

CHAPTER I

INTRODUCTION

This chapter presents the research background, two research questions, two research purposes, the scope of research, the conceptual framework, the research hypothesis, and previous studies.

A. Background

This study aims to investigate the effectiveness of Kahoot! on students' vocabulary retention. Vocabulary plays a fundamental role in language learning, as it supports students' ability to understand and use language meaningfully. However, in classroom practice, many students struggle to retain vocabulary learned over time, which limits their ability to recall and apply words in subsequent learning activities. To address this issue, the integration of digital learning media has gained increasing attention in English language teaching. Kahoot!, a game-based learning platform, provides interactive and engaging quiz activities that encourage active student participation and repeated exposure to vocabulary. Therefore, this study examines the effectiveness of Kahoot! in supporting students' vocabulary retention through a structured quasi-experimental approach.

Vocabulary is one of the components of language and one of the first things applied linguists turned their attention to (Richard, 2001, p. 4). Adequate vocabulary knowledge may enable learners to understand meaning and express ideas accurately, while limited vocabulary restricts language use and comprehension. Vocabulary is the foundation of language learning, as learners with insufficient vocabulary experience difficulties in understanding texts and conveying meaning (Nation, 2001). Beyond initial learning, vocabulary must be retained over time to support sustained language development. Rivers (in Nunan, 1991) stated that vocabulary is the main foundation of language; without adequate vocabulary, listening/speaking/reading/writing skills are not optimal. Vocabulary determines the quantity and quality of language. Without strong vocabulary retention, learners may recognize words temporarily but fail to recall and use them effectively in subsequent learning contexts. Therefore,

strengthening students' ability to retain vocabulary is a crucial aspect of successful language learning.

Understanding and retaining vocabulary may not be easy for many learners. In classroom practice, students often forget newly learned vocabulary because learning activities tend to emphasize memorization rather than meaningful understanding. Repeated and meaningful exposure to target vocabulary plays an important role in strengthening students' ability to retain words over time. When students understand, remember, and repeatedly encounter vocabulary in various contexts, they are more likely to recall and use it effectively in later learning situations. Vocabulary learning involves not only initial understanding but also long-term retention through repeated exposure (Schmitt, 2000). However, vocabulary learning is often delivered through conventional formats that provide limited opportunities for active engagement and repeated practice, which may contribute to students' difficulty in retaining vocabulary.

In recent years, language learning has undergone significant changes along with the emergence of digital technology. One popular method is game-based learning, which uses game elements in the learning process. Deterding et al. (2011) argued that gamification in education can increase student participation and enthusiasm by providing an interactive and enjoyable learning experience. Therefore, many teachers employ alternative methods to teach vocabulary to prevent students from quickly getting bored and forgetting, such as online quizzes or game-based learning, so that students can have more fun learning and find it easier.

Kahoot! is a widely used application in game-based learning, offering an online quiz platform accessible in real time during both face-to-face and online classes. Other platforms, such as Quizizz, Wayground, and Wordwall, also provide similar functionalities. These digital tools enhance the engagement and enjoyment of quizzing activities. Kahoot! was selected for this study because it is a widely used game-based learning platform that provides interactive quizzes, immediate feedback, and competitive learning elements. These features are considered to support student engagement and active participation during the learning process (Wang, 2015; Deterding et al., 2011; Kapp, 2012). These features encourage active participation and

repeated exposure to vocabulary, which supports vocabulary retention. Some studies highlight the positive impact of Kahoot! on English as a Foreign Language (EFL) students' vocabulary retention and recall. Ahmed et al. (2022) found that applying gamification in language learning supports students in remembering vocabulary more effectively and makes the learning process more enjoyable. Kahoot! allows teachers to create visually engaging quiz questions, while students answer them on their own devices. According to Wang & Tahir (2020), the use of Kahoot! has proven effective in increasing student engagement, strengthening interactions between teachers and students, and creating a competitive yet enjoyable learning environment. So, by using Kahoot! This may undoubtedly make learning in class more interactive, more engaging, and more fun.

