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The Enhancement of University Students' English Vocabulary Acquisition through Memrise

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Abstract
Vocabulary mastery is one of the key factors in improving English language skills, particularly for university students who are learning a foreign language at the tertiary level. However, based on observations of second-semester students in the Agribusiness Management Study Program at Politeknik Negeri Lampung, it was found that limited vocabulary remains a major obstacle to their ability to construct varied sentences effectively. To address this issue, this study implemented the Memrise application as a digital-based medium for vocabulary learning. Memrise was chosen due to its interactive features, which enable students to learn and retain new vocabulary more effectively through a gamification approach and spaced repetition. This study employed a quasi-experimental method with a pre-test and post-test design on a group of students who received treatment using Memrise. The results revealed that the use of Memrise had a significant positive effect on students' vocabulary improvement. After the treatment, students were able to use a wider variety of vocabulary in constructing sentences, which directly contributed to greater complexity and diversity in the sentence structures they produced. These findings indicate that the integration of digital technology into language learning can serve as an effective strategy to enhance students' competence, particularly in enriching vocabulary that supports their English communication skills.
Keywords: *Vocabulary Acquisition, English Language Learning, Memrise Application, Digital Learning Media, Quasi-Experimental Study*

INTRODUCTION

Vocabulary mastery plays a crucial role in the process of language learning, particularly English. Without adequate vocabulary mastery, an individual's ability to comprehend texts, speak, write, and listen becomes severely limited (Baker et al., 2022). In the context of higher education, students' ability to master English vocabulary not only affects their academic performance but also serves as an essential asset in facing an increasingly globalized workforce (Latif, 2022). However, in reality, many students still struggle to develop their vocabulary mastery. One of the consequences of this limitation is their difficulty in constructing varied and complex sentences, both in oral and written communication (Lailiyah & Suryati, 2022).

This phenomenon is clearly observed from students' tendency to repeatedly use the same simple vocabulary when asked to construct sentences in English. The inability to master and utilize a variety of vocabulary not only limits their expression but also reflects a lack of understanding of word meanings and contextual usage (Laufer, 2017). Such limitations are often caused by insufficient exposure to effective vocabulary learning practices and a lack of motivation to engage in independent learning outside the classroom (Nation, 2013; Sundqvist & Sylvén, 2016).

Along with technological advancements, English language learning now offers a wider range of methods and media. One of the rapidly growing media is digital-based learning applications, such as Memrise. This application is designed to assist users in memorizing vocabulary through the use of spaced repetition, enhanced with gamification elements. These features create an interactive and enjoyable learning experience, thereby increasing students' motivation to learn (Godwin-Jones, 2018). With its structured approach, Memrise enables users to acquire new vocabulary in a relatively short period while also retaining it in long-term memory (Li & Hafner, 2022; Loewen et al., 2019).

The use of technology in language learning, particularly applications such as Memrise, has been widely studied, one of which is a study conducted by Łuczak (2017). The research demonstrated that this application is not only effective in improving vocabulary acquisition but also has a positive impact on students' learning motivation. However, the implementation of this technology in Indonesia, particularly in the context of higher education, still requires further investigation. The effectiveness of this application in helping students improve their vocabulary mastery while simultaneously developing their ability to construct varied sentences has not yet been extensively explored (Pratama & Yulianto, 2020; Shadiev et al., 2022).

In this study, the main focus is to evaluate the effectiveness of the Memrise application in improving students' English vocabulary mastery. In addition, this study also aims to examine the extent to which the improvement of vocabulary mastery impacts students' ability to construct more varied sentences. The study is based on the assumption that the use of innovative learning technologies, such as Memrise, can serve as an effective solution to address vocabulary learning challenges among university students (Godwin-Jones, 2018; Li & Hafner, 2022; Pratama & Yulianto, 2020).

