



R.T.

UFUK UNIVERSITY

GRADUATE SCHOOL OF SOCIAL SCIENCES

DEPARTMENT OF FOREIGN LANGUAGE TEACHING

ENGLISH LANGUAGE TEACHING PROGRAMME

**THE IMPACT OF MNEMONICS ON ENGLISH VOCABULARY  
ACQUISITION AND RETENTION**

MASTER'S THESIS

ALPER SINGIN

SUPERVISOR

ASSIST. PROF. DR. NESLİHAN ÖZKAN

ANKARA

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## BİLDİRİM

Hazırladığım tezin tamamen kendi çalışmam olduğunu ve her alıntıya kaynak gösterdiğimi taahhüt eder, tezimin kağıt ve elektronik kopyalarının Ufuk Üniversitesi Sosyal Bilimler Enstitüsü arşivlerinde aşağıda belirttiğim koşullarda saklanmasına izin verdiğimi onaylarım:

- Tezimin tamamı her yerden erişime açılabilir.

13.02.2025

Alper SINGIN

## DEDICATION

*To my beloved wife Nafiye, whose unwavering support has  
been instrumental in my endeavors and to my beautiful  
daughter Gün, whose presence continually inspires and  
motivates me.*

## ACKNOWLEDGEMENTS

I wish to extend my heartfelt gratitude to my supervisor, Assist. Prof. Dr. Neslihan ÖZKAN, for her expert guidance and invaluable support throughout the course of this research. Her profound knowledge, insightful feedback, and unwavering encouragement during challenging moments have been pivotal to the successful completion of this thesis.

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Finally, I owe immense gratitude to my family for their unwavering support and constant encouragement throughout my academic journey. Your faith in my abilities and your countless sacrifices have been a source of strength, and I am profoundly thankful for everything you have done for me.

## ÖZ

SINGİN, Alper. Anımsatıcıların İngilizce Kelime Edinimi ve Kalıcılığı Üzerindeki Etkisi, Yüksek Lisans Tezi, Ankara, 2025.

Bu tezin ana amacı, anahtar kelime tekniğini kullanarak anımsatıcıların İngilizce kelime öğrenimi ve hatırlama üzerindeki etkisini incelemektir. Anımsatıcı, özellikle hafızayı geliştirmek için tasarlanmış bir öğretim veya öğrenme tekniğidir. En etkili anımsatıcı tekniklerden biri anahtar kelime yöntemidir. İngilizce kelime öğreniminde anımsatıcıların rolü üzerine mevcut araştırmaların kapsamlı bir şekilde incelenmesiyle, bu çalışma, anımsatıcı tekniğinin İngilizce öğrenenler arasında kelime öğrenimini güçlendirme konusundaki etkinliğini incelemektedir. Türkiye'de Hacettepe Üniversitesi Yabancı Diller Yüksekokulu Temel İngilizce Bölümü'nden bir grup öğrenci deneye katılmak üzere seçilmiştir. Deneyde öğrenciler deney (anımsatıcı) ve kontrol (geleneksel) olmak üzere iki gruba ayrılmıştır. Deney grubundaki öğrencilere, araştırmacı tarafından tasarlanmış bir dizi önceden özel olarak seçilmiş 60 kelime için belirlenmiş anahtar kelime çağrışımları 6 hafta boyunca gösterilirken, kontrol grubu sınıf ortamında alışlageldiği şekilde geleneksel kelime eğitimi almıştır. Anımsatıcı anahtar kelime tekniğinin kelime hatırlama üzerindeki etkisini kontrol etmek amacıyla hem ön test hem de son test için "Receptive Vocabulary Size" için Kelime Seviyeleri Testi kullanılmıştır. Verilerin analizi, anımsatıcı çağrışımlar kullanan deney grubundaki öğrencilerin kontrol grubuna göre kayda değer derecede daha iyi performans sergilediğini göstermiştir. Yani, anımsatıcı yöntem, özellikle alıcı kelime dağarcığı boyutu açısından, öğrencilerin kelime hatırlama becerileri üzerinde belirgin bir etkiye sahip olmuştur.

**Anahtar Sözcükler:** Kelime Bilgisi, Anımsatıcılar, İngilizce Kelime Öğrenimi, Anahtar Kelime Yöntemi, Hatırlama

## ABSTRACT

SINGIN, Alper. The Impact of Mnemonics on English Vocabulary Acquisition and Retention, Master's Thesis, Ankara, 2025.

The main purpose of this thesis is to explore the impact of mnemonics on English language vocabulary acquisition and retention using the keyword technique. A mnemonic is an instructional or learning technique specifically created to improve memory. One of the most effective mnemonic techniques is the keyword method. Through an extensive review of existing research on the role of mnemonics in English language vocabulary learning, this study examines the effectiveness of mnemonics technique as a means of strengthening vocabulary acquisition among English language learners. A group of students from Basic English Department at Hacettepe University School of Foreign Languages in Turkey were chosen to participate in the experiment. In the experiment, the students were divided into two groups of experimental (mnemonic) and control (rote). Using a number of predesigned associations as models, keyword associations for specifically chosen 60 words were administered to the students in the experimental group for 6 weeks while the control group received traditional vocabulary training as they were usually used to receive in the classroom setting. "Vocabulary Levels Test for Receptive Vocabulary Size" was used for both pre-test and post-test in order to check the effect of the mnemonic keyword technique on vocabulary retention. The analysis of the data showed that students in the experimental group, who used mnemonic associations, performed significantly better than those in the control group (rote group). In fact, the mnemonic method had a notable impact on the students' ability to recall vocabulary, particularly in terms of receptive vocabulary size.

**Keywords:** Vocabulary, Mnemonics, English Vocabulary Acquisition, Keyword method, Retention



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## LIST OF ABBREVIATIONS

<b>AR</b>	: Augmented Reality
<b>EFL</b>	: English as a Foreign Language
<b>ESL</b>	: English as a Second Language
<b>HTML</b>	: Hypertext Markup Language
<b>L1</b>	: First Language / Native Language / Mother Tongue
<b>L2</b>	: Second Language
<b>SD</b>	: Standard Deviation
<b>SLA</b>	: Second Language Acquisition
<b>SPSS</b>	: Statistical Package for the Social Sciences
<b>VL</b>	: Vocabulary Levels Test
<b>VR</b>	: Virtual Reality

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## INTRODUCTION

This thesis explores the effects of mnemonics on English vocabulary learning and retention. The introduction establishes the study's background by emphasizing the significance of vocabulary in language acquisition and the ability of mnemonics, specifically the keyword technique, to boost retention when compared to standard rote learning. The section also discusses the importance of the research, emphasizing its contributions to both academic literature and practical pedagogical practices for language instruction. Following that, the research questions that will guide the study are provided, with an emphasis on the comparative performance of learners employing mnemonic tactics vs those using traditional approaches. It describes the research challenge, goal, and importance while emphasizing the study's contributions to teaching methods and academic literature. The efficiency of mnemonic tactics in comparison to traditional approaches is the subject of key research topics. The section also recognizes research limitations and gives explanations of key terms to help the reader.

### Background to the Study

Throughout history, vocabulary has been the most important element in English language learning. Since vocabulary can be considered as the backbone of language learning, various kinds of ways and methods have been found and applied in order to bolster and enhance vocabulary learning and word retention. Considering that lexical chunks can be thought of as major element in learning a language as stated by the founder of the lexical approach Michael Lewis (Lewis, 1993), vocabulary can be the vital component of language learning. Seasoned educators in the field of English as a second language understand the critical role that vocabulary plays. Laufer (1997) emphasizes that mastering vocabulary is central to both acquiring and using any language. In a metaphor, Zhan-Xiang (2004) compares words in a language to the bricks in a towering building; though small, they are essential to the overall structure.

Furthermore, learning new vocabulary is known to be the primary concern when it comes to especially second language acquisition. Since the beginning of the second half of the 20th century, researchers as well as educators have been deeply interested in vocabulary learning and word retention, which urged them to find multiple ways to improve memory in regard to word retention. Specifically, there are some different approaches through

which researchers test their subjects, such as getting them to create their own, personalized keyword types so as to enhance their word retention.

Increasing evidence suggests that mnemonics can enhance the acquisition and retention of vocabulary in a second language, and they are commonly employed by L2 teachers. However, further empirical research is needed to fully establish their effectiveness in this context (Aydoğdu, 2023).

Atkinson (1975) describes mnemonics as cognitive tools that assist in recalling various types of information, such as new words, names, historical dates, numbers, formulas, and other rules and lists. The techniques often involve restructuring or simplifying the components of the target item, making them more familiar, shorter, or easier to remember.

In conclusion, while there are numerous review articles and scientific papers on the role of mnemonics in vocabulary retention, further research is still needed to expand this important area of study.

#### Statement of the Research Problem

Learning vocabulary is essential for mastering any foreign language. In previous decades, vocabulary learning was frequently eclipsed by other parts of language training, such as grammar and pronunciation. However, as the role of vocabulary in communication has grown, language educators and academics have recognized that learning a language is basically about knowing its words. Modern research has changed its focus to the critical function of vocabulary in language acquisition, moving beyond the conventional emphasis on grammar. According to Alqahtani (2015), vocabulary size has a clear correlation with language ability and is crucial for reading, writing, and successful communication. Without suitable vocabulary, learners have substantial challenges in expressing themselves clearly and effectively in the target language. The breadth of a learner's vocabulary is frequently seen as a major indicator of their overall language skill, as it allows for more nuanced and expressive communication. Restricted vocabulary, on the other hand, inhibits the capacity to participate completely in discussions, grasp texts, and respond to various linguistic contexts.

Teaching methods and classroom practices have developed over time in foreign language education, but there is a greater emphasis on the students and their unique approaches to language learning. By the mid-twentieth century, researchers began to doubt whether any



one approach or instructional material could ensure excellent language acquisition results. This shift in focus demonstrated that, although some students thrived regardless of the educational methods utilized, others suffered even when subjected to the same teaching tactics. This discrepancy sparked interest in the study of learning techniques, particularly language development.

Research on language learning strategies, particularly vocabulary retention, has highlighted the need of providing learners with tools and procedures to improve their word knowledge. While vocabulary was previously thought to be less important than the four fundamental language abilities (listening, speaking, reading, and writing), current research shows that it plays an important role in establishing total language competency. Given the importance of vocabulary in language usage, it is critical to focus on tactics that can assist learners acquire and retain new words over time. Vocabulary is commonly recognized as an essential component of language learning. According to Schmitt and McCarthy (1997), the breadth of a learner's vocabulary is highly related to their overall language skill, impacting their capacity to comprehend and communicate successfully. Vocabulary is a solid indicator of ability since it allows for sophisticated knowledge and engagement across a variety of language situations.

As an English teacher with over a decade of experience, I have seen personally how creative teaching approaches can revolutionize language acquisition. Teaching via literature and games is a technique that I have always found to be beneficial. Learners who engage with games, tales, poetry, and novels not only improve their language abilities but also immerse themselves in the cultural intricacies of the language. They acquire a feeling of creativity by linking new language with certain settings and events, and they frequently mimic what they read to create original phrases and scenarios. This dynamic and participatory technique improves both language memory and critical thinking abilities.

Despite these advantages, I have seen tremendous resistance among educators to integrate literary works into their instruction. Many people skip such things because they cannot find enough time or are under pressure to complete complex courses. Furthermore, students sometimes struggle with motivation and interest while dealing with literary works. These issues, although genuine, point to a larger issue: the need for teaching

practices that achieve a balance between engagement, efficiency, and long-term language retention.

In my years of teaching, I have discovered that, while classic rote memorization approaches might provide short-term benefits, they seldom promote long-term vocabulary retention. Conversely, mnemonic tactics, notably the keyword method, show great promise in closing this gap. Mnemonics enable students to form mental connections that make words simpler to recall over time, providing a creative and effective alternative to rote learning. This is consistent with the interactive benefits I have seen in literature-based instruction, when students correlate language with memorable situations and storylines.