The selection of this topic is based on preliminary information obtained from a teaching practicum context at a public junior high school, involving seventh-grade students. Based on informal discussions with a colleague who conducted a teaching practicum at the school, it was found that students still have difficulties in mastering and retaining English vocabulary. Although some teachers have implemented online quiz-based media such as Wordwall in classroom activities, students' vocabulary retention remains limited. Classroom observations also indicated that students showed positive responses and higher engagement when learning through interactive online quizzes, as they found the activities more enjoyable and motivating. While Kahoot! has occasionally been introduced, it is not the primary platform used by the English teacher in the classroom. Therefore, this study aims to explore whether the use of Kahoot!, combined with its game-based features, can be more effective in improving students' vocabulary retention compared to other commonly used methods.

Previous research showed that students who learn using digital media can remember and retain vocabulary more than those who use traditional learning methods (Indrajit Patra et al., 2022). Kahoot! also benefits in increasing student motivation, engagement, and interactivity. In terms of motivation, Kahoot! presents game elements such as scores, leaderboards, and time limits that can foster a

competitive spirit among students and encourage participation (Plump & LaRosa, 2017). In addition, student engagement in learning increases when students are actively involved in responding to interactive quiz questions. (Bicen & Kocakoyun, 2018). Therefore, Kahoot! Serves as both an assessment platform and an innovative learning tool that enhances student knowledge retention.

While extensive research has examined the use of Kahoot! in language teaching, most existing studies have primarily focused on student motivation, engagement, and immediate learning outcomes (Wang & Tahir, 2020; Bicen & Kocakoyun, 2018). Relatively limited attention has been given to its impact on students' long-term vocabulary retention. Moreover, many previous studies have relied solely on immediate post-tests to evaluate learning effectiveness, which does not sufficiently capture how well vocabulary is retained over time. In addition, empirical studies that examine the effectiveness of Kahoot! in comparison with conventional learning practices remain limited, resulting in inconsistent findings regarding vocabulary retention outcomes. Therefore, there is a clear need for a study that investigates the effectiveness of Kahoot! on students' vocabulary retention using a quasi-experimental approach with a delayed post-test design.

B. Research Questions

This study is conducted to answer two research questions. The three research questions are listed below:

1. What are the students' vocabulary scores in the experimental and control groups based on the immediate post-test?
2. What are the students' vocabulary scores in the experimental and control groups based on the delayed post-test?
3. How significant is the difference in vocabulary retention between the experimental and control groups?

A. Research Purposes

Therefore, to determine significant differences between the use of Kahoot! and paper-based worksheets, three research purposes have been formulated in response to the preceding research questions. The aims of this study are as follows:

1. To investigate the students' vocabulary scores in the experimental and control groups based on the immediate post-test.
2. To investigate the students' vocabulary scores in the experimental and control groups based on the delayed post-test.
3. To examine the significance of the difference in vocabulary retention between the experimental and control groups.

B. Research Significances

This research has two types of significance: theoretical and practical. It is hoped that both can benefit the development of science and the implementation of learning in the field.

1. Theoretical Significance

Theoretically, this research aims to advance the field of English Language Teaching (ELT), particularly in the area of vocabulary retention. The findings are expected to reinforce existing theories on the effectiveness of digital learning media, such as Kahoot!, which utilizes gamification theory (Deterding et al., 2011). Incorporating game elements is posited to enhance students' motivation, participation, and memory during the learning process. In addition, this research can also provide additional empirical references regarding the extent to which digital learning media is effective in improving students' vocabulary retention.

Thus, this research can serve as a reference for further research on the integration of technology into English language learning, particularly with respect to vocabulary retention.

2. Practical significance

Practically, the researcher hopes that this research will benefit many stakeholders, particularly in the context of learning English. For teachers, this study can serve as a reference for identifying more interactive and engaging learning tools, such as Kahoot!, to improve students' vocabulary retention and design teaching methods that are more varied and appropriate to students' characteristics. For students, the use of Kahoot! is expected to increase motivation, participation, and the

retention of learned vocabulary. By engaging in enjoyable learning methods, students are expected to retain their English comprehension better.

