

App-Solutely Motivated! EFL Vocabulary Learning in the Digital Age: “Memrise” and Learner Motivation through the Lens of SLA Theories*

Dijital Çağda İngilizce Kelime Öğrenimi: İkinci Dil Edinim Teorileri Merceğinden “Memrise” ve Öğrenci Motivasyonu

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ABSTRACT: This study examines the impact of the Mobile-Assisted Language Learning (MALL) application, Memrise, on the vocabulary learning motivation of English as a Foreign Language (EFL) learners and interprets the findings of the study based on Second Language Acquisition (SLA) theories to bridge the gap between theory and practice. Within this context, first, the related terms, concepts, and theories are clarified by referring to the related literature. Then, a synthesis of empirical studies between the years of 2016-2023 is presented through narrative review methodology. Thematic analysis is employed for data analysis. The results of the study reveal that through its gamified nature, competitive elements, mnemonics, audio-visual aids, and systematic repetition, Memrise increases learner motivation and engagement, promotes self-regulated learning, facilitates peer cooperation, aids in long-term vocabulary retention, and helps learners to master memorization and pronunciation. These results align with various SLA theories ranging from Comprehensible Input Hypothesis to Usage-Based Theory, which collectively explains how Memrise enhances motivation, engagement, and vocabulary retention. Nonetheless, specific constraints regarding the use of Memrise, such as technology accessibility challenges and variations in learning effectiveness in different learning contexts, are acknowledged, as well, indicating that Memrise should be used as a supplementary tool for blended learning rather than a standalone replacement for traditional instruction.

Keywords: Mobile-Assisted Language Learning(MALL), Memrise, vocabulary learning motivation.

ÖZ: Bu çalışma, Mobil Destekli Dil Öğrenimi (MALL) uygulaması Memrise'in Yabancı Dil olarak İngilizce (EFL) öğrenenlerin kelime öğrenme motivasyonu üzerindeki etkisini incelemekte ve çalışmanın bulgularını teori ve uygulama arasındaki boşluğu doldurmak için İkinci Dil Edinimi (SLA) teorilerine dayanarak yorumlamaktadır. Bu bağlamda, öncelikle ilgili terimler, kavramlar ve teoriler, ilgili literatüre atıfta bulunularak açıklığa kavuşturulmaktadır. Ardından, 2016-2023 yılları arasındaki ampirik çalışmaların bir sentezi, anlatı incelemesi metodolojisi aracılığıyla sunulmuştur. Veri analizi için tematik analiz kullanılmıştır. Çalışmanın sonuçları, Memrise'in oyunlaştırılmış doğası, rekabetçi unsurları, anımsatıcıları, görsel-işitsel yardımcıları ve sistematik tekrarı sayesinde öğrenen motivasyonunu ve katılımını artırdığını, öz-düzenlemeli öğrenmeyi teşvik ettiğini, akran işbirliğini kolaylaştırdığını, uzun süreli kelime dağarcığının korunmasına ve öğrenenlerin ezberleme ve telaffuzda ustalaşmalarına yardımcı olduğunu ortaya koymaktadır. Bu sonuçlar, Comprehensible Input Hypothesis'den Usage-Based Theory'e kadar, Memrise'in motivasyonu, katılımı ve kelime dağarcığını nasıl geliştirdiğini toplu olarak açıklayan çeşitli SLA teorileriyle uyumludur. Bununla birlikte, teknolojiye erişilebilirlik zorlukları ve farklı öğrenme bağlamlarında öğrenme etkinliğindeki farklılıklar gibi Memrise'in kullanımına ilişkin belirli kısıtlamalar da kabul edilmekte ve Memrise'in geleneksel öğretimin yerini almaktan ziyade harmanlanmış öğrenme için tamamlayıcı bir araç olarak kullanılması gerektiğini göstermektedir.

Anahtar kelimeler: Mobil Destekli Dil Öğrenimi (MALL), Memrise, kelime öğrenme motivasyonu.

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Foreign language learners may be able to convey their intended messages to listeners somehow even if those messages are structurally spoiled or contain distorted parts syntactically; however, it is almost impossible for them to express themselves and interact with others when they do not have a necessary vocabulary treasure (Sanosi, 2018). Thus, vocabulary is a crucial element of language to transmit messages to listeners, and it constitutes a significant place in the English as a foreign language (EFL), as well. That is why foreign language teachers are into teaching vocabulary with different methods and techniques to students. Among these techniques, Mobile Assisted Language Learning (MALL) has taken its place in language education recently (Li et al., 2023; Teymouri, 2024). When applications available on our smartphones are used for educational purposes appropriately, the possibility of having a more efficient lesson gets higher because, with the help of these applications, students may be motivated more easily and quickly compared to conventional teaching methods (Li et al., 2024). Also, these kinds of applications may not only ease the motivating process of EFL students but also increase their motivation. Thus, the incorporation of mobile technology into the lexicon of the digital realm appears to be a widely accepted notion (Ünal & Güngör, 2021). To this end, this paper aims to examine the effects of the use of a MALL application called “Memrise” on EFL learners’ vocabulary learning motivation by reviewing the related literature narratively and to bridge the gap between theory and practice by interpreting the findings of the study based on many Second Language Acquisition (SLA) theories. From this forth, the study asks the following research question:

1. How does the use of Memrise affect EFL students' vocabulary learning motivation?
2. How do the findings align with the SLA theories?

However, before moving on to the research synthesis, a theoretical background is provided below, including the terms and concepts with their importance for the EFL context.

Theoretical Background

Vocabulary denotes the assemblage of words utilized by individuals or groups (Goh & Burns, 2012) and is crucial for foreign language acquisition for two reasons. Primarily, it is essential for communication and language development (Baker et al., 1995; Schmitt, 2000), since grammar alone cannot enable meaningful interaction (Wilkins, 1972; Pan & Xu, 2011). Secondly, lexical competence is fundamental in EFL contexts, augmenting both receptive and productive skills (Nation, 2001; Cahyono & Widiati, 2008). Nevertheless, knowing a word encompasses not only its definition but also its pronunciation, usage, collocations, and grammatical functions (Nation, 1990). Consequently, contextualized learning (Nation, 2007) and Semantic Field Theory (Pan & Xu, 2011) were proposed as successful vocabulary acquisition methodologies. Within this context, English teachers have been urged to teach their students all aspects of a word instead of just meaning by deploying various useful strategies. To enable students to learn and internalize vocabulary with all their aspects in a motivated manner, some MALL applications such as “Memrise” can be used in the EFL context.

