

CHAPTER I

INTRODUCTION

In this chapter the researchers present the study's background, statement of the research question, purpose, significance, scope and limitations, and definition of key terms.

A. Background Study

In this era, technological developments are rapidly advancing, and digital innovations are increasingly being used in education, especially in language learning. One technology that reflects this development is Augmented Reality (AR), which provides an interactive and enjoyable learning experience by combining the real world environment with virtual objects. According to Idul and Syaiful , AR has been recognized as a supportive tool in English language teaching, particularly when it is used repeatedly and consistently to increase student engagement and learning outcomes.¹ Among the various applications of AR technology in language learning, AR flashcards have received considerable attention as an innovative tool for vocabulary learning. Unlike traditional flashcards, AR flashcards combine visual, digital, and interactive elements to present vocabulary in a more engaging learning

¹ Muhammad Idul and Syaiful Syaiful, "Augmented Reality in The Classroom: Revolutionizing Vocabulary Teaching for High School Language Learners," *Inspiring: English Education Journal* 7, no. 2 (September 2024): 201–21, <https://doi.org/10.35905/inspiring.v7i2.9019>.

environment. Through AR flashcards, learners can interact with vocabulary items in a more meaningful way rather than merely memorizing words from conventional word lists. Therefore, the frequency with which learners use and interact with AR flashcards is an important aspect to consider in vocabulary learning. Repeated interaction with vocabulary materials may provide learners with more opportunities to encounter, recognize, and review vocabulary items during the learning process.

According to Mutar vocabulary mastery is an important aspect of English language learning because it directly supports language skill development.² However, many traditional methods such as mechanical memorization and word lists for learning vocabulary are often considered ineffective and monotonous for long-term learning. This has led to the development of innovative tools such as AR flashcards, which allows students to learn vocabulary more interactively through frequent and repeated exposure.

In recent years, numerous studies have highlighted the potential of Augmented Reality (AR) flashcards in vocabulary learning. Chen and Chan showed that students who were more frequently exposed AR flashcards outperformed those who relied on conventional flashcards in vocabulary recall,

² Qusay Mahdi Mutar, "Flashcard Strategy Role in Teaching English Vocabulary: A Systematic Review," *International Journal of Social Science Research and Review* 7, no. 4 (April 2024): 37–53, <https://doi.org/10.47814/ijssrr.v7i4.1979>.

suggesting that AR contributes to better memory retention.³ In the Indonesian context, Sadikin and Martyani found that students exposed to AR flashcards achieved significantly higher post-test scores than those taught using traditional flashcards.⁴ Their research found that AR not only improves vocabulary acquisition but also helps maintain student engagement in English as a foreign language (EFL) classes. More broadly, Binhomran and Altalhab reported that the application of AR significantly improved vocabulary acquisition, motivation, and retention among young EFL learners.⁵ Although this study was conducted on early childhood learners, the findings also indicate the universal potential of AR to support vocabulary learning at various levels of education, including higher education.

In broader research findings, Özçelik, Ekşi, and Baturay conducted a systematic review of AR research between 2017 and 2021 and concluded that AR has been reported to support student motivation, vocabulary retention, and

³ Ruo Wei Chen and Kan Kan Chan, "Using Augmented Reality Flashcards to Learn Vocabulary in Early Childhood Education," *Journal of Educational Computing Research* 57, no. 7 (December 2019): 70, <https://doi.org/10.1177/0735633119854028>.

⁴ Irma Savitri Sadikin and Erista Martyani, "Integrating Augmented Reality (AR) In EFL Class For Teaching Vocabulary," *PROJECT (Professional Journal of English Education)* 3, no. 2 (March 2020): 161, <https://doi.org/10.22460/project.v3i2.p161-167>.

⁵ Kholoud Binhomran and Sultan Altalhab, "The Impact of Implementing Augmented Reality to Enhance the Vocabulary of Young EFL Learners," *The JALT CALL Journal* 17, no. 1 (April 2021): 23–44, <https://doi.org/10.29140/jaltcall.v17n1.304>.

overall attitudes toward language learning.⁶ However, they also noted that most studies were limited to specific contexts, indicating a need for broader implementation across various educational settings. More recently, Marrahi Gómez and Belda Medina confirmed that AR supports both vocabulary acquisition and student motivation, particularly in higher education.⁷ Their research showed that AR-based activities increased engagement and produced better learning outcomes.

However, these findings indicate that although AR flashcards have been proven beneficial, the frequency of their use in Indonesian higher education is still limited. Therefore, it is important to investigate whether the frequency of using AR flashcards has a significant correlation with the vocabulary mastery of students in the English Study Program. The results of this study are expected to enrich the growing literature on technology-supported language learning and provide valuable insights for educators and learners.

Based on the explanation above, it can be concluded that AR flashcards have strong potential to improve vocabulary learning because they offer interactive and engaging features that traditional methods lack. Although many

⁶ Nermin Punar ÖzçeliK, Gonca Ekşi, and Meltem Huri Baturay, “Augmented Reality (AR) in Language Learning: A Principled Review of 2017-2021,” *Participatory Educational Research* 9, no. 4 (July 2022): 131–52, <https://doi.org/10.17275/per.22.83.9.4>.

⁷ Jose Belda-Medina and Victor Marrahi-Gomez, “The Impact of Augmented Reality (AR) on Vocabulary Acquisition and Student Motivation,” *Electronics* 12, no. 3 (February 2023): 749, <https://doi.org/10.3390/electronics12030749>.

studies show that AR is effective in improving vocabulary mastery and learning motivation, its use in Indonesian universities is still very limited, including at UIN SATU Tulungagung. This condition indicates a need to examine whether the frequency of using AR flashcards truly has a significant relationship with students' vocabulary mastery. Therefore, this study was conducted to provide a deeper understanding of the role of AR flashcards in vocabulary learning at the higher education level.

