
 - a) they are enjoying their drinks and meals.
 - b) they are checking their smartphones.
2. Eileen thinks that...
 - a) spending too much time on social media is an addiction.
 - b) taking selfies is not fun and it's a waste of time.
3. Liam's grandmother...
 - a) will buy a tablet.
 - b) has just bought a tablet.
4. To Eileen, ...
 - a) every single person will use social media sooner or later.
 - b) every single person will stop using social media in the future.
5. Eileen is sure...
 - a) people won't spend time with each other.
 - b) people will enjoy nature without their apps.
6. According to Liam, ...
 - a) we will be the citizens of one big village.
 - b) we won't have a better life with technology.



5 a. Look at the dialogue about social media. Complete the blanks in the boxes with the underlined expressions in the dialogue.

Sue : Well, I think we will be free from social media sooner or later.

Lisa : I totally agree with you. We spend too much time on it. There are better things to do.

Terry : I'm afraid I disagree with you. I think it's too late. We're all social media addicts. Anyway, how will we learn what's going on around the world without social media?

agreement

- That's so true.
- Exactly, you're right.
-

disagreement

- I don't think so.
- I'm afraid you're wrong.
-

b. Who do you agree with, Sue and Lisa or Terry?

e.g. *I agree with Sue and Lisa. Talking face to face is the best way of communication.*
I disagree with Terry. I prefer getting lost in books.

5 Work in groups of three. Prepare a similar dialogue about social media in the future as in exercise 5. Use the expressions below. Then, act it out.

LISTENING & SPEAKING

1 Match the TV programmes with their names.



A



B



C



D



E



F



G



H



I



J



K

- ☐ documentary
- ☐ news & weather
- ☐ chat show
- ☐ quiz show
- ☐ reality show
- ☐ talent show
- ☐ sports programme
- ☐ cartoon
- ☐ TV series
- ☐ cooking programme
- ☐ travel programme

2 Complete the blanks in the TV guide with the type of programmes.

Channel 1	Channel 2
4:30 p.m. The Undersea World! (.....)	4:15 p.m. Spongebob Squarepants (.....)
5:45 p.m. Quick and Unique Recipes with Eva (.....)	5:00 p.m. NBA League Matches (.....)
6:10 p.m. Three Days in Paris (.....)	5:50 p.m. Doctor Who (.....)
7:00 p.m. Tonight Current Affairs (.....)	6:20 p.m. Who Wants to be a Millionaire (.....)
7:50 p.m. Chit Chat with Larissa (.....)	7:10 p.m. Britain's Got Talent (.....)
8:20 p.m. Survivor (.....)	

3 a. Read the dialogue between Tina and Brian. They are talking about the TV programmes in exercise 2. What are they going to watch tonight?

Tina : There is my favourite TV series, *Doctor Who*, on TV tonight. Would you like to watch it?
Brian : Well, not really. I don't like it. I think it is too boring.
Tina : Too boring?? I totally disagree with you. Anyway, I will watch it on the Net later. How about watching *Who Wants to be a Millionaire*?
Brian : I really like quiz shows. What time is it on?
Tina : At 9:20. Let's watch it together.

b. Work in pairs and make a similar dialogue as in the example using the TV guide above. Then, act it out.

4 Do you like watching chat shows? Why / Why not?

Complete the sentences with the **highlighted** words / phrases in the speech bubbles.

1. Have you seen the for the TV anywhere? I can't find it.
2. The new student has a great sense of He makes wonderful jokes about TV programmes.
3. Stacey has a really nice living room with a large sofa and a big TV set.
4. I have missed the last of my favourite TV series.
5. Let's have a look at the TV guide and what's on TV tonight.
6. I think all talent shows are I never watch them.
7. It's very crowded here. I will those TV magazines to make some space on the table.
8. Turn off the TV. It's time to We've got a busy day tomorrow.



There are a lot of travel programmes on TV and I watch them every day. Whenever I get home from work, I feel too tired to go out. I immediately grab the **remote control** and turn on my favourite travel channel. I am a real armchair traveller. It's great to see the cities all over the world from my **comfy** armchair. I have just checked the TV guide. I'm going to take a gondola tour in Venice and **hit the sack** immediately. I have to get up very early tomorrow morning.