However, there is still a lack of information about how mnemonic approaches, such as the keyword method, affect vocabulary learning and retention. While research supports their usefulness, practical application in real-world classroom settings, particularly for English language learners, has yet to be adequately explored. This study intends to fill this gap by looking into how mnemonic methods, as opposed to typical rote learning, affect the acquisition and retention of English vocabulary over time.

Finally, as a passionate educator, I am dedicated to researching and pushing for approaches that not only captivate students but also enable them to successfully retain and use their language abilities. By investigating the impact of mnemonics and the keyword technique, this study hopes to contribute to a more engaging, efficient, and culturally enriching approach to English language instruction.

Memory aids, such as mnemonic strategies, have emerged as an effective tool for vocabulary learning. Mnemonics assist learners in connecting new words to past information, generally through visual or auditory associations, which aids memory retention. These tactics encourage students to take an active part in their own learning, fostering independence and long-term language development. Understanding how mnemonic methods influence vocabulary acquisition, particularly in the context of foreign language learning, is critical for establishing successful teaching practices that cater to the requirements of various students.

In this context, investigating the efficacy of mnemonic approaches such as the keyword method, which promotes deeper cognitive processing of vocabulary, might provide

valuable insights into how learners can improve their language abilities. By using memory methods, students can enhance their ability to retain vocabulary and, as a result, their overall language competency.

### Purpose of the Study

This study aims to examine the impact of mnemonics on the learning and retention of foreign language vocabulary, focusing particularly on the keyword technique, which is considered one of the most effective mnemonic strategies, especially within a university classroom environment. Also, the purpose of this research is to add to the existing research and offer new perspectives that can lead to better scientific insights and applications.

What is more, the specific goal of this study is to look at the influence of mnemonic techniques, especially the keyword approach, on English vocabulary acquisition and retention among language learners. The study, which focuses on a group of Basic English students at Hacettepe University in Turkey, seeks to determine how mnemonic connections impact their capacity to acquire and retain new language when compared to traditional approaches such as rote memorization. The study investigates whether students taught using the keyword strategy, which involves connections with recognizable words or images, do better in vocabulary retention than those taught using traditional classroom techniques. The experiment aims to give empirical evidence for the usefulness of mnemonics in increasing learners' receptive vocabulary size in a foreign language situation.

### Significance of the Study

The research paper is important because it adds to the expanding corpus of research on mnemonic methods, particularly in the context of English language acquisition. While several studies examined mnemonics, this particular research stands out because it employs the keyword approach without the students' L1, Turkish, for instructional delivery. This distinction is critical for understanding how mnemonic approaches work in a completely immersive second language context. Furthermore, the study sheds light on how mnemonics might assist vocabulary acquisition and retention, addressing a major difficulty in second language learning: the ability to memorize and remember huge quantities of new material. By emphasizing the advantages of mnemonic techniques over

standard methods, the study has practical implications for educators and academics seeking creative ways to help learners increase their vocabulary memory and linguistic skills.

### Research Questions

The main purpose of this research is to investigate the effects of mnemonics, especially the keyword technique, on English vocabulary learning and retention among learners. The study will provide insight into how mnemonic tactics might be effectively integrated into language training, as well as the possible problems and advantages of using them. This study compares the results of mnemonic-based learning to typical rote memorization approaches in order to gain insight into their relative usefulness in promoting long-term vocabulary retention.

This study also addresses practical implications for language instructors, attempting to emphasize the unique challenges educators may experience when employing mnemonic methods in classroom settings. Understanding these obstacles is crucial for encouraging the use of mnemonics as an interesting and effective teaching. To accomplish these objectives, the following research questions were developed and tested with two groups of volunteers throughout a six-week period.

1. Is there a difference in receptive vocabulary size between the control group and the experimental group in the pre-test?
2. Is there a difference in receptive vocabulary size between the control group and the experimental group in the post-test?

By answering these questions, this study aims to contribute to a more effective and learner-centered approach to English vocabulary learning and retention. In the context of the research questions given, the study also aims to highlight the difference between learners who acquire specific English vocabulary using mnemonic techniques and those who learn through traditional methods. After the scientific application, and the implementation of the scientific treatment, it is expected that the group learning English words through mnemonic techniques will perform better in terms of vocabulary retention compared to the group using traditional methods.

### Limitations of the Study

Despite its contributions, this study has a few limitations that should be addressed. First, the sample size was tiny, with only 45 people split into two groups. Although the results are statistically significant, the limited sample size restricts the findings' applicability to broader groups. As stated by Davoudi and Yousefi (2016), small sample sizes might restrict the generalizability of results. The study on mnemonic methods included 50 primary school children, which was regarded as a limited sample size. Similarly, the current study's findings should be regarded with care due to the limited number of participants. Future research should replicate the study with bigger and more varied populations. Future research should aim to replicate this study with larger and more distinct groups in order to determine the reliability of the findings. In addition, another notable limitation of this study is that the analysis was based on mean scores rather than individual results. While mean scores offer an overall picture of group performance, they may mask individual differences and outliers that might provide more information about the impact of mnemonic methods. Individual scores, for example, may have shown how specific learners responded to the mnemonic treatments, as well as whether certain participants benefitted more or less depending on criteria such as learning style, cognitive capacity, and motivation. By focusing simply on mean scores, this study may have overlooked minor trends or patterns in the data, thereby limiting the depth of its findings. Future research might solve this issue by examining individual-level data to acquire a more detailed picture of the effectiveness of mnemonic methods.

Secondly, the study only included intermediate-level students at a Turkish institution. This restricted emphasis restricts the findings' application to learners with diverse skill levels or educational environments. For example, beginner-level learners may find mnemonic tactics daunting, but advanced learners may not gain as much owing to their broad vocabulary knowledge. As stated by Lessard-Clouston (2022), research with homogeneous participant groups may lack the variety required to generalize findings to larger populations.

The study's participants were confined to intermediate ESL learners from comparable cultural and linguistic backgrounds, emphasizing the need for future studies to involve a more varied group of learners. Similarly, this study concentrated on intermediate-level

students in a Turkish institution, which limits the application of the findings to learners with different skill levels or from other educational environments.

Third, the study looked at the immediate effect of mnemonic methods on vocabulary retention over a six-week period. Long-term retention, which is necessary for language learning, was not evaluated. It is uncertain whether the benefits of mnemonic methods last for months or years without continuous reinforcement.

Last but not least, the study neglected to look at individual differences in learners' reactions to mnemonic methods. Cognitive style, experience with mnemonic methods, and personal motivation all have the potential to affect intervention success. Future studies should examine how these characteristics influence the link between mnemonic usage and learning results.

### Definitions of Key Terms

There are some key terms which recur throughout this study. The definitions of the terms provide clarity and specificity for understanding the concepts central to this study on the impact of mnemonics on English vocabulary acquisition and retention.

*Keyword Method:* Levin (1981) describes the keyword method as a mnemonic strategy where learners associate a new vocabulary word with a familiar keyword that sounds similar, creating a mental image that connects the two. For instance, linking the French word *pain* (bread) with the English word “pain” through a visual of bread causing discomfort.

*Vocabulary Retention:* Schmitt and McCarthy (1997) define vocabulary retention as the learner's ability to recall and use acquired vocabulary over an extended period, emphasizing its importance in language acquisition and communication.

*Receptive Vocabulary Size:* Webb, Sasao, and Ballance (2017) describe receptive vocabulary size as the total number of words a learner can recognize and understand in context, typically assessed through standardized vocabulary tests.

*Acquisition:* Krashen (1982) explains acquisition as the subconscious process of developing language skills through meaningful exposure and interaction, distinct from explicit learning.

# **CHAPTER 1**

## **LITERATURE REVIEW**

### **1.1. Overview**

This chapter mainly focuses on the available evidence on mnemonics and their effects on English vocabulary learning and retention. It conducts a comprehensive evaluation of existing studies in the subject, categorizing them based on research topics and issues. The ideas and approaches produced thus far are thoroughly reviewed to build the theoretical framework and find gaps in the literature. To conduct a thorough study, databases such as ERIC, JStor, Google Scholar, Research Gate, and others were utilized to investigate major results in the field while setting the way for the current study by identifying areas that require more investigation.

### **1.2. Mnemonics and Its Impact on Vocabulary Acquisition and Retention in Second Language (L2)**

Mnemonics are memory aids or strategies that help people remember new knowledge by linking it with something they already know. They can take many different forms, including acronyms, visual images, rhymes, and even narratives. Mnemonics are successful because they may translate abstract or complicated knowledge into something more tangible, remembered, and retrievable.

Originally introduced by Simonides around 500 B.C.E., mnemonics resurfaced in contemporary times as part of the broader shift away from behaviorism. This resurgence was particularly a response against the continued dominance of verbal emphasis within the Ebbinghaus tradition, even in its mediational interpretations. Merriam Webster's dictionary (2004) explains that the word mnemonic comes from the ancient Greek word "mnemonikos," which stems from "mnemon," meaning "mindful." This term is also associated with Mnemosyne, Zeus' mother of the Muses and the Greek goddess of memory.

What is more, Solso (1995) describes mnemonics as techniques, either verbal or visual, such as rhymes or images, that aid in the retention and retrieval of information from memory. These strategies are particularly valuable in language learning, especially

for vocabulary acquisition, as they provide a highly effective method for remembering new information or linking it to existing knowledge in long-term memory. Pillai (2017)

On the other hand, it could be stated that the impact of mnemonics on vocabulary acquisition and word retention is crucial and undeniable. Mnemonics techniques have a profound effect on improving skills to ensure word retention. Research studies have consistently demonstrated that mnemonics can improve vocabulary retention in Second Language (L2) learners. Mental aids reduce the cognitive load associated with memorizing large amounts of vocabulary by providing learners with a mechanism for successfully encoding current terms. This allows students to focus not just on memorization, but also on the practical application of current terms while speaking, reading, listening, and writing.

Furthermore, mnemonics techniques adapt to a variety of learning styles. Visual learners, for example, may benefit from creating mental images or pairing words with specific visual cues. Sound-related learners may prefer rhymes or connections depending on the sound of the word. By including mental aids into vocabulary training, instructors may provide students with tailored tools that correspond to their individual cognitive preferences.

While establishing a current vocabulary is critical, upkeep is as important. Mental aids serve an important role in ensuring that previously learnt words are not quickly forgotten. The tedious nature of mental assistance methods, such as verifying mental images or rehearsing acronyms, strengthens brain connections. This strengthens the learner's ability to study the language. One of the primary advantages of mnemonics is their ability to promote distributed redundancy, a proven method for improving long-term maintenance. When students return to their mental aide connections at regular intervals, they strengthen their recall and deepen their knowledge of the language. This method is especially effective in Second Language (L2) learning, since the sheer number of useless words can dominate memory to gain importance to learning words.

### **1.3. Keyword Method**

The keyword method is a mnemonic strategy used to help people memorize words, particularly in language acquisition. This strategy is connecting the word to be learnt (often in a foreign language) with a familiar word or phrase (the "keyword") that



sounds similar or is otherwise simple to recall. The learner then envisions a mental image that connects the meaning of the new word to the word. For example, a keyword connection can be related to the pronunciation of that word, which can be called as auditory link. The French word "pain" (pronounced "pah(n)") is the one you wish to learn. In this situation, the English word "pain" (as in discomfort) sounds similar to the French word "pain." Consider a loaf of bread that is causing discomfort, maybe because it is too difficult to bite into. The idea of feeling "pain" after eating bread will remind you that the French word "pain" implies "bread." This link helps the learner retain the word much more easily. On the other hand, the keyword connection can be related to a part of the word which the learner should memorize. In addition, different studies mention the keyword technique in their research papers.