MALL refers to the use of mobile technologies like smartphones, tablets, iPods and more to facilitate learning (Chinnery, 2006). With the advent of technology, learning, and teaching have gone beyond boards and chalks. Thus, it has become

inevitable to integrate technology such as MALL into education. The key advantage of MALL is its accessibility for sure, allowing learners to study anytime and anywhere (Nah et al., 2008). In addition, contextualized vocabulary learning is now performed via mobile phones with the new trending approach MALL (Sanosi, 2018). That is why for a few decades now, using online websites or applications for educational purposes has become common.

“Memrise” is one of those free MALL applications, in this sense. It is a popular online and mobile assisted language learning tool that integrates evidence-based methods such as spaced repetition with engaging gamification and diverse multimedia content to enhance vocabulary acquisition. Established in 2010 and subsequently acknowledged as a premier language application (Google Play’s Best App of 2017), Memrise provides courses in several languages via an engaging, gamified experience (Esmaeili & Shahrokhi, 2020). The technical design employs an adaptive spaced repetition algorithm that arranges review sessions prior to the learner’s forgetting of a word, a method recognized for enhancing long-term memory retention (Fadhilawati et al., 2022). Memrise utilizes “mems,” which are user-created mnemonic devices (such as images, films, or humorous anecdotes) that link new vocabulary to vivid sensory stimuli and personal connections, thereby activating learners’ imagination and emotions to enhance memory retention (Zhang, 2019). This detailed vocabulary encoding is enhanced by gamification elements that transform learning into an engaging experience: learners accumulate points, advance through levels and badges, and cultivate a virtual garden of “flower-memories” that flourishes with each successful review (Nguyen et al., 2023). The game-like characteristics, such as instant visual and audio feedback for correct responses and competitive leaderboards, establish explicit objectives and incentives that maintain motivation and engagement in the learning process (Cancino & Castillo, 2021). Moreover, Memrise facilitates multimedia input and diverse exercise modalities: vocabulary is reinforced through audio recordings, typing and spelling assessments, multiple-choice evaluations, pronunciation exercises, and video segments featuring native speakers, accommodating various learning preferences (Hamer, 2021). The platform is exceptionally user-centric; namely, learners can select from thousands of pre-existing courses or user-generated content, or even develop and disseminate their own vocabulary lists, replete with graphics and audio, thus customizing their educational resources (Hamer, 2021). This flexibility, combined with the ability to tailor one’s study pace and prioritize specific test kinds, grants learners a sense of autonomy in their education. Memrise’s accessibility on mobile devices and its offline functionality (Mobile Assisted Language Learning) facilitate regular, portable practice, hence simplifying the incorporation of vocabulary study into everyday routines (Nuralisah & Kareviati, 2020). Collectively, these technical and pedagogical attributes foster a dynamic and learner-autonomous environment that renders vocabulary acquisition both pleasant and pedagogically robust.

In the realm of English as a Foreign Language (EFL) education, Memrise’s design strongly corresponds with the requirements of vocabulary learners and the tenets of effective lexical instruction. Proficiency in vocabulary is essential for communication in English as a Foreign Language, and insufficient vocabulary size frequently obstructs learners’ capacity to articulate themselves effectively (Portre, 1988). Memrise effectively tackles this difficulty by offering regular, spaced exposure to English

vocabulary in conjunction with significant contextual practice. The spaced repetition approach guarantees that new English vocabulary is consistently reviewed and reinforced until it is firmly entrenched in long-term memory (Aprizal & Wachyudi, 2024). The application's interactive exercises frequently introduce vocabulary within sentences or authentic scenarios instead of isolated lists, which promotes comprehension of usage and enhances semantic processing. Engaging with vocabulary in diverse, meaningful contexts has been demonstrated to bolster learners' confidence and communicative proficiency in English (Dian et al., 2023). Furthermore, by providing immediate feedback and monitoring progress, Memrise allows learners to assess their performance and modify their study tactics, which facilitates self-regulated learning that induces efficacy (Rohim et al., 2022). The gamified aspect of Memrise effectively tackles a longstanding challenge in EFL vocabulary acquisition which is student motivation. Game design elements such as points, stages, challenges, and social rivalry engage both intrinsic and extrinsic motivation in learners, transforming the arduous task of memorizing into a pleasurable and rewarding experience (Weissheimer et al., 2024). The learner autonomy provided by Memrise is especially advantageous in EFL education: students can independently enhance their English vocabulary outside the classroom by choosing content that aligns with their interests or proficiency, establishing personal objectives, and progressing at their own pace (Hamer, 2021; Luczak, 2017). This autonomous component not only enhances formal language education but also fosters independent learning practices.

Motivation drives learning efforts and is influenced by personal goals, attitudes, and external factors (McDonough, 2007; Gardner, 1985a). According to Self-Determination Theory (Deci & Ryan, 2000), motivation can be intrinsic (driven by enjoyment and satisfaction) or extrinsic (influenced by external rewards like grades, recognition, or avoiding negative consequences). Activities that promote competence, autonomy, and creativity enhance intrinsic motivation. Since Memrise integrates engaging and gamified elements, it can positively influence EFL learners' motivation for vocabulary acquisition, making the learning process more enjoyable and effective. In sum, Memrise's integration of spaced repetition, gamification, multimedia resources, community-generated content, and mobile accessibility forms a comprehensive educational instrument for EFL vocabulary enhancement. It utilizes recognized cognitive and motivational principles to improve vocabulary retention and recall, while concurrently enhancing student motivation and autonomy—crucial elements for success in foreign language acquisition (Zhang, 2019; Nguyen et al., 2023).

Narrative Literature Review

The detailed synthesis of the reviewed studies collectively demonstrates the efficacy of Memrise as a digital instrument for vocabulary learning motivation and proficiency along with some minor challenges.

Glod (2017), to illustrate, as part of her teacher training, conducted a study to find out how students can govern their development of lexical skills, raise their awareness of lexical chunks, and use vocabulary items in different linguistic contexts correctly with the help of Memrise. Memrise was introduced to a group of students from four different classes and the vocabulary items that they needed to learn were uploaded onto the platform. Students were asked to create mnemonics and Glod monitored the

process to ensure not to be misleading. Later, the results that students got from English vocabulary tests were compared with the degree to which they were involved, and used Memrise. The findings revealed that with a few exceptions, there was a correlation between them. Also, based on the comments coming from students, she reported that the students were so satisfied with the audio feature of the platform that they said that this was what they missed and wished for while they were making use of conventional word lists. It was also stated that after creating a mnemonic, one of the students looked so proud feeling confident, so she drew a conclusion that creating mnemonics led to involvement and in return this enabled them to have a confidence boost. Moreover, the comments of the students in the survey that Glod conducted at the end of the year made it clear that they liked the fact that they could get help from their peers on the platform instead of only using the materials given by the teacher. In addition, it was expressed by the students that Memrise was so fun that some of them kept using Memrise even after the study was completed. To this end, Glod (2017) concluded that using Memrise to teach students vocabulary had a positive influence on both students' academic success and motivation because in this way they could manage their learning and pace while having fun, which motivated and made them autonomous learners to set long term goals.