C. Research Scope

This study is limited to examining the effectiveness of Kahoot! as a learning medium in improving vocabulary retention of seventh-grade junior high school students. The vocabulary assessed in this research is restricted to vocabulary items aligned with the seventh-grade English curriculum, particularly those taught during the treatment. This study focuses solely on vocabulary retention and does not examine other language skills such as speaking, listening, or writing to maintain a clear and specific research focus.

The research employed a quasi-experimental design using a non-equivalent control group. Data were collected through a pre-test, post-test, and delayed post-test to measure students' vocabulary retention before the treatment, immediately after the treatment, and after a certain time interval. The study was conducted within a limited time period following the school's academic schedule, and therefore, the findings are limited to the specific context, participants, and conditions of the research setting.

D. Conceptual Framework

The conceptual framework serves as a foundation that outlines the main ideas, research variables, and the relationships among these variables in this study. This research examines the effectiveness of Kahoot! as a digital learning medium in improving students' vocabulary retention and is grounded in Jean Piaget's constructivist theory, which emphasizes that learners actively construct knowledge through interaction with their environment and cognitive processes (Piaget, 1952; 1970). According to this theory, learning occurs when students assimilate and accommodate new information into their existing cognitive structures. In this study, Kahoot! provides an interactive learning experience that engages students cognitively through game-based quizzes, immediate feedback, and repeated exposure to vocabulary. Such learning conditions are expected to support deeper vocabulary processing and enhance students' ability to retain vocabulary over time, particularly in

reading activities. Therefore, this conceptual framework clarifies the theoretical basis linking the use of Kahoot! to students' vocabulary retention.

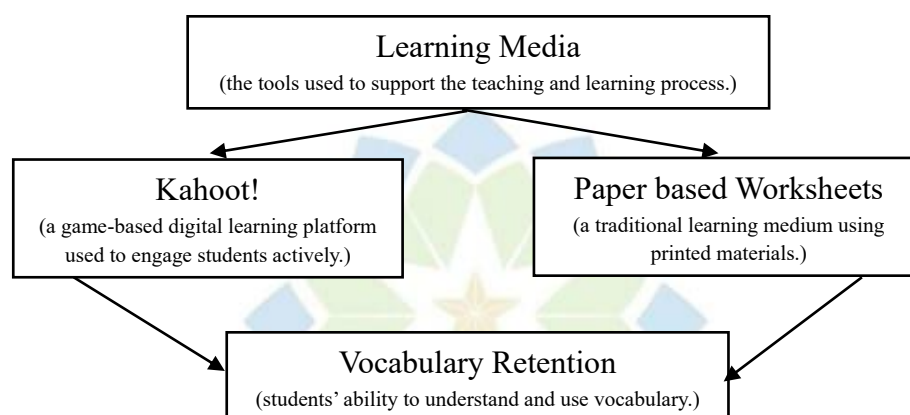
Kahoot! is an interactive digital education platform that incorporates game elements into the learning process. According to Deterding and Kolega (2011), gamification is a learning approach that incorporates game elements such as points, competition among students, and immediate feedback to increase students' learning motivation. In education, Kahoot! allows teachers to design game-like quizzes and make them as engaging as possible, encouraging student participation in enjoyable learning. This method supports active learning and strengthens vocabulary mastery through its repetition system and attractive visuals. Research conducted by Plump & LaRosa (2017) concluded that the use of Kahoot! can improve student motivation and participation as well as information retention compared with traditional (paper-based) learning techniques.

Paper-based worksheets are an old approach where worksheets or written assignments are the main tools in the learning and evaluation process. Typically, this method emphasizes reading skills, vocabulary practice, and other written assignments without the use of digital technology. While this method can help students improve their focus and literacy skills, it is often less interactive and does not provide direct feedback. According to Al-Mashaqbeh (2016), implementing paper-based worksheets can sometimes reduce student motivation because they are less attractive to active students than those provided by digital media. However, this method is still widely applied and serves as a reference for assessing the effectiveness of digital-based learning methods such as Kahoot!.