What is more, the keyword method is a popular mnemonic strategy for learning vocabulary terms. It simplifies unfamiliar material, making it more relevant and memorable (Susana, 2017). The key word strategy, which uses both aural and visual imagery, is highly successful for teaching vocabulary. This strategy combines auditory and visual linkages to strengthen the connection between new words and current schemata, facilitating their retention. (Oxford, Crookall, 1990, pp: 18-19). The key word strategy encompasses both auditory and visual imagery. Research suggests that the key word strategy is commonly used in experimental language education settings (Levin, 1981; Oxford & Crookall, 1989).

To summarize, the keyword method is a powerful mnemonic tool for increasing vocabulary acquisition by making unknown content more relevant and remembered. This method uses both audio and visual images to establish strong associations between new words and prior information, hence enhancing memory. Research shows that it is widely used in experimental language education settings, with a focus on its effectiveness in promoting vocabulary acquisition.

#### **1.4. Review of the Related Studies on Mnemonics**

English is an important worldwide language that facilitates communication between individuals from many cultures throughout the world. Its broad use emphasizes the significance of excellent language instruction, as English is frequently taught in schools, institutions, and language centers across the world. Despite the availability of many instructional techniques and methodologies, many learners continue to struggle,

particularly with verbal communication, due to a lack of vocabulary knowledge. Furthermore, vocabulary is an essential component of language acquisition that has a direct impact on your ability to speak clearly and effectively. Learners frequently fail to recollect relevant words during talks, limiting their capacity to express themselves and engage in meaningful communication. This challenge emphasizes the importance of using effective approaches and ideas to assist students grow their vocabulary and enhance their communication abilities. (Bahrami et al., 2019).

Wei (2014) compared the effectiveness of the word part technique, keyword method, and self-strategy learning for vocabulary retention. Surprisingly, self-strategy learning outperformed the other methods in multiple-choice tests, while the word part approach slightly edged out self-strategy in translation tests. The keyword method lagged behind in both areas, particularly in translation. The study underscores the importance of concrete terms in memory retention and suggests that linguistic differences might hinder the effectiveness of keyword strategies. Overall, the research highlights the need for flexible learning techniques tailored to learner profiles and content types.

Anjomafrouz and Tajalli (2012) investigated how mnemonic associations influence vocabulary recall in Iranian EFL students. Their classroom research demonstrated the strong effectiveness of mnemonic connections, particularly for adult students who outperformed control groups. Early associations significantly improved vocabulary recall, suggesting that mnemonic strategies are valuable learning tools across various age groups.

Susana (2017) focused on the mnemonic keyword strategy to help university students enhance their vocabulary proficiency. The study found that students with memory difficulties and low confidence in English showed significant improvement after using this strategy, which linked unfamiliar words to familiar ones through visual or associative clues. The research highlighted the effectiveness of incorporating keywords and visual aids in vocabulary learning, leading to improved student outcomes and changes in teaching methods.

Wang et al. (1992) investigated the retention of second language vocabulary using keyword mnemonics, considering both immediate and delayed retention intervals. While the keyword strategy initially boosted performance, its long-term effectiveness did not match early gains. The study suggests that the keyword technique may lead to

differential inflation in forgetting rates, raising questions about its long-term retention benefits and indicating the need for further research on the disparity between short-term and long-term effects.

Kayaaltı (2018) compared mnemonic techniques and rote memorization for vocabulary learning among EFL learners and teachers. The study found that mnemonic learning had a significant advantage in both short-term and long-term retention of unknown words compared to rote learning. Although both strategies were effective immediately after training, the mnemonic approach showed a substantial benefit in long-term retention, as revealed in a surprise test.

Thảo (2022) examined the effectiveness of mnemonic techniques for vocabulary learning among EFL students. The study identified various mnemonic approaches, such as spatial grouping, keyword method, rhyming, narrative, and acronyms, as valuable tools for vocabulary memorization and retrieval. The research advocates for the adoption of these strategies in educational settings to enhance the vocabulary learning experience for adult EFL students.

Tavakoli and Gerami (2013) studied the impact of nonverbal mnemonic methods, specifically the keyword and pictorial techniques, on vocabulary learning and retention among adult EFL students. The study found that the keyword method outperformed both graphical and verbal translation methods, particularly in long-term retention. Despite the visual method's memory-enhancing potential, it did not surpass the control group's verbal translation approach, highlighting an interesting contrast in effectiveness.

Jamalipour and Khomeijani Farahani (2015) explored the impact of mnemonic vocabulary teaching, particularly the keyword mnemonic strategy, on content vocabulary acquisition in EFL classes. The study revealed that students who received mnemonic training showed significant improvement in content vocabulary learning and expressed satisfaction with the strategy. The research underscores the broader benefits of mnemonic vocabulary learning, including increased student engagement and motivation.

Bahrami et al. (2019) investigated the use of musical mnemonics to enhance vocabulary recall and long-term retention in young learners. The study emphasized the positive impact of music as a mnemonic tool, suggesting that its enjoyable qualities, such

as melody and rhythm, can significantly aid memory and retention. The findings support the integration of musical mnemonic methods into language learning curricula to improve vocabulary acquisition.

Wyra et al. (2007) examined the influence of specific aspects of the keyword technique on foreign language vocabulary learning, focusing on explicit retrieval training and students' visualization abilities. The study found that explicit training in the keyword strategy significantly improved recall performance, and visualization skills, though having a smaller effect, also contributed to memory enhancement. The research suggests that future language learning strategies should incorporate these elements to refine the effectiveness of the keyword method.

Benge and Robbins (2009) supported the effectiveness of the keyword mnemonic method in improving vocabulary retention, noting a significant increase in retention rates after a brief review session. However, the study acknowledged the time-consuming nature of the method and suggested alternatives like SAT vocabulary cartoons to reduce preparation time. The findings highlight the method's applicability for students with lower English proficiency while addressing the challenges of incorporating mnemonic strategies within time constraints.

Farrokh et al. (2021) examined the impact of visual mnemonic strategies on vocabulary learning among young and adult Iranian English learners. The study found that visual mnemonics significantly enhanced vocabulary learning, with experimental groups outperforming control groups in post-tests. While the effectiveness of these strategies did not differ significantly between age groups, the research highlights the value of visual aids in improving word recall for learners of all ages.

## **CHAPTER 2**

### **METHODOLOGY**

#### **2.1. Overview**

This chapter discusses the comprehensive methodological approach used in the present study. It begins by giving the study plan, which serves as the framework for the subsequent inquiry. The next sections discuss research design, participants, and data collecting methods. Furthermore, the chapter describes the techniques used during data collecting and closes with a detailed overview of the methodologies used for data analysis. Then, the data analysis processes are presented in depth.

#### **2.2. Research Design**

This study employs a quantitative research methodology to assess the effectiveness of mnemonic methods, especially the keyword approach, for English vocabulary learning and retention. Quantitative research is ideal for investigating measurable outcomes since it provides a formal framework for evaluating the efficacy of specific treatments. Moreover, this study utilizes quasi-experimental research, which is an empirical study that attempts to evaluate the causal influence of an intervention. This quasi-experimental design is similar to experiments and randomized controlled trials, yet it does not assign participants to treatment or control groups at random.

The study employs experimental design, with participants divided into two groups: an experimental group that received mnemonic-based training, and a control group that used typical rote learning methods. This approach allows for a comparison study of the two teaching styles, guaranteeing that any changes found may be attributable to the intervention. Choosing a controlled experimental environment improves the study's internal validity by reducing any confounding variables.

The study carefully evaluates the immediate impact of mnemonic strategies on vocabulary retention, using pre- and post-tests to quantify receptive vocabulary size. This methodology not only offers empirical proof of the usefulness of mnemonic methods, but it also lays the groundwork for future research into long-term memory and other uses in language instruction.

### **2.3. Participants**

Forty-six - both male and female - students of Hacettepe University School of Foreign Languages from two intact language classes in Ankara, Türkiye participated in this study. The participants' average age was over 18, which was kept constant to eliminate the age impact. Moreover, based on the standard placement system of the school, both classes had already been assigned as "Intermediate Level", which categorized both classes into the same level, having ensured the reliability of the study. The students' native language was Turkish, and they were learning English as a second language. To begin with, the class with twenty-three students was selected as the experimental group (mnemonic). Another class with twenty-three students was selected as the control group (rote). Furthermore, the participants for both groups were instructed to use same English textbook, which also eliminated any impact that may negatively affect the procedure and the result of the study. They were instructed and educated by two different teachers with a similar level of teaching experience and objectivity.

### **2.4. Data Collection Instruments**

To begin with, in order to test the vocabulary knowledge of the participants during the experiment, "Vocabulary Levels Test for Receptive Vocabulary Size" was utilized. Many tests assess foreign language learners' vocabulary knowledge, with a focus on the receptive component. Certain tests require participants to select appropriate terms from a list based on offered definitions. The Vocabulary Levels Tests (VLT) by Nation (1983) and Schmitt, Schmitt, & Clapham (2001) are widely regarded, with an updated version by Webb, Sasao, and Ballance (2017) (Alagözlü & Kiymazarslan, 2020).

What is more, the test which was administered as pre-test and post-test during the experiment was a modified format of an updated version of the Vocabulary Levels Tests by Webb, Sasao, and Ballance (2017). Specifically, in order to make the tests suitable and applicable for this particular study, a different chart format was created to test the effect of mnemonics keyword method on vocabulary acquisition and retention in regard to receptive vocabulary size, and the participants were asked to choose the correct definitions for the given words as can be found in Appendix-C and Appendix-D. Moreover, the words were adapted from the student's book Oxford English File, which the students had already been using as the coursebook during the lessons given at the school. The prepared test included words randomly taken from the Units 2, 3, 4, 5, 6, 7,

and 8 in the aforementioned coursebook. The same test was used as both pre-test and post-test so as to keep the content and level intact and stable. In other words, the pre-tests and post-tests were kept similar to ensure true comprehension of the target words during the experiment.

## **2.5. Data Collection Procedure**

This quasi-experimental research was carried out over a six-week period during usual class hours. Subjects were divided into two groups: experimental (mnemonic) and control (rote). In the first week, 45 participants for both groups were asked to take the pre-test, and they were instructed step-by-step about how to take the pre-test which took around 40 minutes during a normal class hour on the first day of the first week of the experiment. It took place in the same classroom where the participants normally took their studies. The exam was conducted in the presence of both the researcher and the class teacher. 22 of the students were in the control group, and 23 of them were in the experimental group.

The pre-test included the vocabulary words taken from certain units found in their English coursebook, and the test consisted of 60 questions, and each of them has 1 point, meaning that the overall score is 60 points. The main aim of the pre-test was to test the participants' initial vocabulary knowledge for different groups in terms of receptive vocabulary size at the beginning of the first week of the study. During the pre-test, the participants were instructed to put a check under the word that goes with each meaning given on the left column found on the page of the test. After the pre-test was administered, it was immediately collected to prevent participants from referring to the terms again.

Starting from the first week, the treatment was administered for six weeks. Specifically, in order to apply the treatment, specially prepared notes and a list of keyword associations given for each word which were taken from the coursebook were administered on the experimental (mnemonic) group. This treatment continued to be applied during a six-week period.

Indeed, the prepared notes consisted of mnemonic associations which include memory aids and keywords to help the reader remember the meaning of the given word. Those keywords and memory aids were both in English language and the participants' native language (Turkish). As seen from Figure 1, there were 10 target words and

mnemonics that were referred to each week, which means there were 60 words in total for six weeks. These notes were produced and modified in Microsoft Visual Studio Code as HTML files, and they were saved in a flash disk to make the accessibility easier and faster. In fact, 10 words and their mnemonic associations were administered to the experimental (mnemonic) group as a treatment for each week while the control (rote) group received no mnemonics as a treatment, instead receiving the same chosen words in a traditional instruction during normal lessons. In this case, any factor that might have negatively affected the reliability of the study was eliminated.