Since the use of the Memrise Application was likely to construct students' vocabulary treasure and pronunciation in the English teaching and learning process, Rahmawati et al., (2019) discussed the use of Memrise as a teaching tool which was aimed to build up students' vocabulary. The study followed the ASSURE model for analysis of the use of Memrise and tutorial, drill, and practice to teach Junior High School students were the methods to use media. The two classes using Memrise and not using Memrise were compared with each other and the ASSURE analysis strongly promoted the superiority of Memrise as a way of learning vocabulary over the methods and techniques which students would select by themselves. Also, Rahmawati et al., (2019) suggested that students using Memrise learned conveniently by enjoying their learning, and thus he concluded that Memrise was an effective media tool for teaching and learning vocabulary in Junior High School.

In another study, Fadhila(2016) carried out a study performing Classroom Action Research and aiming to improve the vocabulary achievement of 39-second semester students of the Faculty of Agriculture and Animal Husbandry at the Islamic University of Balitar through Memrise. The students learned 3 levels of agriculture vocabulary and they were asked to learn the vocabulary items in the class and go over them at home by using Memrise Application. The tools used for data collection were pre and post-tests and a questionnaire. Planning, acting, observing, and reflecting procedures were followed in one cycle. The results indicated that implementing Memrise to learn and review vocabulary improved the vocabulary achievement of students from a mean score of 60.45 in the Pre-test up to 86.27 in the Post-test. What is more, by taking the positive attitudes and responses of the students regarding Memrise reflected in the questionnaire into account, it was concluded that Memrise had a positive impact on students' vocabulary achievement and motivation.

Likewise, Huang et al., (2018) in their study, aimed to discover the effects of the use of applications on students' English vocabulary learning and to investigate the students' acceptance and perceptions towards using mobile learning programs such as

Memrise. A quasi-experimental research method was implemented in the study. Two classes from 7th grade were randomly selected; one to be the experimental group whereas the other one to be the normal group. Everything from the teacher to the contents and teaching method were the same except for the fact that the students in the experimental group used Memrise the mobile application to assist vocabulary learning. They used it for 20 minutes in the morning on weekdays. The experiment lasted 12 weeks. The data was collected employing three instruments: Memrise, English vocabulary tests, and a questionnaire. A pre and post-test of the “English Vocabulary Test” were conducted both before and after the experimental treatment and at the end of the experiment, a questionnaire was given to the experimental group to state their opinions as to whether they were motivated by Memrise or not. Data analysis was carried out via independent-samples t-test, the paired-samples t-test, and descriptive statistics. The findings obtained from the questionnaire showed that students' attitudes towards and opinions about Memrise were positive. First, it was stated by the students in the experimental group that they enjoyed Memrise and would like to go on using it in the future, too. Second, Memrise could not highly foster students' curiosity in learning English, but it contributed to this to some extent. Third, the experimental group performed great improvement in spelling between the pre and post-test. Considering these findings, Huang et al., (2018) came to an outcome that application, Memrise, was beneficial for students learning English.

Furthermore, in the first part of her paper, Luczak (2017) attempted to identify the present possibilities of the use of Memrise for teaching legal English vocabulary during a course for the TOLES (Test of Legal English Skills) certificate examination. Within this framework, the paper aimed to gain insight into different exercises fostering memorizing vocabulary and teaching collocations and phrases. In the second part, on the other hand, Luczak (2017) presented research that she implemented with her law students. The research investigated students' opinions regarding Memrise and examined their test results during the legal English course to see whether Memrise has an impact on their achievements or not. In other words, it compared the ones who used Memrise to revise vocabulary and those who preferred traditional methods in terms of academic success by evaluating their scores on the tests. Also, it sought an answer to whether the ones who contributed to Memrise courses by creating courses on the platform performed better in tests compared to those who just used it. After the research, by the students who used and contributed to Memrise, it was expressed that they welcomed Memrise with a high enthusiasm and asserted that it now had a vast number of followers. In line with the comments, the research findings confirmed that the test results of the students were positively affected by using Memrise as a learning tool. The findings also revealed that both the timespan spent on learning and engagement in the course creation process had a positive effect on the students' test results. Thus, it was indicated that it is of high significance to invite and encourage students to create course content because by doing so, they spend much more time on the platform dealing with the vocabulary items, which in the long run can contribute a lot. All in all, Luczak (2017) drew a conclusion that Memrise proved to be very beneficial for the users and authors (students creating course contents) of the courses.

Ono (2017), similarly, sought to shed light on the value of an online vocabulary learning system, Memrise, for memory retention and learning difficult foreign

vocabulary. In his study, with 26 undergraduate students whose department is EFL in a TOEFL iBT course were studied. 400 words from the TOEFL data set on Memrise. 51 most incorrectly identified words were categorized according to accuracy, and frequency. For most of difficult words, the average accuracy rate of acquisition was above 75%. Longer words seem more challenging for memorization than shorter ones, but shorter and obscure words were inclined to be equally difficult for students. So, Ono (2017) suggested that not only word length but also prior language experience affected memory retention. He also concluded that repetitive exposure to difficult words via spaced intervals in Memrise appeared to assist memory retention and vocabulary acquisition, which highlights the value of using Memrise to learn vocabulary.

As mobile applications with language teaching purposes had the possibility to change the way languages were learned, Abarghoui and Taki (2018) examined perceptions of students towards MALL as a complement to direct instruction in EFL classes. For this, 36 students who are in the 10th grade in high school were worked with in Iran. The students were divided into two groups as the treatment group and the control group. Direct English instruction was provided to the control group while MALL-Memrise-assisted direct instruction was provided to the treatment group. Those in the treatment group benefited from the computer laboratory for the last 20 and 30 minutes of each class during the 6-week time period whereas the others in the control group stayed in their classes. As a data collection tool, a questionnaire was made use of and the attitudes of students towards MALL were positive. To add, surveys disclosed that students using Memrise had a more positive attitude towards its effectiveness than those who took part in direct instruction had towards the direct instruction's effectiveness. The results of the questionnaire demonstrated that Memrise could be an extremely effective instructional resource affecting students' attitudes towards learning English if combined with direct instruction. Abarghoui and Taki (2018) also noted that Memrise was not intended to be replaced with direct language instruction; rather, it was to serve as an additional supplement to direct instruction.