B. Research Question

Based on the background above, this study formulates the following research question: Is there a significant correlation between the frequency of using AR flashcards and vocabulary mastery among English Department students at UIN Sayyid Ali Rahmatullah Tulungagung?

C. Research Objective

Based on the research questions above, the study's objective is to determine whether there is a significant correlation between the frequency of using AR flashcards and students vocabulary mastery.

D. Research Hypothesis

The hypothesis of the research can be formulated as follows:

- a. H_0 : There is no significant correlation between the frequency of using AR flashcards and vocabulary mastery of English Department students at UIN SATU Tulungagung.
- b. H_a : There is a significant correlation between the frequency of using AR flashcards and vocabulary mastery of English Department students at UIN SATU Tulungagung.

E. Significance of the study

This research is expected to be able to provide benefits both theoretically and practically, these benefits include :

1. Theoretical benefits

- a. This research is expected to provide understanding of the relationship between the frequency of using AR flashcards and vocabulary mastery in English language learning.
- b. This research is expected to contribute to the body of literature on the integration of Augmented Reality technology in language learning, particularly related to the frequency of using AR flashcards in vocabulary acquisition.

2. Practical benefits

This research provides benefits for researchers ,learners, and for the next researchers, this benefits include:

a. For researchers

This research can provide deeper insight into the relationship between the frequency of using AR flashcards and students' vocabulary mastery.

b. For learners

This research is expected to provide learners with information about learning media that can be used frequently and effectively to improve vocabulary mastery.

c. For future researchers

This research is expected to serve as a reference for future studies related to the frequency of using AR flashcards in English language learning.

F. Scope and Limitation of the Research

This study is limited to analyzing the correlation between the frequency of using AR flashcards and vocabulary mastery among fourth semester English Department students at UIN SATU TULUNGAGUNG. This study does not examine other factors that may contribute to vocabulary mastery, including motivation, learning strategies, learning habits, and vocabulary knowledge. The findings are restricted to the specific context of UIN SATU TULUNGAGUNG.

G. Definition of Key Terms

To avoid misunderstandings of the research entitled “ The correlation between the frequency of using AR flashcards and vocabulary mastery of English department students at UIN SATU Tulungagung ”it is necessary to explain several key terms used in this study as follows:

1. AR (Augmented Reality) Flashcards

AR (Augmented Reality) flashcards are learning media that combine Augmented Reality technology with picture or text cards, which can be accessed interactively through digital devices. According to Hamer and Rohimajaya , the main function of this medium is to facilitate understanding and visualize objects or vocabulary for students.⁸ AR Flashcards are also considered to enrich vocabulary mastery because they are visual, simple, and able to capture students' imagination, especially when used repeatedly.

2. Vocabulary Mastery

Vocabulary mastery in this study refers to students' ability to recognize word meaning, word form, and word usage as measured through a structured

⁸ Welliam Hamer and Nur Azmi Rohimajaya, “Using Flash Card as Instructional Media to Enrich the Students' Vocabulary Mastery in Learning English,” *Journal of English Language Studies* 3, no. 2 (September 2018): 167, <https://doi.org/10.30870/jels.v3i2.3875>.

vocabulary test. Vocabulary is the most crucial part of learning a language: without it would be unable to acquire and develop our vocabulary in foreign languages. Watkins argues the basis of a language is vocabulary, and it is becoming increasingly crucial in language training today.⁹ Therefore, students would experience difficulties in learning English if they do not have the right vocabulary, and a good command of vocabulary is important for language learning.

3. Definition of Frequency of use

Frequency of use refers to how often students use a learning media within a certain period of time. In learning activities, frequency shows how active students are in using a particular medium during the learning process. Frequency of use is commonly used to describe real user behavior because it reflects how often a system or learning media is actually used.¹⁰ In educational contexts, frequency of use does not only mean access to learning media, but also consistency in using it. Students who use learning media more frequently tend to have more exposure to learning materials. In this study, frequency of

⁹ Peter Knapp and Megan Watkins, *Genre, Text, Grammar: Technologies for Teaching and Assessing Writing* (Sydney: UNSW Press, 2005).

¹⁰ Nadya Safitri, "Model Kesuksesan Sistem Teknologi Informasi Delone & McLean pada Sistem Informasi Pengelolaan Proyek," *INFORMATICS FOR EDUCATORS AND PROFESSIONAL : Journal of Informatics* 4, no. 2 (June 2020): 173, <https://doi.org/10.51211/itbi.v4i2.1346>.

using AR flashcards means how often students use AR flashcards as a medium for learning English vocabulary, both inside and outside the classroom.¹¹

H. The Structure of the Thesis

This thesis is organized into the following chapters:

Chapter I:

Introduction, presents the background, research question, objective, use, scope and limitation, key terms, and structure of the thesis.

Chapter II:

Literature Review, provides theoretical foundations on Augmented Reality, flashcards, vocabulary mastery, correlation theory, and previous related studies.

Chapter III:

Research Methodology, describes the research design, population, sample, instruments, data collection procedures, and analysis techniques.

Chapter IV:

Finding, presents the research results and their interpretation.

Chapter V:

¹¹ Safitri, "Model Kesuksesan Sistem Teknologi Informasi Delone & McLean pada Sistem Informasi Pengelolaan Proyek."

Discussion, interpretation of findings, possible factors affecting the results, comparison with previous studies, implications of the study, and limitations of the study

Chapter VI:

Conclusion and Suggestions, provides conclusions, pedagogical implications, and recommendations for future research.