To test this assumption, the study adopted a mixed-method approach combining both quantitative and qualitative designs, specifically classroom action research. The research was conducted on a population of university students with a sample of 30 participants selected randomly. This study not only measured students' vocabulary mastery outcomes after using Memrise but also analyzed their experiences during the use of the application. Through this approach, the findings are expected to provide a comprehensive overview of the benefits of using digital technology in English language learning (Creswell & Creswell, 2018; Mertler, 2019; Fraenkel et al., 2020).

This study is also grounded in theoretical foundations regarding the use of technology in language learning, as explained by Chapelle (2001) in her book Computer Applications in Second Language Acquisition. According to Chapelle, technology provides opportunities to enhance the efficiency of language learning by offering adaptive and interactive materials. In addition, the theory of spaced repetition applied in Memrise, as described by Cepeda et al. (2006), serves as the basis for the application's approach in helping users retain vocabulary in long-term memory.

By integrating digital approaches and technological innovations into language learning, this study not only contributes to the development of more effective teaching methods but also provides practical benefits for both instructors and students. The use of

applications such as Memrise is expected to serve as a learning model that can be widely applied in higher education contexts, particularly to enhance students' English vocabulary mastery (Beatty, 2013; Stockwell & Hubbard, 2013; Kukulska-Hulme & Shield, 2008).

METHODS

This study employs a classroom action research design. To ensure the smooth implementation of the study, certain procedures related to the research problem are required in the form of research preparation. The course of the study can be described as follows.