I don't have enough time to watch TV. Anyway, I think most of the programmes are rubbish. I only watch the documentaries. I don't understand the reason why people always watch reality shows. They put lots of people in a house or on an island and make us watch their **nonsense** adventures. I'm fed up with this

APPENDIX-13 Ethic Forms

Gelen Evrak Tarih ve Sayısı: 11.02.2022-267327



T.C.
GAZİANTEP VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-34659092-605.01-43158664
Konu : Araştırma İzin Talebi
(Esra ATALAN)

10.02.2022

DAĞITIM YERLERİNE

Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngilizce Eğitimi Yüksek Lisans Programı Öğrencisi Esra ATALAN'ın Dr. Öğr. Üyesi Gonca SUBAŞI'nın danışmanlığında yürüttüğü "Dokuzuncu Sınıf Öğrencilerine Kelime Öğretiminde Quizlet Uygulaması" konulu anket uygulama isteği kapsamında, İlimiz Şehitkamil İlçesinde bulunan Çakmaktepe Anadolu Lisesinde öğrenim gören 9. Sınıf öğrencilerine yönelik araştırma çalışma isteği, ilgi yazıda belirtilmektedir.

Bu kapsamda bahsi geçen anket uygulama isteğiyle ilgili Valilik Makamının 09.02.2022 tarihli ve 43106861 sayılı oluru yazımız ekinde gönderilmiş olup konunun ilçenizde bulunan ilgili Okul müdürlüğüne duyurulması ve veli onama formunun imzalı bir nüshasının okul müdürlüklerinde muhafaza edilmesi hususunda;

Bilgilerinizi ve gereğini rica ederim.

Yasin TEPE
Vali a.
İl Millî Eğitim Müdürü

EK:
Yazı ve ekleri
DAĞITIM:
Şehitkamil İlçe MEM

BİLGİ:
Anadolu Üniversitesi

Adres : Pınarlı Mah.58007 Sok. Şehitkamil Gaziantep

Bu belge güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/meh-ehys>

İmgi için: M44 Yrd. M. AR TIRYAKOĞLU şef E. YILDIRIM YHBC:

E.A.YYILDIZ

Telefon No : 0 (342) 280 27 82

E-Posta: gaziantep@meb.gov.tr

Kep Adresi : meb@tr.tic.gov.tr

Uyruş : Veli Hizmetleri ve Kontrol İşletmesi

İnternet Adresi: www.gaziantepmeb.gov.tr

Faks:3422802847

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://tr.tic.gov.tr> adresinden 52f8-468a-3cb3-8994-599a koda ile teyit edilebilir.

APPENDIX-14

Gelen Evrak Tarih ve Sayısı: 11.02.2022-267327



T.C.
GAZİANTEP VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-34659092-605.01-43106861
Konu : Araştırma İzin Talebi
(Esra ATALAN)

09/02/2022

VALİLİK MAKAMINA

İlgi: Anadolu Üniversitesi Rektörlüğünün 30.12.2021 tarihli ve 240129 sayılı yazısı.

Anadolu Üniversitesi Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngilizce Eğitimi Yüksek Lisans Programı Öğrencisi Esra ATALAN'ın Dr. Öğr. Üyesi Gonca SUBAŞ'ın danışmanlığında yürüttüğü "Dokuzuncu Sınıf Öğrencilerine Kelime Öğretiminde Quizlet Uygulaması" konulu anket uygulama isteği kapsamında, İlimiz Şehitkamil İlçesinde bulunan Çakmaktepe Anadolu Lisesinde öğrenim gören 9. Sınıf öğrencilerine yönelik araştırma çalışma isteği, ilgi yazıda belirtilmektedir.

Bu kapsamda bahsi geçen anket uygulama isteği, Bakanlığımız Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.01.2020 tarihli ve 2020/2 sayılı genelgesi kapsamında değerlendirilmiş olup; araştırmacının, araştırmasının bitiminden itibaren 15 gün içerisinde araştırma sonuçlarını 2 kopya halinde CD içerisinde Müdürlüğümüze bildirmesi şartıyla, İlimiz Şehitkamil İlçesinde bulunan Çakmaktepe Anadolu Lisesinde öğrenim gören 9. Sınıf öğrencilerine yönelik anket uygulama isteğinin, eğitim öğretimi aksatmayacak şekilde gönüllülük esasına göre uygulanması Müdürlüğümüz Ar-Ge bürosu bünyesinde oluşturulan komisyonun uygunluk raporu doğrultusunda uygun mütalaa edilmektedir.

Makamınıza da uygun görüldüğü takdirde; Olurlarınıza arz ederim.

Mehmet Metin KILIÇPARLAR
İl Millî Eğitim Müdür V.

