

CHAPTER I

INTRODUCTION

This chapter introduces the study by presenting the background, research questions, research purposes, research significance, research scope, previous studies, conceptual framework, and research hypothesis. These sections provide the study's rationale and direction for using Duolingo and Memrise to improve vocabulary mastery among eighth-grade junior high school students.

A. Background of Study

English, being the first world language, is often described as the first global lingua franca and is the most widely used language in international trade, diplomacy, mass entertainment, international telecommunications, and scientific publications, as well as in the publication of newspapers and other books. As English is a lingua franca, most native and non-native speakers use it as their mode of communication in business matters and business organizations. Based on Smokotin et al., (2014) English has become the fastest-growing language in the modern world, and it has established itself as a commercial language, connecting the East and the West, and the North and the South.

The English language is spoken all over the world in almost all fields, such as science, engineering and technology, medicine, trade and commerce, scientific research, education, tourism, the internet, banking, business, advertising, the film industry, transportation, pharmacy, and more (Lestari, 2022). Among these terms, the most commonly used are English as a Global Language (EGL), English as a Lingua Franca (ELF), and English as an International Language (EIL). According to Tagliatela (2021), although these terms differ in terminology and emphasis, they essentially share the same underlying concept: English serves as the most widely used language for communication across national and linguistic boundaries and is widely used in key fields such as education, business, science, technology, and international communication.

According to Babayiğit et al. (2022), Vocabulary is the foundation of language proficiency because words carry meaning in communication. Learners

with a larger vocabulary size are generally more successful in reading comprehension, speaking fluency, and writing performance. A recent study by Li & Gan (2022) found that English vocabulary knowledge significantly predicts students' reading comprehension. The study also highlighted the importance of reading motivation and vocabulary knowledge in supporting students' English learning. Therefore, effective strategies, such as interactive activities and reading groups, can significantly enhance vocabulary acquisition and support students' overall language development (Aristawidya and Santoso Agus, 2025). Incorporating diverse vocabulary-building activities not only aids in language acquisition but also fosters critical thinking and communication skills among learners.

The important point regarding the role of vocabulary in second language (L2) learning is that a learner's vocabulary range and oral language proficiency are interrelated and influence one another. Highlights that a strong command of vocabulary can boost a learner's confidence in speaking. According to Uchihara (2022), the importance of focusing on vocabulary use in second language (L2) learning has been emphasized. Vocabulary development is viewed as a fundamental factor in improving all four communicative skills (Ali, 2023). This highlights the necessity of integrating vocabulary instruction with speaking, listening, reading, and writing to enhance overall language proficiency. The study also clearly states that vocabulary is crucial for the development of speaking skills.

Vocabulary instruction is still carried out in many schools using traditional techniques, such as memorizing word lists, translating words, and textbook exercises. These approaches are often considered boring and unengaging, even though they may help students learn a language (Vazirakhon Rustamovna Ochilova, 2020). However, integrating modern technologies can revitalize vocabulary learning and make it more interactive and enjoyable. Because they do not actively use that vocabulary in relevant situations, students may remember the terms for a short time but quickly forget them. This is especially true for younger students who are more interested in interactive and digital

learning environments; traditional vocabulary training can Potentially reduce student motivation.

Rapid technological advancements have opened new opportunities to improve vocabulary learning. Thanks to educational technology, teachers can use digital tools such as games, mobile applications, and multimedia materials in language instruction. According to Duan et al., (2026) Repeated practice, immediate feedback, visual assistance, and pleasurable learning opportunities are all possible with these tools. Mobile-supported vocabulary learning significantly improves vocabulary retention, student motivation, and independent learning habits. Therefore, technology-based vocabulary learning may be an effective way to overcome the weaknesses of conventional teaching methods.

Learning vocabulary cannot be separated from many problems, as is the case when learning English. One of the problems that makes it difficult for students to learn English is the process of learning vocabulary. The challenges of learning English vocabulary can be divided into two categories: linguistic and non-linguistic factors. Linguistic factors relate to language difficulties (related to grammar and language rules). Non-linguistic factors are divided into two categories: internal factors (student motivation, student interest, and vocabulary memorization ability) and external factors (teaching methods, environment, and context) (Elmahdi and Hezam, 2020). To effectively address these challenges, educators should focus on enhancing both linguistic skills and student motivation through engaging teaching methods and supportive learning environments.

One of the most popular forms of educational technology today is Mobile Assisted Language Learning (MALL). Mobile Assisted Language Learning refers to the use of mobile devices such as smartphones and tablets to support language learning. Through mobile applications, students can study vocabulary anytime and anywhere without being limited by classroom time. This flexibility is particularly relevant for today's students, who are accustomed to using smartphones in their daily lives. Smartphone-based learning also allows students to study independently and review learning materials at their own pace. According to Okumuş Dağdelen (2023), mobile-assisted language learning (MALL) enhances vocabulary mastery, student engagement, and independent learning. The study concluded that the ease

of access, flexibility, and opportunities for repeated practice provided by mobile apps make them highly effective tools for vocabulary learning. Therefore, integrating MALL into English language instruction can provide students with greater opportunities to expand their vocabulary both inside and outside the classroom.