As for the application process of the treatment, the teacher (instructor) simply projected the keyword association notes as HTML files on the whiteboard by using a projector and read aloud the words and their keyword mnemonic associations shown in Figure 1, and she instructed the participants to take notes when necessary. For example, to help remember the word “afford”, the keyword mnemonic instruction such as “when you buy a FORD car, then you can affORD it” was provided during the treatment process. Another example for keyword method administered to experimental group is as follows:

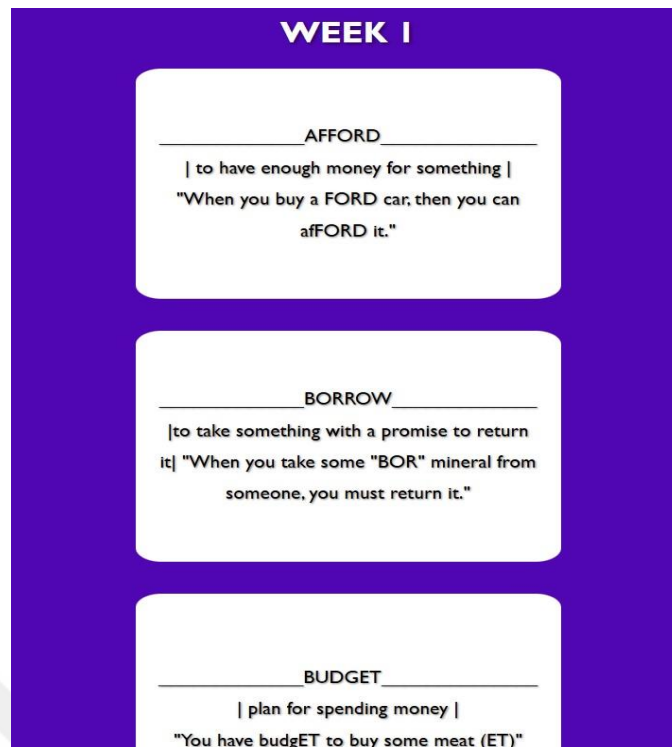
"When you don't have 'UN' in your kitchen, then you have rUN out of flour."

The Turkish word “un” means “flour” so that the students were able to make easier association. Sometimes, the keywords were given in English, which is the second language of the participants. The keywords in the explanations were capitalized to activate acquisition and bolster retention:

“When you go to a ‘BAR’, you would like to BAR-GAIN for the drink named 'GAIN'.”

Furthermore, those instructions were randomly integrated into the regular lessons. The keywords included both English and Turkish (the participants’ native language) memory aids. The keyword instruction (treatment for the experimental group) was spread throughout six weeks, in which ten words along with their keywords for each week were applied and integrated into normal lessons.





**Figure 1.** A Sample of Prepared Notes of Mnemonic Associations as Treatment Administered to Experimental Group

Finally, at the end of six weeks, the participants were randomly asked to take a post-test which had questions that were the exact same as those given in the pre-test. The post-test took around 45 minutes in total, and it was held in the same classroom setting where the participants usually had their lessons. The test was administered in the presence of researcher and the teacher of the class. After the data was collected, since the data was not specifically based on each individual, the scores for each test administered for both experimental and control groups were manually gathered and finally saved in a Microsoft Excel file to calculate the mean scores which were carefully sorted out in order to be analyzed with SPSS Statistics 30.0.0.

## 2.6. Data Analysis

To begin with, the obtained data was analyzed with SPSS Statistics 30.0.0 to determine the effect of mnemonics on English vocabulary learning and retention. An independent-samples t-test was used to compare the post-test scores from the control and experimental groups. Prior to analysis, the data were checked for mistakes or outliers to ensure correctness and consistency. The t-test was used because the study wanted to see if there was a statistically significant difference in receptive vocabulary size between the two groups. The test is useful for comparing means from two independent groups.

The analysis's dependent variable was the post-test total score, which represented the participants' vocabulary knowledge following the intervention. The group type, which was divided into control (Group 1) and experimental (Group 2), served as the independent variable. The t-test assumptions, such as normality and variance homogeneity, were confirmed: Levene's Test for Equality of Variances determined if the assumption of equal variances was satisfied. The main reason to get the variance to feel safe on their track to see if the reason for the negativity of the course to see if it happens all the way around.

The findings of the independent-samples t-test revealed whether the mnemonic-based instructional technique substantially enhanced vocabulary learning compared to the traditional method utilized in the control group. The findings are presented in depth in the Results section of the study to be analyzed.

## CHAPTER 3

### RESULTS

#### 3.1. Overview of the Results

This chapter discusses the study's findings by carefully addressing the research questions and hypotheses. The findings are divided into parts that represent the pre- and post-test analyses, comparing the experimental group, which received mnemonic-based training, to the control group, which used typical rote learning methods.

The findings show substantial variations in receptive vocabulary size between the two groups, emphasizing the importance of the mnemonic keyword technique for vocabulary acquisition and retention. Statistical analysis, including independent samples t-tests, give precise information about the intervention's effectiveness. Furthermore, the chapter investigates the consequences of these findings, focusing on their contribution to understanding how mnemonic methods improve language learning.

This section also explores associated topics and contextualizes the findings within the larger literature, ensuring that the results are well integrated with prior research. By closely reviewing the findings, the study provides important insights into the educational uses of mnemonic strategies for improving English vocabulary learning.

The Shapiro-Wilk test of normality was used to examine if particularly the pre-test and post-test results were normally distributed. As seen from Table 1, the results showed that the pre-test scores did not differ substantially from normality (Shapiro-Wilk  $p = 0.195$ ), implying that participants' initial language proficiency levels followed a normal distribution. On the other hand, the post-test scores deviated significantly from normality (Shapiro-Wilk  $p = 0.006$ ), indicating that the distribution of vocabulary retention scores was not normally distributed following the intervention.

**Table 1.**  
**The Shapiro-Wilk Test of Normality for Both Pre and Post-Test**

		<b>Shapiro-Wilk</b>	
	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>
<b>Mean Scores for Pre-Test</b>	.964	43	.195
<b>Mean Scores for Post-Test</b>	.922	43	.006

### **3.2. Pre-Test Analysis**

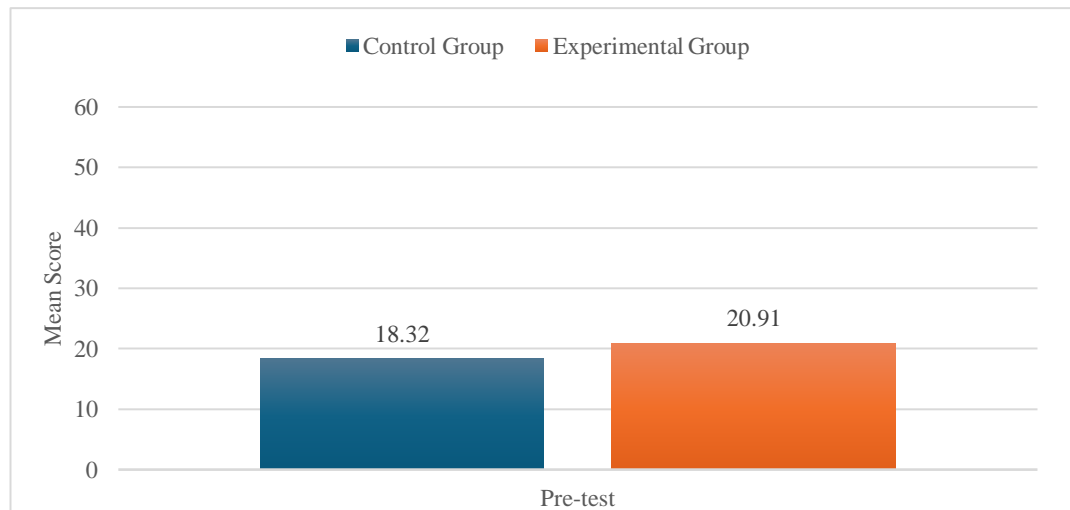
An independent samples t-test was used to compare the receptive vocabulary size scores of the control group (N = 22) with the experimental group (N = 23) before the intervention. The table summarized the outcomes for pre-test scores. The control group's mean score was 18.32 (SD = 6.965), while the experimental group's mean was somewhat higher at 20.91 (SD = 8.959) as shown in Table 2, which has been calculated and concluded through SPSS 30.0.0.

Moreover, based on the results of The Shapiro-Wilk test of normality test conducted for pre-test results, there was no significant difference between control and experimental group.

**Table 2.**  
**Group Statistics for Independent T-test in regard to Mean Scores for Pre-Test**

	<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Std.</b>	<b>Std. Error</b>
	<b>Assignment</b>			<b>Deviation</b>	<b>Mean</b>
<b>Mean Scores for Pre-Test</b>	Control	22	18.32	6.965	1.485
	Experimental	23	20.91	8.959	1.868

Moreover, the pre-test results indicate no significant difference between groups in target vocabulary knowledge. Both groups lacked prior knowledge of the terms they would learn through instructions as also can be indicated in Figure 2:



**Figure 2.** Comparison of the Control and the Experiment Groups Based on Pre-test Mean Score Results

On the other hand, the difference in mean scores between the two groups was not statistically significant. Therefore, Table 3 clearly and statistically explains this insignificant difference indicated by the t-test results:  $t(43) = -1.081$ ,  $p = .286$   $t(43) = -1.081$ ,  $p = .286$ , assuming equal variances. The Levene's Test for Equality of Variances ( $F = 0.891$ ,  $p = .351$ ) verified that the assumption of equal variances was not violated.

**Table 3.**  
Independent Samples T-test in regard to T-test for Equality of Means and Levene's Test for Equality of Variances

		Levene's Test for Equality of Variances				t-test for Equality of Means		
		F	Sig.	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference
Mean Scores for Pre-Test	Equal variances assumed	.891	.351	-1.081	43	.286	-2.595	2.400
	Equal variances not assumed			-1.087	41.308	.283	-2.595	2.386

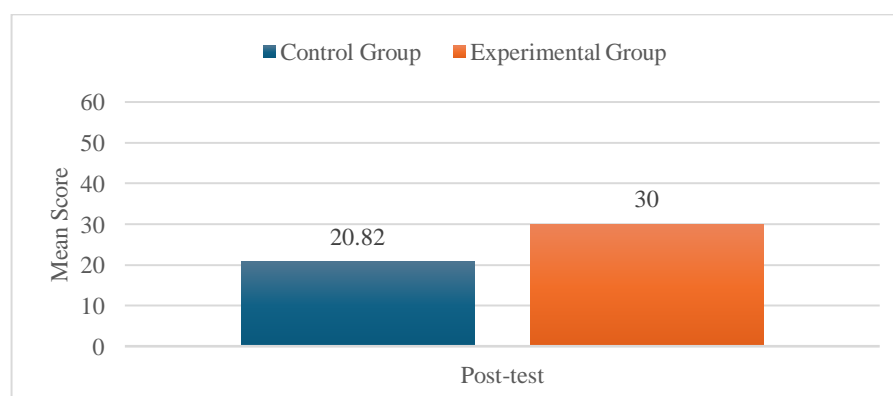
### 3.3. Post-Test Analysis

Following the six-week intervention and treatment specially designed and administered for the experimental group, an additional independent samples t-test was used to compare the post-test vocabulary mean scores between the two groups. The post-test results showed that the control group (N = 22) had a mean score of 20.82 (SD = 9.664), whereas the experimental group (N = 21) had a significantly higher mean score of 30.00 (SD = 13.737) as can be seen from Table 4. This also showed that after six weeks of treatment, the mnemonic keyword technique significantly affected the acquisition and retention of the English words as indicated in the hypothesis of this study.

**Table 4.**  
**Group Statistics for Independent T-test in regard to Mean Scores for Post-Test**

	Group	N	Mean	Std. Deviation	Std. Error
<b>Mean Scores for Post-Test</b>	<b>Assignment</b>				<b>Mean</b>
	Control	22	20.82	9.664	2.060
	Experimental	21	30.00	13.737	2.998

What is more, the post-test results presented information regarding a significant difference between groups in target vocabulary knowledge. Figure 3 also indicated that there was a significant difference in regard to the mean scores between two groups after six weeks of treatment of keyword mnemonics studies administered to the experimental group while the control group only received traditional way of instruction.