OLUR
Nihat KARABİBER
Vali a.
Vali Yardımcısı

Adres : Pınarlı Mah.58007 Sok. Şehitkamil Gaziantep

Bu belge gıvazlı elektronik imza ile imzalanmıştır.

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/meb-ebys>
Bilgi için: Mtd Yrd. M. Ali TIRYAKIOĞLU Şef E. YILDIRIM VEHİ:
SAYYILDEZ

Telefon No : 0 (342) 280 27 82
E-Posta: gaziantep@meb.gov.tr
Kep Adresi : meb@tr01.kep.tr

Uyru: Vat. Harfata ve Kontrol İşletmesi
İnternet Adresi: www.gaziantepmeb.gov.tr Faks:3422802847

Bu evrak gıvazlı elektronik imza ile imzalanmıştır. <https://tr01.kep.tr> adresinden: d58b-de58-36e8-8c68-6fca koda ile teyit edilebilir.

APPENDIX-15

Gelen Evrak Tarih ve Sayısı: 11.02.2022-267327

Ana.Ünl.: 30.12.2021-240129



T.C.
ANADOLU ÜNİVERSİTESİ REKTÖRLÜĞÜ
Genel Sekreterlik
Yazı İşleri Müdürlüğü

Sayı : E-63784619-605.01-240129
Konu : Esra ATALAN'ın Yüksek Lisans Tezi
Uygulama İzin Talebi

30.12.2021

GAZİANTEP VALİLİĞİNE
(İl Millî Eğitim Müdürlüğü)

Üniversitemiz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngilizce Eğitimi Yüksek Lisans Programı öğrencisi Esra ATALAN, Dr. Öğr. Üyesi Gonca SUBAŞ'ın danışmanlığında "Dokuzuncu Sınıf Öğrencilerine Kelime Öğretiminde Quizlet Uygulaması" başlıklı Yüksek Lisans tezini hazırlamaktadır. Tez çalışması kapsamında 2021-2022 Öğretim yılı Güz ve Bahar döneminde İl Millî Eğitim Müdürlüğüne bağlı Çakmaktepe Anadolu Lisesinde öğrenim gören 9. sınıf öğrencileriyle araştırmanın uygulanması planlanmaktadır. Araştırmanın uygulanmasında Üniversitemiz Etik Kurulunca sakınca bulunmamaktadır.

Bilgilerinizi ve gerekli iznin verilmesini arz ederim.

Prof. Dr. Süleyman SÖZEN
Rektör a.
Rektör Yardımcısı

Ek:Yüksek Lisans Tez Önerisi

Bu belge, güvenli elektronik imza ile imzalanmıştır.

Belge Doğrulama Kodu : BSA66D1N1H
Yazın Enine Kampüsü Tepebaşı/Elazığ
Telefon No:+90 222 335 05 80/332-1333 Faks No :+90 222 335 36 16
e-Posta: genclik@anadolu.edu.tr İnternet Adresi: www.anadolu.edu.tr
Kep Adresi: anadolu.universitesi@trbtl.kap.tr

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/anadolu-universitesi-ehes>

04 Ocak 2022

Belge İmza : Ayşe İBRAHİM
Bana Peteneli
Telefon No: 1352-0318



Bu belge, güvenli elektronik imza ile imzalanmıştır.

Strateji

APPENDIX-16

Evrak Kayıt Tarihi: 15.11.2021

Protokol No: Z15279

Tarih: 30.11.2021



ANADOLU ÜNİVERSİTESİ
SOSYAL VE BEŞERİ BİLİMLER BİLİMSEL ARAŞTIRMA VE YAYIN ETİĞİ KURULU
KARAR BELGESİ

ÇALIŞMANIN TÜRÜ:	Yüksek Lisans Tez Çalışması
KONU:	Eğitim Bilimleri
BAŞLIK:	The Use of Quietet in Teaching Vocabulary to 9th Grade Students
PROJE/TEZ YÜRÜTÜCÜSÜ:	Dr. Öğr. Üyesi Gonca SUBAŞI
TEZ YAZARI:	Esra ATALAN
ALT KOMİSYON GÖRÜŞÜ:	-
KARAR:	Oylu

CURRICULUM VITAE

Name Surname: Esra ATALAN

Foreign Language: English

Education and Work Experience:

- 2021-Still, English Teacher, Çakmaktepe High School
- 2019-2020, English Teacher, Bilfen Schools
- 2018-2019, University of Arizona, School of Middle Eastern & North African Studies
- 2013-2018, Gazi University, Gazi Eğitim Faculty of Education, English Language Education

Association Membership:

- 2019, Fulbright, Ankara