However, Consoli et al., (2023) notes that, in the current discourse, researchers seem to agree that survey instruments assessing technology integration should not solely measure the frequency of technology use but also aspects related to the quality of technology integration in instructional practice. Technology integration is also commonly considered to foster students' digital competencies for learning.

Duolingo and Memrise are two of the most popular language learning applications for vocabulary acquisition. To encourage pupils, Duolingo employs gamification elements like points, levels, streaks, and interactive exercises. Through matching words, translation, listening, and sentence- building exercises, students complete vocabulary exercises. These characteristics promote regular practice and make learning fun.

Memrise, on the other hand, places a significant emphasis on vocabulary retention using real recordings of native speakers, spaced repetition techniques, flashcards, and pronunciation models. To remember words in long-term memory, students can review vocabulary regularly using the spaced repetition feature. This approach is more effective and has scientific backing than traditional memorizing. Both Memrise and Duolingo are regarded as useful tools for expanding vocabulary because of these advantages. Interactive learning programs are becoming increasingly popular as teaching tools in the digital age. Applications like Memrise and Duolingo offer flexible, engaging learning opportunities that can be adapted to students' needs. Memrise uses a spaced repetition strategy to improve vocabulary mastery, while Duolingo uses gamification features to improve grammar comprehension and motivation. In addition, students can use their cell phones to study anytime, anywhere, thanks to mobile learning programs. As a result, Duolingo and Memrise are regarded as successful interactive learning applications for raising students' language proficiency.

Both Duolingo and Memrise share several similarities in their applications, which are particularly useful for those who want to learn English as a second or additional language. They offer a structured learning program that focuses on vocabulary development, grammar instruction, and basic conversational skills (Hasif and Darmi, 2024). Also, both platforms prioritize mobile accessibility through user-friendly applications designed for smartphones and tablets. This allows learners to engage in lessons and practice exercises on the go (Elaish, 2019). While the specific approaches differ, both applications incorporate gamification elements to increase motivation and engagement. Duolingo utilizes points, badges, and leaderboards, while Memrise might use quirky characters or point systems, such as spaced repetition, flashcards, and pronunciation models (Shortt et al., 2023).

The effect of language learning applications on vocabulary mastery has been the subject of several prior studies. According to research by Govindasamy et al., (2019), students who use language-learning applications on mobile devices demonstrate significantly higher vocabulary proficiency than those who follow conventional learning methods. According to Rahmani et al., (2022), students' passive and active vocabulary skills improved thanks to the mobile app, as it provides contextual practice and repeated exposure. These results suggest that vocabulary learning can benefit greatly from digital applications.

Hasif and Darmi (2024) explain why the researchers chose to focus on two applications in this paper; furthermore, it illustrates how these two applications are related and how both influence vocabulary development in language learning. Advantages and disadvantages of both applications are analyzed in this study. Researchers found that Memrise focuses more on vocabulary memorization through spaced repetition, while Duolingo prioritizes gamification, grammar instruction, and motivation. Based on the study's findings, both applications offer useful features and, depending on the students' needs, can work well together. This result validates the current study's comparison of Memrise and Duolingo for vocabulary acquisition.

The purpose of this study was to compare students' vocabulary achievement before and after using the interactive language learning programs Duolingo and Memrise. Many children use educational applications in the digital age, but it isn't

clear how much impact they have on their vocabulary development. This study can determine whether these programs considerably enhance students' vocabulary knowledge and mastery by administering pre-test and post-test assessments. It is hoped that the findings of this study will provide useful information for educators and students about the use of technology as an effective tool in learning languages. Therefore, the researcher is interested in conducting a study entitled The Effect of Interactive Language Learning Applications Using Duolingo and Memrise on Vocabulary Mastery in Eighth Grade Students of Junior High School.

B. Research Questions

1. How are students' Vocabulary skills before using the Duolingo and Memrise applications?
2. How are students' Vocabulary skills after using the Duolingo and Memrise applications?
3. How significant is the difference in students' vocabulary mastery before and after using Duolingo and Memrise?

C. Research Purposes

1. To identify students' vocabulary mastery before the use of the interactive language learning Duolingo and Memrise applications.
2. To identify students' vocabulary mastery after the use of the interactive language learning Duolingo and Memrise applications.
3. To determine whether there is a significant difference in students' vocabulary mastery before and after the implementation of Duolingo and Memrise.