**Figure 3.** Comparison of the Control and the Experiment Groups Based on Post-test Mean Score Results

Moreover, the differences in scores between the two groups were statistically significant. The t-test showed that for equal variances,  $t(41)=-2.545$  and  $p=.015$ . The p-value was .015. The Levene's Test for Equality of Variances ( $F=4.814$ ,  $p=.034$   $F=4.814$ ,  $p=.034$ ) revealed a violation of the assumption of equal variances.

Therefore, the T-test findings without assuming equal variances were also taken into account. In this situation,  $t(35.760)=-2.524$ ,  $p=.016$   $t(35.760)=-2.524$ ,  $p=.016$ . Without assuming equal variances, the mean difference remained the same (-9.182), but the confidence interval extended from -16.561 to -1.803. These data and results were statistically seen in Table 5. Thus, there is no problem regarding reliability of the data analysis and the results when we do not take equal variances into account.

**Table 5.**  
**Independent Samples Test in regard to T-test for Equality of Means and Levene's Test for Equality of Variances**

		Levene's Test for Equality of Variances				t-test for Equality of Means		
		F	Sig.	t	df	Sig (2-tailed)	Mean Difference	Std. Error Difference
<b>Mean Scores for Pre-Test</b>	Equal variances assumed	4.814	.034	-2.545	41	.015	-9.182	3.608
	Equal variances not assumed			-2.524	35.760	.016	-9.182	3.637

## **CHAPTER 4**

### **DISCUSSION**

#### **4.1. Overview of Discussion**

This chapter discusses the study's findings in depth, with an emphasis on the influence of mnemonics, specifically the keyword technique, on English vocabulary learning and retention. The discussion is consistent with the study topics, assessing the results of both pre- and post-tests while considering the larger implications for language acquisition and teaching.

The findings are compared to current literature to identify parallels, differences, and novel additions to the area. The study emphasizes the importance of mnemonic tactics in improving vocabulary retention, giving empirical evidence for their superiority over standard rote learning approaches. Key issues, such as the cognitive advantages of mnemonics and their use in a variety of educational settings, are thoroughly covered.

The chapter also explores the practical consequences of these results for language instructors, providing insights into how to use mnemonic strategies into classroom instruction to improve student outcomes. The study's limitations and potential influence on the generalizability of results are also discussed, laying the groundwork for future research initiatives. This chapter advances our knowledge of efficient vocabulary learning techniques in second language acquisition by critically analyzing the data and contextualizing it within the larger academic debate.

#### **4.2. Interpretation of Results**

The study's findings show that mnemonic methods, namely the keyword technique, have a considerable influence on vocabulary acquisition and retention among English language learners. Comparable baseline levels were ensured by the pre-test results, which showed that there was no statistically significant difference in vocabulary knowledge between the experimental and control groups before the beginning of the study. This was a crucial component in confirming the experiment's internal validity. The control group scored somewhat lower (18.32) than the experimental group (20.91), but



both groups' mean scores were within a comparable range. The groups were suitably balanced before the intervention, as evidenced by the lack of significant change.

The post-test results after the six-week treatment offered solid evidence of the effectiveness of mnemonic techniques. The experimental group, which was taught using keyword mnemonics, performed noticeably better than the control group. The experimental group's mean score was 30.00, while the control group's mean score was 20.82. This difference was statistically significant. This notable improvement demonstrates the effectiveness of mnemonic techniques in improving vocabulary retention over time as well as acquisition. With new language, the keyword method seems to give students a cognitive tool that promotes deeper processing and connection-making.

Additionally, the post-test analysis's violation of the premise of equal variances highlights the experimental group's score variability, which is probably caused by individual variations in how they responded to the mnemonic technique. This research implies that although mnemonic procedures are generally successful, their effects could differ depending on learner attributes including motivation, cognitive styles, or experience with related methods.

#### **4.3. Implications of the Study**

The lack of significant differences between control and experimental groups for pre-test implies that both groups began the research with similar levels of vocabulary knowledge. This baseline equality increases the study's internal validity by assuring that any detected discrepancies in post-test outcomes may be ascribed to the mnemonic-based intervention rather than pre-existing inequalities in vocabulary knowledge. Thus, the pre-test results justify the experimental design and establish a solid platform for understanding the post-test outcomes.

When it comes to post-test results between two groups, the data collected indicates the efficacy of mnemonic techniques for language acquisition. The remarkable improvement in the experimental group demonstrates the unique function of mnemonic strategies, particularly the keyword approach, in improving deeper cognitive processing and long-term language retention. The considerable mean difference emphasizes the intervention's practical value, demonstrating that learners exposed to mnemonics obtained a significant advantage in vocabulary knowledge when compared to those who

relied exclusively on rote learning. This study, like Davoudi and Yousefi (2016), emphasizes the efficacy of mnemonic approaches, notably the keyword method, in promoting long-term vocabulary recall. The mnemonic method's capacity to build mental linkages and visual associations improves both the acquisition and retention of language, giving learners an advantage over standard rote memorization techniques. Also, like Kayaaltı (2018), this study demonstrates the positive effect of mnemonics over rote learning even though the students were not instructed in their L1 during regular lessons and interventions.

Furthermore, the results of this study have major implications for English language teaching, particularly in terms of vocabulary development. First, the study emphasizes the efficacy of mnemonic methods as a teaching tool that may be implemented in language classes. Traditional rote memorization methods, while still useful, may not interest students as well as mnemonic strategies, which use cognitive connections to aid memory. Educators should think about implementing mnemonic tactics, such the keyword approach, into their class plans to improve learning results.

From a theoretical standpoint, this study contributes to the growing body of data supporting the use of mnemonics in language acquisition. It is in line with cognitive theories that emphasize the role of dual coding and association in memory retention. This study bridges the theory-practice divide by proving the real benefits of mnemonics, giving educators practical insights.

Practically, the study provides a scalable and low-cost strategy for increasing language learning. Mnemonic methods do not require complex technology or substantial training; thus, they are accessible to instructors in a range of educational contexts. Furthermore, the use of bilingual terms in this study demonstrates how mnemonic methods may be tailored to multiple language and cultural situations, increasing their application. Azimi Amoli and Karbalaee (2012) emphasizes the scalability and usability of mnemonic approaches as efficient language learning aids. Mnemonic strategies improve encoding through association, elaboration, and visualization, lowering cognitive load and increasing word learning efficiency. These strategies are adaptive across many linguistic and educational contexts, showing their potential for wider implementation in language instruction.

#### **4.3.1. Empirical Evidence for Mnemonics**

The findings provide empirical evidence for the usefulness of mnemonic methods in vocabulary acquisition, which is consistent with prior studies in cognitive and language learning theories. Mnemonic approaches assist learners encode language more deeply by exploiting dual coding (verbal and visual links) and semantic correlations, hence improving the rates of retrieval and retention.

#### **4.3.2. Educational Implications**

These findings highlight the efficacy of mnemonic methods as a pedagogical tool for improving learning outcomes in classrooms. Teachers can use mnemonic strategies to handle one of the most difficult parts of language learning: vocabulary acquisition—without dramatically modifying existing curriculum or needing costly resources.

#### **4.3.3. Theoretical Implications**

The study contributes to theoretical frameworks that highlight the importance of memory aids in language acquisition. By proving the real benefits of mnemonics, the study closes the gap between abstract cognitive theories and their practical use in education.

#### **4.3.4. Practical Implications**

The large gain shown in the experimental group implies that mnemonic methods can be a low-cost, scalable way to increase vocabulary acquisition. These techniques, which are adaptable to varied linguistic and cultural contexts, can be employed in a variety of educational settings.

Finally, the study's findings address both research topics in a way that emphasizes the differences in impact between traditional and mnemonic-based vocabulary acquisition approaches. The lack of significant differences in the pre-test verifies the equality of the groups, allowing the intervention's effects to be reliably attributed to the use of mnemonics. The considerable changes in the post-test, on the other hand, give compelling evidence for the effectiveness of mnemonic methods in improving vocabulary knowledge.

The findings also show that mnemonic strategies are not only marginally successful but also provide significant improvements in language learning. This clearly addresses the study's major goal of assessing the influence of mnemonic tactics on vocabulary learning and retention, validating the conclusion that these strategies are an effective supplement to standard teaching approaches.

#### **4.4. Future Directions**

Building on this study's findings and limitations, many possible areas for future research are suggested to improve our understanding of the influence of mnemonic methods on English vocabulary learning and retention. The suggestions above try to fill the gaps highlighted in this study and apply the findings to other situations.

As for investigating long-term retention, it could be said that while this study examined the short-term impact of mnemonic methods over a six-week period, the long-term retention of language remains unknown. Safavi and Hamzavi (2013) found that the mnemonic keyword strategy greatly improves vocabulary retention over time, with participants in the mnemonic group outperforming the rote memorization group even a month after the intervention. However, both groups displayed a drop in retention, highlighting the need for more studies to investigate how reinforcement or periodic review sessions might minimize forgetting rates. Future studies should examine whether the reported benefits of mnemonic methods last for months or perhaps years. Follow-up assessments at regular intervals (e.g., three months, six months, or a year after the intervention) would offer useful information about the long-term effectiveness of mnemonic learning. This would allow instructors to decide whether more reinforcement or periodic review sessions are required to retain vocabulary gains.

Furthermore, expanding participant demographics would be convenient for future studies. This study focused on intermediate-level students at a particular university in Turkey. Future study should involve people from varied backgrounds, including different competence levels. Nemati (2009) examined the effectiveness of mnemonic methods among 310 pre-university students in an Indian ESL setting. The study emphasized the usefulness of organized techniques such as grouping and acronyms for increasing long-term recall, recommending that future research should explore how these tactics operate across varied age groups and cultural situations. Thus, beginners may need more personalized memory tactics, whereas experienced learners may benefit differently

depending on their prior vocabulary knowledge. Also, exploring the efficiency of mnemonics among younger learners (e.g., primary school kids) and older individuals might give information on how these tactics may be adapted throughout developmental stages. Different cultural and linguistic contexts would affect the study differently. Investigating how mnemonic methods operate in languages other than English, especially in areas where English is not widely taught, might increase the findings' generalizability. The study emphasized the importance of tailoring vocabulary instruction to specific learner demographics. By examining younger learners and linguistic contexts where structured strategies are critical, researchers can uncover how mnemonic methods can be adapted to maximize their impact across diverse populations. Nemati (2009).

On the other hand, incorporating individual-level analysis would be included in further studies. This study used mean scores for statistical analysis, which, although beneficial for finding broad patterns, may ignore individual differences. Future research should examine individual scores to determine how cognitive characteristics such as working memory and attention span affect the efficacy of mnemonic methods. Learners' preferences and styles would also affect the study differently. For example, visual learners may benefit more from imagery-based mnemonics whereas auditory learners may prefer rhyming or phonetic strategies.

What is more, technology-enhanced mnemonics use would contribute more to further studies. In fact, with technological improvements, future study might look at integrating digital tools and applications to give mnemonic methods. For example, interactive learning platforms that use mnemonic methods via interactive exercises or quizzes, mobile applications that offer personalized keyword associations or spaced repetition techniques, augmented reality (AR) and virtual reality (VR) are technologies for graphically representing mnemonics in immersive contexts have the potential to make mnemonic processes more interesting and accessible, particularly for younger generations that have grown up with digital learning. According to Saini et al. (2021) the use of AR in education has grown steadily during the past eight years, primarily. Most AR's applications have been in higher education and professional education. Both marker-based and location-based augmented reality are extensively utilized. AR contributes significantly to current technological advancements by making things more familiar and lifelike with real items. These days, it is a highly sought-after study issue in computer

science and engineering because of its inherent qualities and the development of inexpensive hardware. It combines a virtual and real-world setting.