Reed & Hooper (2018) set out a study to make a comparison between two groups of 27 EFL Japanese university students studying vocabulary from the New General Service List (NGSL) through Memrise, which offered spaced repetition of items and gamification. One of the groups studied the items by using their Japanese translations (English-Japanese) while the other studied them with their original English definitions (English-English). A questionnaire was used as the data collection tool at the end of the study. Later, four interviews were conducted with four students; one student experiencing a positive effect and one experiencing a negative effect were chosen from both groups. Some participants answered positively to Memrise's gamified features. That is gamification elements in Memrise foster learning by triggering participants to want to learn. Also, the majority of participants reported that they felt competitive when they noticed the leaderboard and it increased their motivation for learning. Likewise, based on the extremely positive feedback from the participants received through the questionnaire and interview, Reed & Hooper (2018) argued that Memrise contributed positively to both groups as a motivating factor with its gamified and competitive nature.

In another study, Esmaeili and Shahrokhi (2020) intended to determine how the Memrise program affected the collocation learning and retention of Iranian EFL

students. A quasi-experimental approach was employed to achieve this goal. Based on convenience sample using two complete classes, 75 Iranian intermediate EFL students studying English at a private language school in Farahan, Iran, were chosen to take part in the study. In order to analyze the data, the scores were input into the SPSS program. The examination of the data revealed that the Memrise program had a statistically significant impact on the way Iranian EFL learners learned collocations. Furthermore, it was shown that Iranian EFL learners' collocation retention was statistically affected differently by the Memrise program. Furthermore, research demonstrated a statistically significant difference in the immediate post-test results of Iranian EFL students receiving Memrise program compared to those receiving traditional instruction. Ultimately, the results showed that the delayed post-test scores of Iranian EFL students using Memrise program differed statistically significantly from those of students receiving traditional instruction. Consequently, based on the results and observing students' motivation, Esmaeili and Shahrokhi (2020) suggested that EFL teachers should try to enhance their students' collocation learning and retention by using the Memrise application as an additional tool in the classroom.

However, despite its benefits, a recent study noted challenges associated with Memrise (Nguyen et al., 2023). To illustrate, issues such as unreliable internet access and varying effectiveness across learning contexts impact its use. Also, in another recent study, no significant difference was found in vocabulary acquisition between Memrise users and those using traditional methods though Memrise demonstrated higher motivation (Wang et al., 2023). These findings suggest that while Memrise can be an effective learning tool, external factors such as infrastructure and learning preferences may influence its overall effectiveness.

Wang et al. (2023), for instance, evaluated the efficacy of the Memrise program in inspiring American middle school pupils to acquire Chinese as a foreign language (CFL). The study involved 27 participants who were middle school students enrolled in Chinese as a Foreign Language courses at an urban public middle school in the Midwestern United States. In the study, the experimental group utilized the Memrise application, whereas the control group employed conventional paper flashcards to acquire new Chinese characters. The mixed-design ANOVA results revealed no significant difference ($p > 0.05$) in scores between students in the experimental and control groups regarding the acquisition of Chinese characters. The Group main effect was substantial ($p < 0.001$), demonstrating that students in the experimental group exhibited more motivation and desire for learning CFL compared to those in the control group. It is recommended that subsequent study incorporate a bigger sample size and additional forms of CFL learning applications.

Nguyen et al. (2023), on the other hand, examined the impact of English language acquisition on the socioeconomic development of Vietnam, focusing on the advantages of technology-assisted vocabulary learning. A mixed-method approach was utilized incorporating both quantitative and qualitative designs, to examine the vocabulary development of college students ($n=23$) who received instruction through Memrise (Experimental group) alongside a traditional teaching method, in contrast to their counterparts ($n=24$) who were instructed solely through a traditional teaching method (TTM) (Control group) without the application. The students' perceptions regarding the advantages and difficulties of using Memrise for vocabulary acquisition

post-treatment were also examined. The study produced significant results across various domains. Quantitative analysis of the vocabulary post-tests indicated that the experimental group significantly surpassed the control group in vocabulary scores. Qualitatively, interview data revealed that Memrise favorably influenced students' motivation and interest in vocabulary learning, indicating its efficacy in tackling specific issues of engagement and retention in vocabulary acquisition. Nonetheless, logistical difficulties arose, especially in rural areas. Factors such as unreliable internet connections and insufficient mobile devices negatively impacted the quality of learning experiences with Memrise. This study emphasizes critical pedagogical implications and underscores the significance of technological interventions in language acquisition, providing insights into overcoming infrastructure obstacles and customizing e-learning strategies for varied educational contexts and requirements.

Methodology

Research Design

The current study attempts to review studies examining the impact of the MALL Application "Memrise" on the vocabulary learning motivation of EFL learners and interprets the findings of the reviewed studies based on many groundbreaking SLA theories to bridge the gap between theory and practice. It is a narrative review study which is a type of literature review. Narrative reviews also known as narrative overviews (Oxman et al., 1994), are comprehensive unsystematic narrative syntheses of previously published data; they encapsulate the main points of each article and convey the author's conclusions succinctly (Helewa & Walker, 2000). Different from systematic reviews adopting pre-defined protocols such as PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement, narrative reviews do not follow a predefined protocol for identifying, selecting, and synthesizing research findings (Sukhera, 2022), which leads to some degree of flexibility allowing for a broader exploration of a topic and making the research rigorous and practical, as well (Ferrari, 2015). Drawing on these, to fully grasp the impact of the MALL application "Memrise" on EFL learners' vocabulary learning motivation with its all aspects, narrative review was chosen as the research methodology of this study.

