

CHAPTER I

INTRODUCTION

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

A. Background

Vocabulary is pivotal in mastering English as it underpins effective communication and comprehension. Schmitt (2020) emphasizes that vocabulary is a core component of language learning, serving as a crucial element in supporting communication. Similarly, Yang (2024) highlights that vocabulary breathes life into ideas and thoughts, transforming abstract notions into clear and meaningful expressions.

During teaching practice (PPL), researchers observed that many students had difficulty mastering English vocabulary, especially in understanding the meaning of words, synonyms of a vocabulary, and how to use words in a sentence. This limitation hinders their understanding of English and fosters the perception that English is complex. Digital media is a promising solution in modern education to overcome this problem.

Digital media provides innovative and interactive solutions to overcome learning challenges. These tools include websites, applications, e-books, videos, and educational games that incorporate engaging and participatory elements. Nugroho (2024) emphasizes that digital media enhances student learning outcomes by integrating interactive components into the educational process. Supporting this view, several studies have demonstrated the effectiveness of digital media in improving vocabulary mastery. Liang and Zhang (2024) found that AI-based applications, featuring personalized learning pathways and gamification, significantly improved learners' vocabulary retention and motivation. Similarly, Syafutra et al. (2023) reported improved vocabulary scores through the use of the British Council for Teens website, which provides visual and auditory learning materials. In addition, game-based platforms such as Wordwall.net (Shabrina & Taufiq, 2023) and 7 Little Words (Alfuhaid, 2023) proved to be more effective than conventional methods. Furthermore, augmented reality-based learning tools, such

as Assemblr Edu (Riadin & Aminuddin, 2024), have been shown to create immersive and context-rich learning experiences, significantly enhancing students' vocabulary comprehension. These findings affirm that digital media can serve as an engaging, relevant, and effective solution in modern educational contexts.

Digital media provides access to a diverse range of resources that enrich the learning experience and promote improved vocabulary comprehension. Online platforms such as Vocabulary.com play an instrumental role by providing interactive exercises, multimedia features, and engaging games to boost learning motivation. Features like flashcards, vocabulary pronunciation tools, and context-based activities make vocabulary mastery more effective and enjoyable. As Schmitt and McCarthy (1990) suggest, fun and interactive teaching methods significantly improve vocabulary retention and application.

This study explores the effectiveness of Vocabulary.com as a digital learning medium to improve vocabulary mastery. Vocabulary.com is a versatile English learning platform with customizable vocabulary lists, pronunciation guides, interactive exercises, reading resources, and a comprehensive dictionary. These tools support learners in understanding vocabulary meanings, usage in sentences, and synonyms.

The primary objective of this study is to assess the effectiveness of Vocabulary.com in enhancing students' vocabulary comprehension. In addition, it aims to contribute to the development of innovative and effective vocabulary teaching strategies. To contribute to the development of innovative and effective vocabulary teaching strategies. In addition, these findings are expected to provide educators with actionable recommendations to improve the quality of vocabulary teaching in English classes.

B. Research Question

The questions focus on determining the effectiveness of using Vocabulary.com to improve students' vocabulary comprehension and its impact on English language learning outcomes. The specific research questions are as follows:

1. What is the student's vocabulary mastery before using Vocabulary.com?
2. What is the student's vocabulary mastery after using Vocabulary.com?

3. Is there a significant difference in students' English vocabulary mastery before and after using Vocabulary.com?

C. Research Purposes

Based on research questions, here are several purposes of this research:

1. To examine the students' vocabulary mastery before using Vocabulary.com.
2. To investigate the students' vocabulary mastery after using Vocabulary.com.
3. To determine whether there is a significant difference in students' English vocabulary mastery before and after using Vocabulary.com.

D. Research Significance

This section highlights the significance of this study, emphasizing its theoretical and practical contributions to digital media-based learning in improving students' English vocabulary mastery.

Theoretically, this research provides clear empirical evidence of the effectiveness of Vocabulary.com in enhancing students' vocabulary mastery by comparing their performance before and after its use. Through examining whether a statistically significant difference exists between pre-intervention and post-intervention results, this study strengthens the theoretical framework of digital media integration in language learning. It also highlights the pedagogical role of technology in creating interactive and engaging learning environments that foster active student participation. In doing so, the findings contribute to the broader body of knowledge on effective vocabulary learning strategies and emphasize the importance of integrating adaptive digital tools into English language education.

Practically, the study offers valuable insights for English teachers, students, and educational practitioners. For teachers, the results serve as a guide for incorporating Vocabulary.com effectively into classroom instruction to enhance student engagement, comprehension, and vocabulary retention. For students, the findings underline the platform's potential as a self-directed learning resource that supports independent study, contextual application, and long-term mastery of vocabulary. For educational institutions, this research illustrates how digital media integration can transform conventional teaching methods into more results-oriented and

learner-centered approaches, ensuring alignment with the evolving needs and expectations of modern learners.

E. Research Scope

This study is delimited to examining the use of *Vocabulary.com* as a digital learning medium to enhance tenth-grade students' English vocabulary mastery. The research focuses specifically on determining the effectiveness of *Vocabulary.com* in improving vocabulary mastery among senior high school students in Bandung during the second semester of the 2024/2025 academic year. The participants consisted of 36 tenth-grade students selected through purposive sampling.