Lastly, different types of mnemonics could be used and studied for further studies, as well. Indeed, this study concentrated on the keyword method, although other mnemonic strategies such spatial grouping, narrative techniques, and musical mnemonics show potential. Comparative studies could study which mnemonic approaches are most useful for vocabulary acquisition, and they could also study whether combining various mnemonic approaches yields better results than utilizing only one.



## **CHAPTER 5**

### **CONCLUSION**

#### **5.1. Overview of Conclusion**

This last chapter summarizes the study's findings, highlighting the influence of mnemonic tactics, notably the keyword approach, on English vocabulary learning and retention. It addresses the consequences of these findings for language education, focusing on how to successfully use mnemonic strategies into instructional procedures to improve student outcomes.

The chapter also makes recommendations for future study, including longer investigations on long-term retention, different student demographics, and the investigation of technology-enhanced mnemonic techniques. The chapter reflects on the broader implications of these findings for second language acquisition (SLA), pedagogical practices, and cognitive learning strategies. By resolving the current study's limitations, the conclusion emphasizes the need to adjust mnemonic techniques to different learner needs and educational circumstances, thereby adding to the larger area of second language learning and pedagogy.

#### **5.2. Conclusion**

Vocabulary acquisition has long been recognized as a fundamental cornerstone of English language learning, with researchers and educators consistently emphasizing its critical role in second language mastery. As Lewis (1993), Laufer (1997), and Zhan-Xiang (2004) have established through their seminal works, vocabulary forms the essential building blocks of language acquisition and use. Since the mid-20th century, the focus on enhancing vocabulary retention has led to the exploration of various methodological approaches, particularly mnemonic techniques. These cognitive tools, as defined by Atkinson (1975), assist learners in recalling new information through restructuring and simplification, though their full effectiveness in second language contexts continues to be an area requiring thorough empirical investigation.

This study has contributed significantly to our understanding of how mnemonic approaches, particularly the keyword method, affect English vocabulary learning and

retention among university-level language learners. A thorough six-week experimental study done at Hacettepe University's School of Foreign Languages in Turkey proved the significant benefits of introducing mnemonic tactics into vocabulary education over typical rote learning approaches.

The data convincingly demonstrates the efficacy of mnemonic strategies in improving vocabulary learning and retention. The experimental group, which received teaching using keyword mnemonics, performed much better in vocabulary retention than the control group, which got traditional instruction. In the post-test findings, the experimental group had significantly higher mean scores than the control group. The statistically significant findings support the effectiveness of mnemonic approaches in vocabulary learning.

This study's method to mnemonic education was particularly interesting, as treatment in this study was delivered with relying minimally on the students' native language (Turkish). This methodological decision distinguishes this study from earlier ones in the field and gives important insights into the efficacy of mnemonic strategies in a more immersive second language learning setting. The results of the study support theories of cognitive learning, especially Atkinson's (1975) work on memory aids. By creating associative connections between newly learned words and previously understood ideas, mnemonics promote deeper encoding and improve recall and retention. The experimental group's performance significantly improved, demonstrating the possibility of systematic mnemonic interventions to promote long-term language recall. This study's emphasis on reducing the students' reliance on their local language (Turkish) while utilizing mnemonic techniques was one of its main methodological advantages. The study's immersion-based methodology sets it apart from earlier studies and implies that mnemonics can be successfully incorporated into second language acquisition without requiring a lot of L1 translations.

The research findings have significant implications for English language teaching and learning. First, the study presents empirical evidence in support of incorporating mnemonic strategies into regular vocabulary education. Teachers might consider using organized mnemonic approaches, notably the keyword method, to supplement standard teaching methods. Second, the noticeable improvement in the experimental group's performance implies that mnemonic strategies can be especially



helpful at improving long-term vocabulary retention, addressing one of the most difficult aspects of second language learning. Thirdly, the findings support the use of mnemonic technique training in language teaching curricula, particularly at the university level, when vocabulary acquisition is critical to academic achievement.

In conclusion, this study has produced convincing evidence that mnemonic devices improve the learning and retention of English vocabulary. The study adds significantly to our knowledge of vocabulary education in second language acquisition, notwithstanding its limitations. The results indicate that frequent vocabulary education can improve learners' vocabulary acquisition and retention by introducing mnemonic strategies, especially the keyword method. This study offers useful implications for language teaching practice in addition to contributing to the theoretical knowledge of vocabulary learning. Teachers and curriculum designers should give careful thought to the use of mnemonic devices in vocabulary education as we continue to look for efficient ways to improve language acquisition. As Başibek (2010) emphasizes, the use of mnemonic devices improves second language (L2) vocabulary acquisition and retention. The results highlight the significance of using mnemonic devices in teaching methods and have significant implications for L2 vocabulary learning, emphasizing how important it is for teachers to consider the variations in vocabulary acquisition among individual students. Lastly, this paper emphasizes once again that mnemonic techniques significantly outperform rote learning strategies. It advocates that, in contexts where educators have the opportunity to implement mnemonic devices as an alternative to direct memorization, priority should be given to these methods to optimize learning outcomes.

### **5.3. Summary of the Implication of the Study**

The outcomes of this study have important significance for SLA research and language teaching.

#### **5.3.1. Theoretical Implications**

This study adds to the body of second language acquisition (SLA) literature by giving empirical support for mnemonic methods as an effective method of vocabulary learning. The findings are consistent with and expand prior research on the keyword technique, emphasizing its importance as a cognitive tool in language learning. This work reinforces the theoretical underpinning for memory-enhancing tactics in SLA research by

proving mnemonic techniques' usefulness in boosting both short-term retention and long-term recall.

Furthermore, this study closes the gap between theoretical talks of memory-enhancing strategies and their actual use in classroom settings. While earlier research has frequently focused on either the cognitive mechanisms behind mnemonic methods or anecdotal evidence of their efficacy, this study provides empirical data that combines the two viewpoints. As a result, it gives a more complete explanation of how mnemonic-based learning fits into known SLA frameworks, such as the dual-coding theory and the depth of processing hypothesis.

What is more, the findings add to existing arguments about the relative efficiency of explicit versus implicit vocabulary acquisition methodologies. This study demonstrates that cognitive techniques play an important role in maximizing vocabulary learning by emphasizing the benefits of mnemonic training, particularly for learners with variable skill levels. These findings may also help to shape future theoretical models that aim to combine form-focused education and meaning-based learning, highlighting the need of pedagogically solid, research-backed vocabulary teaching approaches.

### **5.3.2. Educational Implications**

The findings indicate that instructors should consider introducing mnemonic strategies, particularly the keyword method, into vocabulary training. Given the proven success of these tactics, including them in language courses can improve both short-term recall and long-term retention, resulting in better overall vocabulary acquisition. This technique has various pedagogical benefits: Firstly, mnemonic techniques provide organized recall mechanisms that improve long-term vocabulary retention by forming strong associations between new words and prior knowledge. Secondly, unlike rote memory, mnemonic strategies promote creative and interactive learning experiences, making vocabulary acquisition more pleasurable and relevant for pupils. This enhanced involvement might result in better motivation and participation in language acquisition. Thirdly, to improve learning results, language programs can include mnemonic-based vocabulary training in addition to traditional approaches.

Furthermore, this research emphasizes the need for teacher training in mnemonic methods. Educators should be provided with the information and resources required to

properly execute these strategies, allowing students to reap the maximum benefits. Future study might look at the scalability of mnemonic training across different competency levels and learning contexts, helping to refine best practices for using it in a variety of educational settings.

### **5.3.3. Practical Applications**

This study emphasizes the scalability of mnemonic methods across different learning settings. Because mnemonic techniques need few resources, they may be successfully utilized in traditional classroom settings, online education platforms, and self-directed learning programs. Their versatility makes them especially useful for students with varying requirements, learning styles, and competence levels, as it allows for tailored training that improves vocabulary acquisition.

The findings also show the possibilities for technology integration, such as mobile applications, interactive digital tools, and adaptive learning platforms that use mnemonic principles to aid in vocabulary learning. Educational technology developers may use these findings to create more successful vocabulary-building programs that use spaced repetition, multimedia components, and gamification to improve word memory.

Language teachers and curriculum designers might also investigate blended learning techniques that mix mnemonic processes with other instructional methods, such as contextual learning and communicative practice. This comprehensive approach may make language learning more enjoyable and successful, allowing students to build both lexical knowledge and practical language abilities.

This study adds to the continuing topic about creative and cost-effective tactics for improving language education in a variety of educational contexts by stressing the accessibility and adaptability of mnemonic approaches.

### **5.4. Study Limitations Summary**

While this study provides solid evidence for the usefulness of mnemonic methods, it is important to realize a few limitations. One major restriction is the sample size ( $N=45$ ), which, while enough for finding patterns, is still quite small. Furthermore, because the participants were all Turkish university students, the findings' applicability to other language and cultural settings is restricted. Future study should look at the

effectiveness of mnemonics among students from various educational backgrounds, age groups, and competence levels to see if the results are consistent across different populations.

Another limitation is the study's short length. The six-week duration allowed for an examination of short-term vocabulary increases, although it is uncertain if these effects last over time. Longitudinal studies that assess vocabulary retention over months or even years would offer a more complete picture of the long-term effects of mnemonic methods. Furthermore, future study should investigate whether ongoing exposure to mnemonic-enhanced learning leads to cumulative increases in language acquisition.

Finally, individual learner variations may influence the usefulness of mnemonic strategies. While the keyword strategy was generally useful, factors such as cognitive style, learning preferences, and experience with mnemonic tactics may impact how well learners apply and remember new terminology. Some students may find mnemonics intuitive and entertaining, whilst others may prefer different vocabulary learning approaches. Further studies should examine how personal learning characteristics combine with mnemonic methods to improve vocabulary training for a wider range of students.

### **5.5. Recommendations for Further Research**

This study's findings and limitations provide recommendations for further research. One important topic to investigate is the long-term preservation of language taught using mnemonic methods. Future research should include follow-up evaluations at three months, six months, and one year after intervention to investigate the durability of mnemonic-based learning and if frequent reinforcement is required to maintain retention over time.

Another significant aim is to broaden the demographic scope of study to include younger learners, adult learners, and people with various linguistic and educational backgrounds. Investigating how mnemonic methods work across different age groups and learning situations might improve the generalizability of the findings and reveal whether changes are required for diverse populations. Furthermore, research might look at how individual differences in working memory capacity, learning styles, and motivation affect the efficiency of mnemonic approaches.

Comparative research might improve our understanding of memory efficacy by comparing other techniques, such as the keyword method to story mnemonics, spatial mnemonics, or musical mnemonics. Identifying which strategies perform best for various learner profiles or linguistic settings allows educators to adjust vocabulary training to enhance student achievement.

Given the growing importance of digital learning aids, future studies should investigate the integration of mnemonic approaches with developing technology. AR, VR, and AI-generated tailored mnemonics have the potential to create immersive, adaptive learning experiences that improve vocabulary acquisition. Investigating how these technologies interact with cognitive processes may lead to novel advances in second language learning, making mnemonic procedures more engaging and accessible to a larger audience.