Selection of the Studies

Depending on the study's aim, to collect data for this narrative review study, relevant articles were identified and screened by using the keyword "Memrise". Using only this keyword yielded desired outcome because when other possible keywords like "English language learning" or "vocabulary learning motivation" are used along with "Memrise", then the search is filtered more than expected and even some related studies disappear. That is why, only "Memrise" was typed in the search engines of the databases. The databases sought for the articles were "Web of Science", "Scopus" and "Google Scholar". The search utilized these databases due to their wide coverage. They catalog a diverse array of academic sources, encompassing journal articles, conference proceedings, and dissertations, which makes them complete search engines for scholarly material and facilitating user accessibility. They are accessible databases that enable scholars to swiftly and effectively locate pertinent literature. They are easy to use; in other words, they facilitate the straightforward filtering of search results by date,

relevancy, and citation count. They are complimentary and open-access search engines, rendering them optimal selections for scholars lacking access to costly subscription-based resources. Studies published between 2016 and 2023 were included in the review. Empirical studies focusing on EFL learners were considered for selection. Research examining the impact of Memrise on vocabulary motivation was analyzed. Peer-reviewed journal articles, conference papers, and theses were reviewed. At first, 154 studies were identified; 26 on Web of Science, 31 on Scopus and 97 on Google Scholar. 9 studies were removed because of duplication. 145 studies were screened and retrieved. Among these, 11 studies met the inclusion criteria and 134 were excluded due to the reasons expressed in the exclusion criteria. To exemplify, studies which are not related to Memrise and vocabulary learning motivation were excluded from the review. Moreover, research conducted in non-EFL contexts (e.g., ESL or general education) was not considered. In addition, review articles, conceptual articles, theoretical articles and editorials were omitted from the selection process. Furthermore, studies which are not written in the English language were excluded from the review. Research comparing Memrise with other mobile applications was not also considered for inclusion. What is more, studies published before 2016 were omitted from the selection processes. No matter how much narrative reviews are far more flexible in terms of following a protocol compared to systematic reviews, the researcher specified the inclusion and exclusion criteria to provide reassurance. Please see Table 1 for the criteria.

Table 1

Inclusion and Exclusion Criteria for the Review

Inclusion Criteria	Exclusion Criteria
Studies published between 2016 and 2023 were included in the review.	Studies not related to Memrise or vocabulary motivation were excluded from the review.
Empirical studies focusing on EFL learners were considered for selection.	Research conducted in non-EFL contexts (e.g., ESL or general education) was not considered.
Research examining the impact of Memrise on vocabulary motivation was analyzed.	Review articles, conceptual articles, theoretical articles and editorials were omitted from the selection process.
Peer-reviewed journal articles, conference papers, and theses were reviewed.	Studies not written in English language were excluded from the review.
	Research comparing Memrise with other mobile applications was not considered for inclusion.
	Studies published before 2016 were omitted from the selection processes.

Overview of the Studies Included in the Review

The selected articles investigate vocabulary acquisition in a wide array of linguistic and educational contexts across various nations utilizing a range of methodologies. The research was conducted in Indonesia, Luxembourg, China, Poland, Japan, Iran, the USA, and Vietnam, encompassing both English as a foreign language (EFL) and foreign language acquisition in various circumstances. The databases that the selected articles are repositied in are also various. The six of the studies are in Google Scholar, four of them are in Web of Science and one of them is in Scopus. The studies encompass the period from 2016 to 2023 and examines various learner demographics, including high school, university, and middle school pupils, in addition to specialist learners preparing for examinations like as TOEFL and TOLES. Moreover, the investigations utilize a combination of experimental, quasi-experimental, and mixed-methods methodology.

In the context of vocabulary acquisition, research differs according to the educational environment and intended learners. Certain studies concentrated on university students, such Fadhila (2016), who analyzed agricultural vocabulary acquisition in Indonesia, and Ono (2017), who explored TOEFL vocabulary learning among EFL university students in Japan. In addition, Reed and Hooper (2018) investigated Japanese university students utilizing Memrise for vocabulary acquisition. Similarly, Nguyen et al. (2023) investigated college students in Vietnam. However, some studies were carried out in private language institutions. To exemplify, Esmaili and Shahrokhi (2020) analyzed students at private language institutions in Iran studying English collocations. By the same token, Luczak (2017) investigated the acquisition of legal English vocabulary in a course for the TOLES examination in Poland. Moreover, some research focused on high school students. To illustrate, Glod (2017) concentrated on high school students and their lexical chunk learning using Memrise in Luxembourg. Likewise, Abarghoui and Taki (2018) studied the application of Memrise in EFL instruction in Iran with high school students. Furthermore, Rahmawati et al. (2019) analyzed high school students' general vocabulary acquisition in Indonesia. Some research, on the other hand, were conducted with middle school students. For instance, Huang et al. (2018) examined seventh-grade pupils in China and Wang et al. (2023) investigated vocabulary acquisition among American middle school students learning Chinese as a foreign language.

These studies employ a blend of experimental, quasi-experimental, and mixed-methods approaches. Fadhila (2016) employed classroom action research, whereas Glod (2017), Ono (2017), and Wang et al. (2023) utilized experimental designs. Huang et al. (2018), Abarghoui and Taki (2018), and Esmaili and Shahrokhi (2020) conducted quasi-experimental research. Reed and Hooper (2018) conducted a comparison study, whereas Rahmawati et al. (2019) utilized the ASSURE model for comparative analysis. Luczak (2017) and Nguyen et al. (2023) employed mixed-methods methodologies. Many studies utilized pre/post-tests to assess vocabulary retention, with many additionally using questionnaires, interviews, or statistical analyses, including SPSS and mixed-design ANOVA. Please see Table 2 for the overview of the studies.

Table 2
Overview of the Studies

Authors	Year	Context	Database	Country	Methodology
Fadhila	2016	University students learning agricultural vocabulary	Google Scholar	Indonesia	Classroom Action Research, pre/post-tests, questionnaire
Glod	2017	High school students learning lexical chunks and vocabulary with Memrise by creating mnemonics	Google Scholar	Luxembourg	Experimental study, vocabulary tests, student feedback
Luczak	2017	Students learning legal English vocabulary during a course for TOLES exam	Scopus	Poland	Mixed-methods study, test scores comparison, student feedback
Ono	2017	University students whose departments is EFL in a TOEFL course learning vocabulary for TOEFL exam	Google Scholar	Japan	Experimental study, accuracy analysis of word retention
Huang et al.	2018	7th-grade English vocabulary learning	Web of Science	China	Quasi-experimental, pre/post-tests, questionnaire
Abarghoui & Taki	2018	High school students using Memrise in EFL course as a complement to direct instruction	Google Scholar	Iran	Quasi-experimental, questionnaire survey
Reed & Hooper	2018	EFL Japanese university students using Memrise for vocabulary learning	Google Scholar	Japan	Comparative study, questionnaire, interviews
Rahmawati et al.	2019	High School students learning vocabulary	Google Scholar	Indonesia	ASSURE model analysis, comparative study
Esmaeili & Shahrokhi	2020	Private language school students learning English collocations	Web of Science	Iran	Quasi-experimental, SPSS data analysis, pre/post-tests
Wang et al.	2023	American middle school students learning Chinese as a foreign language	Web of Science	USA	Experimental, mixed-design ANOVA, pre/post-tests
Nguyen et al.	2023	College students learning English vocabulary	Web of Science	Vietnam	Mixed-methods study, pre/post-tests, qualitative interviews

Data Analysis

For data analysis, the study employed the thematic analysis methodology to be able to draw conclusions at the end of the review more easily. Thematic analysis is

defined as the process of gathering information from a certain domain in accordance with specific aims, organizing it around a common theme, classifying it based on analogous characteristics, and creating a structured entity (Cohen et al., 2007). In line with this, themes were identified out of the findings of the reviewed studies. In the process of forming themes, two independent experts in the field worked as interraters to cross check and increase the reliability of the study. Key findings extracted from the thematic analysis are presented in the results section. Moreover, the findings of the review are discussed in relation to many Second Language Acquisition (SLA) theories in the second part of the results in detail.