Vocabulary retention refers to students' ability to recognize, understand, remember, and retain vocabulary over time after the learning process has taken place. According to Schmitt (2000), vocabulary learning involves not only initial understanding but also long-term retention, which is influenced by repeated exposure and meaningful use of words in context. Students are more likely to retain vocabulary when they frequently encounter it and actively process its meaning during learning activities. In this study, vocabulary retention was measured through a delayed post-

test administered several weeks after the treatment to examine how well students could remember and apply the vocabulary they had learned. The interactive and repetitive nature of Kahoot! is expected to facilitate deeper cognitive engagement and repeated exposure to vocabulary, thus supporting better long-term vocabulary retention compared to more traditional learning approaches.

The relationship between these variables can be explained in the following conceptual framework.



E. Hypothesis

- a. Null hypothesis (H_0): There is no significant difference in students' vocabulary retention between students who are taught using Kahoot! and those who are taught using conventional learning methods.
- b. Alternative hypothesis (H_a): There is a significant difference in students' vocabulary retention between students who are taught using Kahoot! and those who are taught using conventional learning methods.

F. Previous Studies

Previous research has explored the application of Kahoot! and other game-based digital media in English language teaching, with a particular focus on enhancing vocabulary mastery and retention. Ahmed et al. (2022) examined the effectiveness of Kahoot! as a game-based learning tool for teaching English vocabulary to EFL learners in Iran. Utilizing a quasi-experimental design with both experimental and control groups, the study employed vocabulary assessments

administered as pre-tests, post-tests, and delayed post-tests to evaluate students' vocabulary recall and retention. The results indicated that students taught with Kahoot! demonstrated significantly greater improvement in vocabulary recall and retention than those who received traditional learning or media. Furthermore, integrating Kahoot! was associated with increased student engagement and motivation, thereby contributing to a more enjoyable and effective vocabulary learning experience.

Secondly, a study conducted by Febriani et al. (2024) examined the effect of using Kahoot! as a digital learning application on junior high school students' vocabulary retention at the second-grade level. The study used a quasi-experimental design, comparing an experimental group taught using Kahoot! with a control group that received paper-based worksheets. Data were collected through vocabulary tests administered before and after the treatment to measure students' vocabulary retention. The results indicated that students who learned vocabulary through Kahoot! demonstrated higher vocabulary retention than those who learned through traditional paper-based methods. Additionally, the use of Kahoot! was found to increase students' enthusiasm and participation during the learning process, which contributed positively to their long-term vocabulary retention.

Thirdly, a study conducted by Añora et al. (2025) examined the use of Kahoot! as a game-based learning tool in improving vocabulary acquisition among Grade 10 learners. The study employed an experimental research design by comparing students who learned vocabulary through Kahoot! with those who were taught using conventional methods, such as memorization from textbooks. Data were collected using vocabulary tests and learning activities designed to measure students' vocabulary mastery and engagement. The findings indicated that traditional learning methods were less effective in supporting long-term vocabulary retention, while the use of Kahoot! significantly increased students' participation, motivation, and vocabulary retention. These improvements were attributed to Kahoot!'s constructivist learning approach, which emphasizes active student involvement during the learning process.

Lastly, a study conducted by Patra et al. (2022) investigated the effects of technology-based learning using digital games on EFL learners' vocabulary retention and recall in Bangladesh. The study employed an experimental research design by comparing students who learned vocabulary through digital game-based learning with those who received traditional learning methods. Data were collected through vocabulary recall and retention tests to measure students' ability to remember and store newly learned vocabulary. The findings indicated that students who learned using digital media demonstrated better vocabulary retention and recall than those who learned through conventional learning approaches. This suggests that technology-based learning environments can effectively support long-term vocabulary learning.

Based on the previous studies, the researchers have confirmed that the use of Kahoot! and digital game-based learning positively affects students' vocabulary mastery, motivation, and engagement. Most of these studies, however, primarily focus on immediate learning outcomes such as post-test scores, vocabulary recall, or reading comprehension shortly after the treatment. In addition, the studies examine the effectiveness of Kahoot! without directly comparing it to paper-based worksheets as a control medium, particularly in the context of vocabulary retention over time. Furthermore, limited research has employed a delayed post-test design to investigate students' long-term reading retention, especially at the junior high school level. Therefore, this study seeks to address these gaps by conducting a quasi-experiment to determine the effectiveness of Kahoot! On students' vocabulary retention using a delayed post-test.