## REFERENCES

- Alagözlü, N., & Kiymazarslan, V. (2020). *Current perspectives on vocabulary learning and teaching*. Cambridge Scholars Publishing.
- Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*, 3(3), 21–34.
- Anjomafrouz, F., & Tajalli, G. (2012). The effect of teaching vocabulary through semantic mapping on EFL learners' awareness of the affective dimensions of deep vocabulary knowledge. *Journal of Language Teaching and Research*, 3(3), 489–495.
- Atkinson, R. C. (1975). Mnemotechnics in second-language learning. *American Psychologist*, 30(8), 821–828.
- Aydoğdu, N. (2023). The impact of digital storytelling on EFL learners' speaking skills. *Journal of Language and Linguistic Studies*, 19(1), 45–60.
- Azimi Amoli, F., & Karbalaeei, A. (2012). The effect of mnemonic strategies instruction on the immediate and delayed information retrieval of vocabulary learning in EFL learners. *Procedia - Social and Behavioral Sciences*, 46, 3890–3895. <https://doi.org/10.1016/j.sbspro.2012.06.161>
- Bahrani, Z. N., Izadpanah, S. & Bijani, H. (2019). The Impact of Musical Mnemonic on Vocabulary Recalling of Iranian Young Learners. *International Journal of Instruction*, 12(1), 977-994.
- Başıbek N. (2010). Using visual and audio-visual mnemonics vs. context in teaching vocabulary of intermediate level. *Ulusal Tez Merkezi*.
- Benge, C. & Robbins, M.E. (2009). Using keyword mnemonics to develop secondary students' vocabularies: A teacher's action research. *Journal of Language and Literacy Education*, 6(1),93-104.
- Davoudi, M., & Yousefi D. (2016). The effect on vocabulary retention of senior high school EFL learners in Iran. *Journal of Language Teaching and Research*, 7(6), 1160–1167.

- Farrokh, P., Vaezi, H., & Ghadimi, H. (2021) Visual Mnemonic Technique: An Effective Learning Strategy. *GIST – Education and Learning Research Journal*, 23, 7–32. <https://doi.org/10.26817/16925777.1042>
- Jamalipour, S., & Khomeijani Farahani, A. A. (2015). The effect of vocabulary knowledge and background knowledge on Iranian EFL learners' L2 reading comprehension. *Journal of Applied Linguistics and Language Research*, 2(2), 107–121.
- Kayaaltı, M. (2018). Mnemonic Technique - An Effective Vocabulary Teaching Method to Plurilingual Students. *MJLTM*, 8(5), 388–400.
- Krashen, S. D. *Second Language Acquisition and Second Language Learning [M]*. Oxford: Pergamon Press, 1981
- Laufer, B. (1997). The lexical plight in second language reading: Words you don't know, words you think you know, and words you can't guess. In J. Coady & T. Huckin (Eds.), *Second Language Vocabulary Acquisition* (pp. 20–34). Cambridge University Press
- Lessard-Clouston, M. (2022). *Teaching Vocabulary*. TESOL International Association.
- Levin, H. (1981). Organizational patterns in prose and their effect on memory. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical Issues in Reading Comprehension* (pp. 85–117). Lawrence Erlbaum Associates.
- Merriam-Webster. (2004). *Mnemonic*. In *Merriam-Webster's Collegiate Dictionary* (11th ed.). Merriam-Webster, Incorporated. Nation, I. S. P. (1983). Testing and teaching vocabulary. *Guidelines*, 5, 12–25.
- Nemati, A. (2009). Memory vocabulary learning strategies and long-term retention. *International Journal of Vocational and Technical Education*, 1(2), 14–24.
- Oxford, R. L., & Crookall, D. (1989). Research on language learning strategies: Methods, findings, and instructional issues. *The Modern Language Journal*, 73(4), 404–419.
- Pillai, S. (2017). Investigating the effectiveness of task-based language teaching in a Japanese EFL context. *Asian EFL Journal*, 19(3), 150–175.

- Safavi, M. S., & Hamzavi, R. (2013). The effect of explicit vocabulary instruction on reading comprehension of intermediate EFL learners. *Theory and Practice in Language Studies*, 3(9), 1641–1648.
- Saini, D. K., Yadav, A. K., & Sharma, K. (2021). Mnemonics in e-learning using augmented reality. In *Institution of Engineering and Technology eBooks* (pp. 215–233).
- Schmitt, N., Schmitt, D., & Clapham, C. (2001). Developing and exploring the behaviour of two new versions of the Vocabulary Levels Test. *Language Testing*, 18(1), 55–88.
- Schmitt, N., & McCarthy, M. (Eds.). (1997). *Vocabulary: Description, Acquisition, and Pedagogy*. Cambridge University Press.
- Solso, R. L. (1995). *Cognitive Psychology* (4th ed.). Allyn & Bacon.
- Susana, I. (2017). Enhancing vocabulary mastery through the mnemonic keyword method for university students. *English Education Journal of English Teaching and Research*, 2(1).
- Tavakoli, M., & Gerami, E. (2013). The effect of keyword and pictorial methods on EFL learners' vocabulary learning and retention. *Porta Linguarum*, 19, 299-316.
- Thảo, T. M. (2022). The application of mnemonic strategies to improve EFL students' aptitude for vocabulary. *Journal of Nusantara Studies*, 7(2), 166-183. <http://dx.doi.org/10.24200/jonus.vol7iss2pp166-183>
- Wang, M., Koda, K., & Perfetti, C. A. (1992). The relationship between phonological and orthographic processing in learning to read Chinese characters. *Applied Psycholinguistics*, 13(4), 471–483. <https://doi.org/10.1017/S0142716400005728>
- Webb, S., Sasao, Y., & Ballance, O. (2017). The updated Vocabulary Levels Test: Developing and validating two new forms of the VLT. *ITL - International Journal of Applied Linguistics*, 168(1), 33–69. <https://doi.org/10.1075/itl.168.1.02web>



- Wei, L. (2014). Code-switching as a communicative strategy in bilingual classrooms. *Journal of Language Teaching and Research*, 5(5), 1109–1115. <https://doi.org/10.4304/jltr.5.5.1109-1115>
- Wyra, M., Lawson, M. J., & Hungi, N. (2007). The mnemonic keyword method: The effects of bidirectional retrieval training and of ability to image on foreign language vocabulary recall. *Learning and Instruction*, 17(3), 360–371. <https://doi.org/10.1016/j.learninstruc.2007.02.008>
- Zhan-Xiang, M. (2004). The necessity of intensifying English vocabulary in the remote minority area college English teaching. *Asian EFL journals*, 6(2), 25-31.



## APPENDICES

### APPENDIX-A. Consent Form

#### BİLGİLENDİRİLMİŞ ONAM FORMU

Sayın Katılımcı,

Bu çalışma Ufuk Üniversitesi tarafından yürütülen bir araştırmadır. Bu çalışmanın amacı; anımsatıcıların ikinci dil öğretiminde kelime edinimi ve kalıcılığı üzerindeki etkisini ölçmek için veri toplamaktır. Ayrıca, belirli İngilizce kelimeleri anımsatıcı teknikler yoluyla öğrenenler ile geleneksel yöntem ile öğrenenler arasındaki fark ortaya konması hedeflenmektedir. Çalışma boyunca sizden ön test ve son test olmak üzere iki adet “Vocabulary Levels Test for Receptive Vocabulary Size (Alıcı Kelime Dağarcığı Boyutu için Kelime Düzeyleri Testi)’ne girmeniz beklenecek olup kontrol veya deney grubuna dahil olmanız istenecektir. Bu çalışmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Çalışmanın amacına ulaşması için sizden beklenen, bütün soruları eksiksiz, kimsenin baskısı veya telkini altında olmadan, size en uygun gelen cevapları içtenlikle verecek şekilde cevaplamanızdır. Bu formu okuyup onaylamanız, araştırmaya katılmayı kabul ettiğiniz anlamına gelecektir.

Bu çalışmaya katılım tamamen gönüllülük esasına dayalıdır. Eğer katılmayı kabul ederseniz, sizden konuyla ilgili bazı testlere girmeniz istenecektir. Lütfen soruları olması gerektiğini düşündüğünüz biçimde değil, sizin düşüncelerinizi tüm gerçekliği ile yansıtacak biçimde cevap veriniz. Samimi ve içtenlikle vereceğiniz cevaplar çalışmanın sağlığı açısından çok önemlidir. Sizden yapılan testler üzerinde belirtilecek hiçbir kimlik belirleyici hiçbir bilgi istenmeyecektir. Cevaplarınız sadece araştırmanın amacına uygun olarak bilimsel açıdan kullanılacak ve gizli tutulacaktır. Bu çalışmaya katılmayı kabul edebilir, reddedebilirsiniz ayrıca çalışmanın herhangi bir yerinde onayınızı çekme hakkına da sahipsiniz. Ancak formları sonuna kadar ve eksiksiz doldurmanız, bu araştırmanın geçerli olabilmesi için önem taşımaktadır.

Çalışma ile ilgili herhangi bir bilgi almak isterseniz, aşağıdaki elektronik iletişim adresinden ulaşabilirsiniz.

Araştırma Koordinatörü:

Dr. Öğr. Üyesi Neslihan ÖZKAN

Araştırmacı:

Alper SINGIN

**Katılımınız ve ayırdığınız vakit için şimdiden teşekkür ederiz.**

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**Katılımcı Beyanı:**

Araştırma ile ilgili yukarıdaki bilgiler bana aktarıldı. Çalışma hakkında yazılı ve sözlü açıklama aşağıda adı belirtilen araştırmacı/araştırmacılar tarafından yapıldı. Bana yapılan tüm açıklamaları ayrıntılarıyla anlamış bulunmaktayım. Verdiğim bilgilerin bilimsel amaçlı yayınlarda kullanılmasını kabul ediyorum. Bu araştırmada ‘katılımcı’ olarak yer alma kararını aldım.

İsim Soyisim:

İmza:

## APPENDIX-B. Wordlist of the Target Vocabulary and the Keyword Explanations

### Week 1

TARGET WORD	English Definition and Keyword Mnemonic Explanation
AFFORD	To have enough money for something / When you buy a FORD car, then you can afFORD it.
BORROW	To take something with a promise to return / When you take some "BOR" mineral from someone, you must return it.
BUDGET	Plan for spending money / You have budgET to buy some meat (ET).
INHERIT	Get things from someone who died / You get your grand grand mother's money after she died. You inHERit HER money
LOAN	Borrow monet from especially a bank / When you take a LOan with a LOwer interest, you become happy
TAX	Money that you must give to the government / When you buy an AX you should pay tAX for it.
ENORMOUS	Really, really big / Imagine an enorMOUS MOUSE.
EXHAUSTED	Extremely tired / When you clean the HOUSe all day, you become exHAUSed.
HILARIOUS	It is so funny that you laugh a lot / HILLARY tells me a HILArrious joke.
SCAM	Tricking people to steal from them / People get SCARed when they come across a SCAm

## Week 2

TARGET WORD	English Definition and Keyword Mnemonic Explanation
RUN OUT	No more of something left / When you don't have 'UN' in your kitchen, then you have rUN out of flour.
SET OFF	Start a trip or journey / You set OFF to OF / Trabzon.
APOLOGIZE TO	Say sorry to someone / When someone crashes your Volkswagen POLO car, he/she must aPOLOgize to you.
FED UP WITH	Really annoyed or tired of something / When I FED my dog with the same thing every day, it became FED up with it.
FOND OF	Really like something or someone / My sister really likes her 'FONDöten.' She is FOND of it.
KEEN ON	Really interested in something / When I saw the KEy ON the door, I became very KEen ON the situation.
PROVE	Show something is true / A PROfessor can easily PROVe a theory.
ENGAGED	Busy or involved in something / When I focus on learning ENGLISH, I become ENGaged in it.
HANG UP	End a phone call / When I stop talking on the phone, I HANG it UP on the wall, and stick it well.
SWIPE	Move finger on a screen / You SWiftly SWipe the screen.

### Week 3

TARGET WORD	English Definition and Keyword Mnemonic Explanation
DISAPPOINTED	Sad because things didn't go as expected / When you get a low POINT, you get disaPOINTed and become sad.
EMBARRASSED	Feel awkward or ashamed / When people laugh at you at the 'BAR', you feel emBARrassed.
FRIGHTENED	Scared or afraid / When you get into a FIGHT, you become FRIGHTened.
FRUSTRATED	Feeling upset as things aren't going right / I have cut my face with 'USTURA', and I get frUSTRated.
DECLINE	Say no to something politely / When you do not want to eat an ECLair (ekler), you dECLine it.
BUSKING	Play music in a public place and perform for money in public / On a BUSy street, the KING of the music is playing music, thus BUSKING.
INAPPROPRIATE	Not right for the situation / When you ATE an APPlE during an OPera, it is 'in APPrOPriATE'.
INCONSIDERATE	Not thinking about others / An inconsiderATE person ATE my dessert without asking me.
MONOPOLIZE	Control completely / MANY POLice officers want to MONO-POLize the streets.
CIRCUIT	Lap, going around, tour / When a car takes a tour in a CIRcuit, it CIRcles around.