Results

The Use of Memrise on EFL Students' Vocabulary Learning Motivation

The thematic analysis of the reviewed studies' findings reveals that Memrise may serve as an effective Mobile-Assisted Language Learning (MALL) tool for improving vocabulary learning and motivation among EFL learners for several reasons. First, one of the primary benefits of Memrise is its capacity to foster autonomous learning and self-regulation. Research by Glod (2017) and Luczak (2017) indicates that learners using Memrise cultivate a sense of ownership toward their vocabulary acquisition. Memrise promotes a sense of independence in learners by enabling them to construct their own mnemonics and participate in self-directed learning, which is essential for sustained language acquisition. Second, the platform's peer collaboration functionalities, as outlined in Glod (2017), allow learners to gain from shared learning experiences, thereby augmenting their vocabulary acquisition beyond conventional rote memorizing methods. Third, another significant feature noticed in the findings is the influence of gamification on motivation and engagement. Research conducted by Reed and Hooper (2018), Huang et al. (2018), and Abarghoui and Taki (2018) substantiates that the gamified features of Memrise, such as competitive leaderboards and rewards, markedly improve learner motivation. The incorporation of gamified elements creates an engaging learning atmosphere, enhancing the probability of sustained involvement. Students particularly expressed delight for the reward system, which rendered vocabulary acquisition pleasurable and motivated them to engage with the platform consistently. Fourth, Memrise's systematic and repetitive presentation of language increases long-term retention. The spaced repetition approach guarantees that learners revisit vocabulary at ideal intervals, enhancing memory retention and reducing the forgetting curve. Consequently, there are substantial enhancements in learners' vocabulary test scores and academic performance following the utilization of Memrise as reported in the studies of Fadhila (2016); Esmaeili & Shahrokhi, (2020); Rahmawati et al., (2019) and Ono, (2017). Fifth, the audio-visual aids included into the platform facilitate pronunciation proficiency, since learners obtain immediate feedback on their advancement (Rahmawati et al., 2019).

Notwithstanding these advantages, some research underscores the obstacles and limitations linked to the utilization of Memrise. First, challenges including unreliable internet connectivity and technological limitations were observed, especially in rural regions (Nguyen et al., 2023; Wang et al., 2023). Second, although Memrise was shown to enhance motivation, other research (e.g., Wang et al., 2023) indicated no statistically

significant difference in vocabulary acquisition between students utilizing Memrise and those employing conventional approaches. This indicates that although Memrise functions as a valuable supplemental resource, it may not entirely supplant traditional vocabulary acquisition methods. Rather, it should be incorporated into a mixed learning model, merging direct instruction with digital reinforcement.

All in all, the results indicate that Memrise improves learners' motivation through gamification, engagement through competitive elements, and vocabulary retention through audiovisual aids and mnemonics. It enhances pronunciation precision through its spaced repetition method, cultivates student autonomy through self-regulated learning processes, and encourages peer collaboration through interactive components, rendering vocabulary acquisition a rewarding and pleasurable experience. However, to optimize its efficacy, educators should integrate Memrise with conventional teaching methods, guaranteeing that learners obtain a comprehensive vocabulary acquisition experience. Moreover, future research may investigate methods to address technology constraints and customize Memrise-based instruction for various learner profiles to improve its relevance across multiple educational environments. Please see Table 3 for the thematic codes and key findings to better grasp the impact of the use of Memrise on EFL students' vocabulary learning.

Table 3

Thematic Coding Framework

Theme	Key Findings	Supporting Studies
Autonomous Learning and Self-Regulation	Memrise promotes autonomous learning, enabling students to oversee their vocabulary development using mnemonic techniques and collaborative efforts with peers.	Glod (2017), Luczak (2017)
Motivation and Engagement Through Gamification	Gamification components, such leaderboards and competition, enhance student motivation and engagement. Students conveyed satisfaction and eagerness to persist in utilizing Memrise..	Reed & Hooper (2018), Huang et al. (2018), Abarghoui & Taki (2018)
Effectiveness in Vocabulary Retention and Academic Performance	Students utilizing Memrise demonstrated notable enhancements in vocabulary assessment scores and retention, especially through spaced repetition and organized learning.	Fadhila (2016), Esmaili & Shahrokhi (2020), Rahmawati et al. (2019), Ono (2017)
Peer Collaboration and Social Learning	Memrise facilitates peer-to-peer interaction and content generation, hence augmenting engagement and academic achievement.	Glod (2017), Luczak (2017)
Challenges and Limitations of Memrise Use	Factors such as inconsistent internet connectivity and differing efficacy among educational environments affect its utilization. Certain research revealed no substantial difference in language development compared to conventional approaches.	Nguyen et al. (2023), Wang et al. (2023)