D. Research Significance

1. Theoretical Significances

Theoretically, the researcher is expected to contribute to the field of English Language Teaching, particularly in vocabulary mastery and Mobile Assisted Language Learning. The findings may strengthen existing theories related to vocabulary learning, such as multimedia learning theory Mayer (2009), by providing empirical evidence on how interactive language learning applications enhance vocabulary mastery in the English as a foreign language context.

2. Practical Significances

In practical terms, the researchers are expected to provide useful insights for English teachers on how to utilize interactive language-learning applications such as Duolingo and Memrise as alternative tools to improve students' vocabulary mastery. The findings may help students improve their vocabulary learning through more engaging and autonomous learning experiences. In addition, the researcher may support schools in integrating mobile-assisted language learning into English instruction and encourage the effective use of educational technology in the classroom. In addition, the findings of this study can serve as a reference for future researchers interested in conducting additional studies on vocabulary learning and the use of interactive learning applications in the context of English as a foreign language.

E. Research Scope

This study focuses on the implementation of interactive language-learning applications, namely Duolingo and Memrise, in supporting eighth-grade students' vocabulary mastery at MTs. Ar-Raudloh. The study is limited to students' ability to recognize, understand, and use vocabulary in written contexts. The vocabulary mastery examined in this study covers both receptive and productive aspects.

The receptive aspect focuses on students' ability to recognize word meanings, identify synonyms and antonyms, understand vocabulary in context, and match words with their definitions. Meanwhile, the productive aspect focuses on students' ability to select appropriate vocabulary, complete sentences using target vocabulary, and use vocabulary in simple written contexts.

The scope of the study is limited to one class of eighth-grade students in the 2025/2026 academic year. The implementation of Duolingo and Memrise focuses on introducing, practicing, reviewing, and reinforcing the target vocabulary during the treatment. The study primarily focuses on vocabulary mastery in written contexts, while basic grammar is incorporated as a supporting component to help students understand and use the target vocabulary in simple sentences. Grammar is not treated as a separate research variable or learning outcome, although several assessment items may involve basic grammatical structures.

The scope of this study focuses primarily on students' vocabulary mastery, while basic grammar is included as a supporting language component in the learning activities and vocabulary assessment. Grammar is not examined as a separate learning outcome or research variable. Instead, basic grammatical structures are used to provide context for students to understand and use the target vocabulary in simple written sentences. Therefore, several test items may involve grammatical structures, but the main purpose of the assessment remains to measure students' vocabulary mastery.

F. Hypothesis

Based on the research questions and conceptual framework, the hypotheses are formulated as follows:

1. **Null Hypothesis (H_0):**

There is no significant difference in students' vocabulary mastery before and after the implementation of Duolingo and Memrise.

2. **Alternative Hypothesis (H_1):**

There is a significant difference in students' vocabulary mastery before and after the implementation of Duolingo and Memrise.

G. Previous Study

Mujiarni (2024) conducted a study to determine whether Duolingo helped tenth-grade students at SMKN 2 Palangka Raya improves their vocabulary mastery. The researchers used a quasi-experimental approach to compare pupils who received traditional instruction with those who used Duolingo. According to the results, pupils who used Duolingo to learn had far higher vocabulary scores. This study demonstrates how gamified applications can enhance vocabulary learning outcomes and offer a more engaging learning environment.

Conducted a systematic review of Duolingo applications to explore the use of gamification in mobile-assisted language learning. According to the study, students' enthusiasm and engagement in the vocabulary-learning process increased due to Duolingo's gamification features, including points, badges, levels, and a progression system. Through repeated tasks, learners improved their consistency in vocabulary practice. Since Duolingo is one of the applications used as a treatment tool, this study is relevant to current research.

According to Zuniati (2023), eighth-grade students participated in this study's pre-experimental design. To gauge students' vocabulary growth following Memrise use, the researchers used pre-test and post-test assessments. Using a Sig. (2-tailed) value of $0.000 < 0.05$, the results demonstrated a substantial improvement in pupils' vocabulary competence following treatment. This suggests that Memrise's digital activities and spaced repetition are useful in promoting vocabulary growth.

Based on Mirdad (2023), "Students' Perceptions of Duolingo and Memrise in Vocabulary Learning.", this study examines students' perceptions of the usage of both programs. The findings showed that while Memrise was thought to help learn new vocabulary through repetition and pronunciation practice, students found Duolingo entertaining due to its game-like activities. Because it contrasts the advantages of both programs in vocabulary learning, this study validates the current research. Ajisoko (2020) conducted a study to evaluate progress in vocabulary acquisition through systematic pre- and post-test assessments, with a particular focus on middle school students. Because students were encouraged by interactive elements such as gamification, repetition, and rapid feedback, researchers found that Duolingo contributes positively to vocabulary growth. Because it focuses on the same educational level as the current research, this study is quite pertinent.