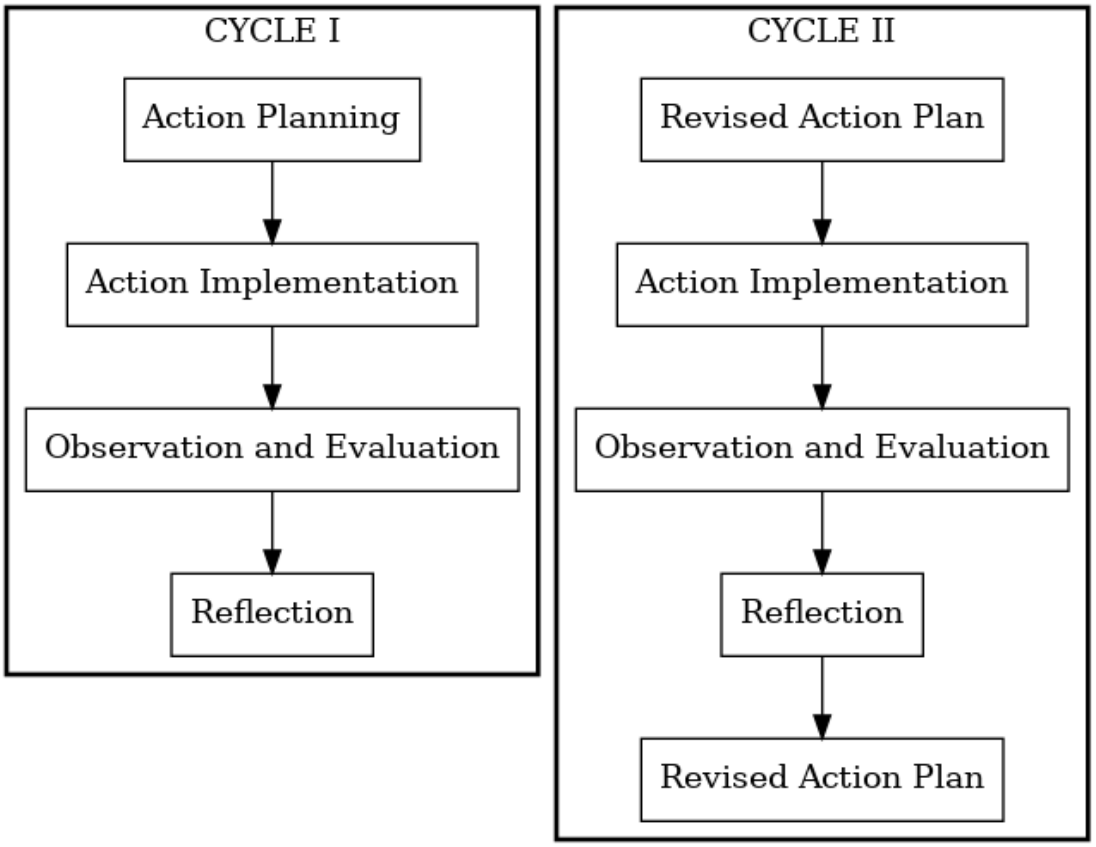

Figure 1. Classroom Action Research Design

The population in this study consisted of all second-semester students of the Agribusiness Management Study Program, totaling 30 students. The sample used was equal to the population, in accordance with the opinion of Arikunto (2006), who stated that if the population is fewer than 100, it is preferable to include the entire population as the sample.

Data were collected through tests and observations. The tests were conducted in two stages, namely a pre-test to measure students' initial ability and a post-test to evaluate the effectiveness of the Memrise application in improving students' English vocabulary mastery. Observations were carried out during the research process to examine the alignment between the planned actions and their implementation. Data analysis included both quantitative and qualitative data. Quantitative data were analyzed descriptively by calculating the mean score and the percentage of learning mastery based on students' level of comprehension. Students were considered to have achieved mastery if they reached a minimum comprehension level of 70% (Arikunto, 2010; Creswell & Creswell, 2018).

This study employed a classroom action research method consisting of two cycles. In each cycle, planning, implementation, observation, and reflection were carried out. The first cycle included lesson planning, learning activities with teacher guidance, and observation of students' interest and skills. The reflection results from the first cycle were used to make improvements for the second cycle. The second cycle followed the same stages, aiming to further optimize the learning process. The final reflection served as the basis for evaluating the effectiveness of the teaching method applied (Kemmis & McTaggart, 1988; Mertler, 2019).

RESULTS & DISCUSSION

Result

This classroom action research was conducted to evaluate the effectiveness of the Memrise application in improving students' English vocabulary mastery. The study was carried out in two cycles, each consisting of the stages of planning, implementation, observation, and reflection.

In Cycle I, the planning stage began with English language course activities. The implementation was conducted in two sessions: the first session focused on applying conventional methods by analyzing English vocabulary, while the second session was dedicated to an evaluation consisting of 10 multiple-choice questions. During the learning process, the lecturer formed groups, demonstrated the application, and guided students in discussions as well as in presenting their results. However, observations revealed that student activity was not yet optimal, with relatively low engagement in paying attention to the lecturer's explanations, writing down discussion outcomes, and responding to other groups' presentations.

The reflection on Cycle I involved collaborative evaluation between the lecturer and the researcher to identify obstacles, such as the lack of student participation in discussions and difficulties in understanding English vocabulary. Based on these findings, improvements were planned for Cycle II to increase student engagement and enhance overall learning outcomes.

Table 1. Results of Students' Learning Test Scores in Cycle I

No	Initial	Score	Description	No	Initial	Score	Description
1	AR	80	T	16	MR	70	T
2	ARP	60	TT	17	NA	70	T
3	ASP	90	TT	18	NF	70	T
4	AA	50	TT	19	NS	50	TT
5	DPM	70	T	20	RA	70	T
6	EA	60	TT	21	RK	50	TT
7	FA	80	T	22	SP	70	T
8	FH	50	TT	23	SN	30	TT
9	HS	70	T	24	SO	60	TT
10	IL	30	TT	25	SH	70	T
11	JM	20	TT	26	TP	70	T
12	JE	70	T	27	UH	60	TT
13	MA	40	TT	28	WT	70	T
14	MTT	60	T	29	YDC	50	TT
15	MPN	50	TT	30	SAN	70	T

Description:

T = Mastery

TT = Not Mastery

In Cycle II, the implementation was carried out using the same steps as in Cycle I, but with improvements based on the previous reflection. The lecturer began the lesson with attendance and provided an overview reflection of the Cycle I evaluation results, emphasizing that the scores obtained were still unsatisfactory and that students were expected to study more diligently. After conducting a question-and-answer session as an apperception activity, students returned to their groups to analyze English vocabulary using Memrise. Each group recorded the results of their discussion and presented them through a representative, followed by reinforcement from the lecturer.