## Week 4

TARGET WORD	English Definition and Keyword Mnemonic Explanation
REFEREE	Person who enforces rules in a game / When a REFEREE applies the rules, he/she has some REFEREnces.
SEND OFF	Make someone leave, usually in sports / When the football player takes the ball OFF the pitch at the END of the game, they sEND him OFF.
SLOPE	A slanted, inclined surface / When a car goes up on a SLOPe, it moves SLOwly.
SPECTATOR	Person watching an event; a close observer / spectATORs want to see the biggest alligATOR.
COLLEAGUE	Person you work with / You have a COLLEague at the COLLEge where you work.
AUDIENCE	People watching or listening to a (usually public) performance / Imagine an AUDIence watching a driving performance with AUDI brand car.
DUB	Change original voice in a video or movie / They have made a DOUBle mistake when they try to DUB the movie.
PLOT	The main events in a story / The people who have made the movie PLanned a LOT when they were creating the pLOT.
SCRIPT	Written words for a play or movie / The name of the SCRipt writer appeared on the SCReen at the end of the movie.
SEQUEL	A follow-up to a story; something that follows something else / When something has a SEquel, it has a SEConD one coming or following.

## Week 5

TARGET WORD	English Definition and Keyword Mnemonic Explanation
NOD	Move head up and down to show agreement / You cannot say 'NO' to 'OLD' people. Then you NOD to agree with them.
STARE	Look at something for a long time; look at with fixed eyes / Imagine someone looks at the STARS for a long time. He/she STARes at them.
EXPEL	Force someone to leave or move out / When you want some people to EXit the country, you EXpel them.
MISBEHAVE	Behave badly / When a dog barks like 'HAV HAV' so much, then it misbeHAVes.
PUNISH	Give consequences for bad behavior or use penalty / When you behave badly at UNiversity, imagine they pUNish you.
REVISE	Change, correct or rewrite something, especially for the purpose of editing / When I have a problem with my VISA, then I have to reVISE my application.
CHIMNEY	A pipe for smoke to go out, especially for buildings / When a train goes like 'CHu! CHu!', smoke comes out of its CHimney.
OUTSKIRTS	Edges of a town or outlying areas of a city / When you go OUT with your SKIRT, then you feel cold in the OUTSKIRTS.
SPACIOUS	Having a lot of room; very large in scope / The SPACe is SPACious because it is very large and vast.
EMPLOYMENT	Having a job / You can't PLAY games anymore because you have emPLOYment now. You are working.



## Week 6

TARGET WORD	English Definition and Keyword Mnemonic Explanation
PERMANENT	Lasting forever; continuing without change / ERMAN needs a pERMANent job in order to earn money.
PROMOTION	Moving to a higher position / When a PROfessional worker got PROMOTion, he/she gets a MOTorbike.
RESIGN	Leave or quit your job voluntarily / REktör SIGNed the papers when he wanted to RE-SIGN.
RETIREMENT	Stop working, usually when older / MEN buy a new TIRE for their car when they get reTIREMENT.
SACK	Fire someone from a job; end someone's employment / Sack means a type of bag, so when someone SACKs you, then you take your SACK and leave.
TEMPORARY	Only for a short time; not continuing forever / When you don't have the same TEMPO in PORTugal, you stay there for a short time.
COMPENSATION	Money for loss or injury / Your COMPany gives you COMPenSAtion money because you become SENsitive, thus crying.
TEMPTATION	Wanting to do something bad and so much / You have a TEMPtation to visit a TEMPlE. You really want to visit there.
BARGAIN	Good deal, low price; agreement especially based on price / When you go to a BAR, you would like to BAR-GAIN for the drink named 'GAIN'.
REFUND	Get money back for something you bought / You RE-take your money and have FUN while spending it because you get REFUND.

## Appendix-C. Vocabulary Levels Test for Receptive Vocabulary Size Used as the Pre-test

### Vocabulary Levels Test for Receptive Vocabulary Size

This is a test that looks at how well you know useful English words. Put a check under the word that goes with each meaning. Here is an example.

	game	island	mouth	movie	song	yard
land with water all around it						
part of your body used for eating and talking						
piece of music						
<b>It should be answered in the following way.</b>						
	game	island	mouth	movie	song	yard
land with water all around it		✓				
part of your body used for eating and talking			✓			
piece of music					✓	
<b>Put a check under the word that goes with each meaning.</b>						
	miss	afford	earn	borrow	charge	budget
1. plan for spending money						
2. take something with a promise to return it						
3. have enough money for something						
	inherit	insurance	mortgage	salary	loan	tax
4. get things or money from someone who died						
5. money you borrow and pay back						
6. money you must give to government						
	starving	enormous	exhausted	freezing	hilarious	fascinating
7. So funny that you laugh a lot						
8. very, very tired						
9. really big						
	afraid of	end up	scam	pick up	run out	set off
10. tricking people to steal from them						
11. no more of something left						
12. start a trip or journey						
	ask for	apologize to	fed up with	believe in	arrive at	fond of
13. say sorry to someone						
14. really annoyed or tired of something						
15. really like something or someone						
	keen on	tired of	proud of	prove	engaged	pay for
16. really interested in something						
17. busy or involved in something						
18. show something is true						
	put on hold	amazing	depressing	hang up	swipe	disappointed
19. end a phone call						
20. move your fingers on a screen						
21. sad because things didn't go as expected						
	exciting	embarrassed	frightened	tiring	appropriate	frustrated
22. feeling upset because things aren't going right						
23. scared or afraid						
24. feel awkward or ashamed						
	inappropriate	rude	selfish	beat	busking	decline
25. say no to someone politely						
26. performing for money in public						
27. not right for the situation						
	inconsiderate	course	monopolize	circuit	lose	draw
28. lap, going around, tour						
29. control completely						
30. not thinking about others						

	<b>pitch</b>	<b>slope</b>	<b>team</b>	<b>fancy</b>	<b>send off</b>	<b>referee</b>
31. person who enforces rules in a game						
32. make someone leave, usually in sports						
33. a slanted surface						
	<b>spectator</b>	<b>cast</b>	<b>animation</b>	<b>dub</b>	<b>colleague</b>	<b>audience</b>
34. person watching an event						
35. person you work with						
36. people watching a performance						
	<b>dub</b>	<b>plot</b>	<b>scene</b>	<b>soundtrack</b>	<b>script</b>	<b>western</b>
37. written words for a play or movie						
38. the main events in a story						
39. change original voice in a video						
	<b>sequel</b>	<b>nod</b>	<b>subtitle</b>	<b>kick</b>	<b>drama</b>	<b>stare</b>
40. a follow-up to a story						
41. move head up and down to show agreement						
42. look at something for a long time						
	<b>whistle</b>	<b>expel</b>	<b>pass</b>	<b>misbehave</b>	<b>punish</b>	<b>cheat</b>
43. force someone to leave						
44. act badly, be naughty						
45. give consequence for bad behaviour						
	<b>basement</b>	<b>revise</b>	<b>attic</b>	<b>ceiling</b>	<b>chimney</b>	<b>outskirts</b>
46. change or correct something; go over something again						
47. pipe for smoke to go out						
48. edges of a town						
	<b>employment</b>	<b>cosy</b>	<b>modern</b>	<b>spacious</b>	<b>secondary</b>	<b>permanent</b>
49. having a lot of room; large						
50. having a job						
51. lasting forever						
	<b>qualify</b>	<b>overtime</b>	<b>promotion</b>	<b>translate</b>	<b>resign</b>	<b>retirement</b>
52. move to a higher position						
53. quit a job						
54. stop working, usually when older						
	<b>achieve</b>	<b>sack</b>	<b>promote</b>	<b>attach</b>	<b>temporary</b>	<b>compensation</b>
55. fire someone from a job						
56. only for a short time						
57. money given for loss or injury						
	<b>temptation</b>	<b>refund</b>	<b>management</b>	<b>payment</b>	<b>value</b>	<b>bargain</b>
58. wanting to do something bad						
59. good deal, low price						
60. get money back for something you bought						

## Appendix-D. Vocabulary Levels Test for Receptive Vocabulary Size Used as the Post-test

### Vocabulary Levels Test for Receptive Vocabulary Size

This is a test that looks at how well you know useful English words. Put a check under the word that goes with each meaning. Here is an example.

	game	island	mouth	movie	song	yard
land with water all around it						
part of your body used for eating and talking						
piece of music						

**It should be answered in the following way.**

	game	island	mouth	movie	song	yard
land with water all around it		✓				
part of your body used for eating and talking			✓			
piece of music					✓	

**Put a check under the word that goes with each meaning.**

	miss	afford	earn	borrow	charge	budget
1. plan for spending money						
2. take something with a promise to return it						

	pitch	slope	team	fancy	send off	referee
31. person who enforces rules in a game						
32. make someone leave, usually in sports						
33. a slanted surface						
	spectator	cast	animation	dub	colleague	audience
34. person watching an event						
35. person you work with						
36. people watching a performance						
	dub	plot	scene	soundtrack	script	western
37. written words for a play or movie						
38. the main events in a story						
39. change original voice in a video						
	sequel	nod	subtitle	kick	drama	stare
40. a follow-up to a story						
41. move head up and down to show agreement						
42. look at something for a long time						
	whistle	expel	pass	misbehave	punish	cheat
43. force someone to leave						
44. act badly, be naughty						
45. give consequence for bad behaviour						

3. have enough money for something						
	inherit	insurance	mortgage	salary	loan	tax
4. get things or money from someone who died						
5. money you borrow and pay back						
6. money you must give to government						
	starving	enormous	exhausted	freezing	hilarious	fascinating
7. So funny that you laugh a lot						
8. very, very tired						
9. really big						
	afraid of	end up	scam	pick up	run out	set off
10. tricking people to steal from them						
11. no more of something left						
12. start a trip or journey						
	ask for	apologize to	fed up with	believe in	arrive at	fond of
13. say sorry to someone						
14. really annoyed or tired of something						
15. really like something or someone						

16. really interested in something	keen on	tired of	proud of	prove	engaged	pay for
17. busy or involved in something						
18. show something is true						
	put on hold	amazing	depressing	hang up	swipe	disappointed
19. end a phone call						
20. move your fingers on a screen						
21. sad because things didn't go as expected						
	exciting	embarrassed	frightened	tiring	appropriate	frustrated
22. feeling upset because things aren't going right						
23. scared or afraid						
24. feel awkward or ashamed						
	inappropriate	rude	selfish	beat	busking	decline
25. say no to someone politely						
26. performing for money in public						
27. not right for the situation						
	inconsiderate	course	monopolize	circuit	lose	draw
28. lap, going around, tour						
29. control completely						
30. not thinking about others						
	basement	revise	attic	ceiling	chimney	outskirts
46. change or correct something; go over something again						
47. pipe for smoke to go out						
48. edges of a town						
	employment	cosy	modern	spacious	secondary	permanent
49. having a lot of room; large						
50. having a job						
51. lasting forever						
	qualify	overtime	promotion	translate	resign	retirement
52. move to a higher position						
53. quit a job						
54. stop working, usually when older						
	achieve	sack	promote	attach	temporary	compensation
55. fire someone from a job						
56. only for a short time						
57. money given for loss or injury						
	temptation	refund	management	payment	value	bargain
58. wanting to do something bad						
59. good deal, low price						
60. get money back for something you bought						

# CURRICULUM VITAE

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