Alignment of the Results with the SLA Theories

The findings of this review on Memrise for EFL vocabulary learning align with multiple Second Language Acquisition theories, demonstrating its effectiveness as a supplementary tool. First, Glod (2017) and Luczak (2017) indicate that Memrise offers comprehensible input via audiovisual aids, flashcards, and mnemonic techniques, hence endorsing Krashen's Comprehensible Input Hypothesis (1982). This theory posits that language learners internalize new vocabulary through exposure to input that is marginally demanding yet comprehensible ($i+1$). Memrise customizes learning exercises according to user progress, guaranteeing that learners have suitable linguistic input at an ideal difficulty level, hence promoting structured vocabulary acquisition. Second, Glod (2017) emphasizes peer collaboration as a significant advantage of Memrise, wherein learners interact, formulate mnemonics, and exchange educational experiences. This corresponds with Vygotsky's Sociocultural Theory (1978), which emphasizes the significance of interaction and scaffolding in language acquisition. Students gain advantages from interacting with more knowledgeable peers in a collaborative learning setting, which improves their capacity to collectively construct meaning instead of depending exclusively on direct instruction. By enabling students to share content and create mnemonics, Memrise provides opportunities for scaffolding and cooperative learning, further reinforcing the role of social contact in vocabulary acquisition. Third, Glod (2017) and Luczak (2017) highlight that learners experience autonomy and competence while utilizing Memrise, aligning with Deci and Ryan's Self-Determination Theory (2000), which posits that intrinsic motivation is driven by autonomy, competence, and relatedness. According to Reed and Hooper (2018), Huang et al. (2018), and Abarghoui and Taki (2018), the competitive aspects of Memrise, including leaderboards and self-directed learning, enhance autonomy; interactive components boost competence; and gamified features like badges promote relatedness. Moreover, they state the engagement generated by these aspects indicates that learners are more inclined to continue their vocabulary acquisition endeavors due to the rewarding and enjoyable experience offered by Memrise, hence enhancing intrinsic motivation. Fourth, the study's findings are in line with Sweller's Cognitive Load Theory (1988), which asserts that information should be presented in a way that optimizes working memory. According to this theory, dividing information into smaller, organized chunks leads to better retention and processing. In the same vein, Fadhila (2016), Ono (2017), Rahmawati et al. (2019), and Esmaeili and Shahrokhi (2020) reveal that Memrise's use of spaced repetition, and chunking strategies reduce cognitive overload by presenting vocabulary in digestible segments. Fifth, Rahmawati et al. (2019) prove that students valued the audio pronunciation function, enhancing their phonological knowledge and spelling accuracy. This corroborates Schmidt's Noticing Hypothesis (1990), which argues that conscious noticing of linguistic features is essential for language acquisition. Immediate visual and auditory feedback on Memrise enables learners to identify and rectify errors in real-time (Glod, 2017; Luczak, 2017), thereby enhancing their comprehension of word meanings and pronunciation. Memrise promotes deeper cognitive processing and augments vocabulary acquisition by making learners explicitly aware of language patterns.

Glod (2017) suggests that while it is mainly self-directed, certain learners seek assistance from peers and instructors, in tune with Long's Interaction Hypothesis

(1996), which proposes that meaningful interaction, meaning negotiation, and feedback facilitate language acquisition. Although direct communication is not a fundamental aspect of Memrise, learners who communicate with peers and instructors for assistance might gain advantages from interaction-based learning. Moreover, Glod (2017) and Luczak (2017) demonstrate that students took advantages of the audio-visual aids, hence enhancing cognitive encoding (Fadhila, 2016; Ono, 2017; Rahmawati et al., 2019; Esmaeili & Shahrokhi, 2020). This correlates with Paivio's Dual Coding Theory (1971), which states that memory retention is improved when information is conveyed through various modalities. The integration of visuals, pronunciation instructions, and videos in Memrise adheres to this idea, enhancing learners' ability to recall language by engaging both verbal and visual cognitive channels. In addition, Fadhila (2016), Ono (2017), Rahmawati et al. (2019), and Esmaeili and Shahrokhi (2020) indicate that learners recalled vocabulary more effectively due to the spaced intervals of exposure. Memrise employs spaced repetition, a technique rooted in Ebbinghaus's Spaced Repetition Theory (1885) focusing on memory retention. The organized review cycles of Memrise assist learners in consolidating vocabulary knowledge over time, mitigating quick forgetting and enhancing long-term retention. Furthermore, Fadhila (2016), Ono (2017), Rahmawati et al. (2019), and Esmaeili and Shahrokhi (2020) point out that Memrise tailors vocabulary difficulty to learners' progress based on their previous performance and it cultivates meaningful engagement with language items in a manner that reflects natural learning processes, thereby ensuring that learners encounter and practice words in diverse contexts. The platform's such adaptive characteristics are compatible with Ellis's (2002) and Tomasello's (2003) Usage-Based Theory. This theory argues that language acquisition occurs when learners are frequently exposed to linguistic patterns that are customized based on their previous performances, mirroring natural learning processes and aligning with Memrise's methodology for vocabulary reinforcement. Please see Table 4 below for the summary of the reviewed studies' findings about Memrise in relation to SLA theories.

Table 4

Reviewed Studies' Findings about Memrise in Relation to SLA Theories

SLA Theories	Memrise
Comprehensible Input Hypothesis (Krashen, 1982)	Memrise provides comprehensible input through audiovisual aids, flashcards, and mnemonics, ensuring appropriate linguistic input. Glod (2017), Luczak (2017)
Sociocultural Theory (Vygotsky, 1978)	Peer collaboration on Memrise fosters interaction and scaffolding, enhancing vocabulary learning. Glod (2017)
Self-Determination Theory (Deci & Ryan, 2000)	Gamified features, leaderboards, and self-directed learning promote autonomy, competence, and intrinsic motivation. Glod (2017), Luczak (2017), Reed and Hooper (2018), Huang et al. (2018), Abarghoui and Taki (2018)

Cognitive Load Theory (Sweller, 1988)	Spaced repetition and chunking strategies help reduce cognitive overload and improve retention. Fadhila (2016), Ono (2017), Rahmawati et al., (2019), Esmaeili and Shahrokhi (2020)
Noticing Hypothesis (Schmidt, 1990)	Audio pronunciation features and real-time feedback aid learners in recognizing and correcting errors. Rahmawati et al.,(2019),Glod, (2017), Luczak, (2017)
Interaction Hypothesis (Long, 1996)	While primarily self-directed, some learners benefit from peer and instructor interactions. Glod (2017)
Dual Coding Theory (Paivio, 1971)	Use of visuals and auditory cues enhances memory retention by engaging multiple cognitive channels. Glod (2017), Luczak (2017), Fadhila (2016), Ono (2017), Rahmawati et al., (2019), Esmaeili and Shahrokhi (2020)
Spaced Repetition Theory (Ebbinghaus, 1885)	Memrise's review cycles strengthen long-term vocabulary retention. Fadhila (2016), Ono (2017), Rahmawati et al., (2019), Esmaeili and Shahrokhi (2020)
Usage-Based Theory (Ellis, 2002; Tomasello, 2003)	Adaptive learning mirrors natural language acquisition, reinforcing vocabulary through repeated contextual exposure. Fadhila (2016), Ono (2017), Rahmawati et al., (2019), Esmaeili and Shahrokhi (2020)

Conclusion and Discussion

Vocabulary is a crucial element of language to transmit messages to listeners. Teaching vocabulary with different techniques may help students' vocabulary learning. Among these techniques, Mobile Assisted Language Learning (MALL), which is the use of mobile technologies, has come forward recently. Mobile Technologies may not only ease the motivating process of EFL students but also increase their motivation. In parallel with this, in this paper, the effects of the use of a MALL application called "Memrise" on EFL learners' vocabulary learning motivation were examined by reviewing the related literature and the findings were discussed in relation to SLA theories. The results indicate that Memrise improves learners' motivation, engagement, and vocabulary retention via its gamified features, competitive aspects, mnemonic techniques, audiovisual resources, interactive components, spaced repetition, and self-directed learning methods. It offers systematic vocabulary exposure, enhances pronunciation accuracy, encourages learner autonomy, and facilitates peer collaboration, rendering vocabulary acquisition an exciting and dynamic endeavor. Nonetheless, certain constraints, including technology accessibility challenges and disparate efficacy across various educational contexts, indicate that Memrise ought to be utilized as an ancillary resource rather than substituting conventional instruction.