Observations indicated an increase in student activity compared to Cycle I. Students' attentiveness to the lecturer's explanation improved, although some were still less focused. Participation in writing discussion results also showed improvement, even though in each group there were still one or two students who were less active. In addition, nearly all students began to engage in responding to other groups' presentations, which demonstrated progress in interactive English vocabulary learning.

The reflection on Cycle II revealed that students experienced significant improvement. Observation data and test results showed that the students had met the success criteria. Furthermore, the use of Memrise to enhance students' English vocabulary mastery proved to be highly effective, as evidenced by their improved activity compared to Cycle I. Thus, Cycle II can be considered successful in enhancing students' mastery of English vocabulary.

Table 2. Results of Students' Learning Test Scores in Cycle II

No	Nama Mahasiswa	Skor	Keterangan	No	Nama Mahasiswa	Skor	Keterangan
1	AR	90	T	16	MR	80	T
2	ARP	70	T	17	NA	90	T
3	ASP	100	T	18	NF	80	T
4	AA	70	T	19	NS	70	T
5	DPM	80	T	20	RA	80	T
6	EA	80	T	21	RK	80	T
7	FA	60	TT	22	SP	70	T
8	FH	80	T	23	SN	60	TT
9	HS	90	T	24	SO	70	T
10	IL	80	T	25	SH	80	T
11	JM	80	T	26	TP	90	T
12	JE	90	T	27	UH	60	TT
13	MA	90	T	28	WT	80	T
14	MTT	90	T	29	YDC	90	T
15	MPN	90	T	30	SAN	80	T

Description:

T = Mastery

TT = Not Mastery

Discussion

The implementation of the Memrise application in improving students' English vocabulary mastery proved to be highly effective. Based on the findings, before the intervention, the average pre-test score was 60.33, with a learning mastery rate of 50%. After the second cycle of intervention, in which learning activities were combined with the use of Memrise, the students' average test score increased to 80, with a mastery rate of 90%. These results clearly demonstrate that the application significantly enhanced students' vocabulary mastery.

The integration of Memrise not only improved vocabulary acquisition but also increased student engagement and motivation. Students became more enthusiastic and focused during the learning process. The lecturer's open, attentive, and guiding attitude further encouraged students to stay engaged. Additionally, the provision of praise from the lecturer helped students feel more confident, active, and willing to ask questions. Memrise also fostered a collaborative learning environment by encouraging mutual support among students within their groups, aligning with research that highlights the social and motivational benefits of gamified learning environments (Li & Hafner, 2022; Loewen et al., 2019).

Furthermore, Memrise is designed in such a way that students can analyze English vocabulary and transform it into sentences based on the content within the application. This approach places greater emphasis on contextual analysis, which is considered essential in promoting deeper understanding and long-term retention of vocabulary (Nation, 2013; Godwin-Jones, 2018).

The table 3 describes students' learning outcomes in Cycle I and Cycle II.

Table 3. Average Results of Cycle I and Cycle II

Description	Cycle I	Cycle II
Average Score	60,33	80,00
Mastery Level	50%	90%

RESULTS

The implementation of the Memrise application has been proven effective in enhancing students' mastery of English vocabulary. In the first cycle, students' participation was relatively low, as reflected in their limited activeness in answering questions, recording discussion results, and responding to other groups' presentations. After improvements were made in the second cycle, students demonstrated a significant increase in engagement, better understanding of the material, and higher average learning scores. The findings indicate that Memrise not only improves vocabulary acquisition but also fosters active participation, critical thinking, and collaborative learning among students. Therefore, Memrise can serve as an effective alternative medium in vocabulary learning to create a more engaging and interactive learning environment in higher education.

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