From a theoretical perspective on SLA, these findings correspond with several frameworks. Krashen's Input Hypothesis (1982) is corroborated by Memrise's delivery of comprehensible input via contextualized vocabulary exposure. The platform's interactive features and peer collaboration exemplify Vygotsky's Sociocultural Theory (1978), whereby learners exchange mnemonics and participate in social learning, thereby experiencing scaffolded learning within their Zone of Proximal Development (ZPD). Moreover, Memrise's gamification and tailored feedback systems correspond with Self-Determination Theory (Deci & Ryan, 2000), augmenting intrinsic motivation by fostering autonomy and competence. Moreover, Schmidt's Noticing Hypothesis (1990) is supported by the immediate feedback mechanism, enabling learners to notice and correct their mistakes in pronunciation and usage. The spaced repetition system of Memrise aligns with Ebbinghaus's Spaced Repetition Theory (1885), which posits that long-term vocabulary retention is best attained by gradual, repeated exposure. The utilization of mnemonics, dual-modal input (text and audio), and flashcards correlates with Paivio's Dual Coding Theory (1971), which asserts that multimodal input facilitates enhanced cognitive processing and memory retrieval. Moreover, Memrise adopts adaptive difficulty levels that adjust to users' achievement, so confirming Usage-Based Theory (Ellis, 2002; Tomasello, 2003) by facilitating regular exposure to and meaningful engagement with vocabulary.

In sum, Memrise is an exceptionally powerful instrument for vocabulary acquisition, bolstering motivation, retention, and engagement, underpinned by robust theoretical foundations in many SLA frameworks. For optimal outcomes, it should be carefully integrated into blended learning models as a supplemental tool to maximize its advantages while mitigating potential problems.

Pedagogical Implications

To optimize the advantages of Memrise in EFL vocabulary education, various pragmatic recommendations may be contemplated. First, educators should integrate Memrise with conventional vocabulary training, providing students with structured coaching in conjunction with digital reinforcement. Second, educators can utilize Memrise's gamified elements by organizing friendly competitions, leaderboard challenges, and reward-based incentives to maintain student motivation. Third, institutions ought to provide training sessions to acquaint both educators and learners with Memrise's functionalities, so enhancing its efficacy for vocabulary acquisition. Fourth, educators ought to consistently evaluate students' advancement in Memrise and offer supplementary assistance or criticism informed by their performance metrics. Fifth, educational institutions and policymakers must strive to enhance internet accessibility and furnish essential digital resources to guarantee fair access to Memrise across all learning situations. Sixth, teachers can customize Memrise courses to meet specific curricular requirements, enhancing the relevance and efficacy of the learning experience for students. Lastly, promoting peer collaboration via group challenges and collective mnemonic development can significantly improve language memory and social interaction. By adopting these ideas, educators may fully utilize Memrise, fostering a dynamic and engaging vocabulary acquisition experience for EFL students.

Recommendations for Future Research

The review's findings indicate many potential directions for future research on Memrise in EFL vocabulary acquisition, all directly linked to empirical evidence. Initially, given that Memrise promotes independent learning via mnemonic development and self-directed engagement (Glod, 2017; Luczak, 2017), longterm research could investigate its effects on learners' enduring self-regulation and metacognitive skills. Secondly, considering the platform's motivational efficacy through gamification components such as leaderboards and badges (Reed & Hooper, 2018; Huang et al., 2018; Abarghoui & Taki, 2018), experimental investigations should isolate these components and examine how learner characteristics, including competitiveness and digital affinity, influence outcomes. Third, data indicates that Memrise improves vocabulary retention by spaced repetition and organized presentation (Fadhila, 2016; Ono, 2017; Rahmawati et al., 2019; Esmaeili & Shahrokhi, 2020); future studies may investigate retention variations according to word type and duration. Fourth, given that Memrise facilitates peer cooperation and the collective construction of mnemonics (Glod, 2017; Luczak, 2017), research might examine the impact of group-based activities on vocabulary acquisition and collaborative competencies. Fifth, obstacles such as restricted internet access and inadequate infrastructure (Nguyen et al., 2023; Wang et al., 2023) need investigation into the impact of contextual elements and offline iterations of Memrise on its efficacy. Sixth, while several studies indicate no substantial benefit above conventional approaches (Wang et al., 2023), comparative or blended-learning research designs are essential to ascertain Memrise's supplementary function. Seventh, given that the platform incorporates audio-visual aids for pronunciation and feedback (Rahmawati et al., 2019), subsequent research could evaluate its impact on phonological awareness and listening comprehension. Finally, while Memrise corresponds with Second Language Acquisition theories, future theoretical research should investigate how these theories are activated during app utilization via tools such as clickstream analysis and learner interviews.

Limitations of the Study

This review emphasizes Memrise's contribution to EFL vocabulary acquisition while recognizing its limitations. First, the dependence on existing literature may lead to selection bias, as only publications from particular databases were included, thus excluding pertinent studies from alternative sources. Second, the study lacks empirical data collecting or experimentation; therefore, results rely on previous studies with differing methodology, sample sizes, and contexts, hence impacting consistency and generalizability. Third, the variation in research methodology and student demographics, particularly the distinctions between high school and university students, hinders the formulation of universal conclusions. Furthermore, as Memrise and other digital learning platforms advance, their features may alter, rendering certain discoveries obsolete over time. Rectifying these shortcomings in subsequent research may yield a more thorough comprehension of Memrise's function in vocabulary acquisition and its potential for more educational enhancements.

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Statement of Responsibility

This study was carried out by a single author.

Conflict of Interest

There is no conflict of interest in this study.

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