A quantitative approach was employed using a pre-experimental one-group pre-test and post-test design. The scope of the study is limited to improving students' vocabulary in three specific aspects: understanding word meanings, recognising synonyms, and applying vocabulary in sentences. Other language skills, such as listening, speaking, reading, and writing, are beyond the scope of this research. Furthermore, the study was conducted over a relatively short period of five meetings, including the administration of pre-tests and post-tests to measure students' progress in vocabulary mastery.

F. Conceptual Framework

The conceptual framework of this research serves as a visual representation of the logical structure underlying the study. It outlines the relationship between the core variables, the sequence of research activities, and the expected outcomes. By mapping the flow from input to process and finally to output, the framework clarifies how the study is designed to address its objectives and research questions. In this context, vocabulary is positioned as the primary input to be developed, the learning process involves pre-testing, instructional intervention using *Vocabulary.com*, and post-testing, while the output reflects the measurable improvement in students' English vocabulary mastery. This framework not only guides the research process but also ensures that each stage is systematically aligned with the overall purpose of the study.

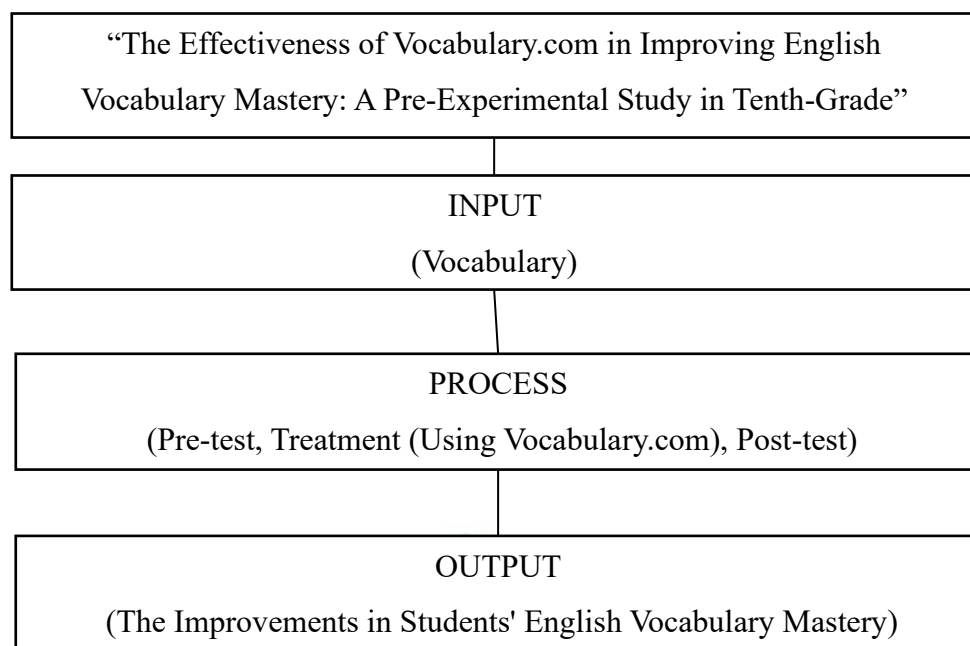


Figure 1.1 Conceptual Framework

Vocabulary is a fundamental component of effective communication, idea expression, and information exchange. As stated by Alqahtani (2015), vocabulary serves as a primary tool for language learners to comprehend and articulate their thoughts. A broad vocabulary enables learners to understand complex texts and express ideas with greater precision. Furthermore, adequate vocabulary mastery facilitates the development of other language skills, including reading, writing, speaking, and listening. This aligns with Nation's (2001) theory, which posits that vocabulary mastery involves not only knowing the meaning of words but also being able to use them appropriately in various contexts. Therefore, vocabulary serves as the input in this research and forms the foundation to be strengthened through targeted instructional strategies.

The first stage of the process begins with a pre-test designed to assess students' baseline vocabulary knowledge. This pre-test consists of 20 multiple-choice questions covering the aspects of word meaning, synonym recognition, and using the words sentence. The results provide a clear picture of the students' initial abilities and serve as a benchmark for measuring subsequent improvements.

The second stage of the process involves the use of Vocabulary.com as a digital learning medium. This approach is grounded in Siemens' (2005) theory of connectivism, which emphasizes that effective learning in the digital era is shaped by the ability to access, connect, and manage information across a network of digital resources. Vocabulary.com offers interactive features, including flashcards, audio pronunciation, personalised vocabulary lists, and adaptive practice exercises. These features enable students to engage with diverse linguistic inputs, receive real-time feedback, and continuously develop their vocabulary knowledge through interconnected learning experiences.

The third stage concludes with a post-test that mirrors the format of the pre-test, allowing for direct comparison of results. This step is crucial for assessing the impact of the instructional intervention and determining the degree of improvement in students' vocabulary mastery following the treatment.

Finally, the output of this research is the measurable improvement in students' English vocabulary mastery, as demonstrated by the comparative analysis of pre-test and post-test scores. This outcome directly addresses the research objectives and questions: to assess students' vocabulary mastery before and after using Vocabulary.com, and to determine whether the observed improvement is statistically significant. The structured progression from input to process and output ensures that the study remains aligned with the conceptual framework and provides empirical evidence of the effectiveness of digital media in vocabulary learning.

G. Hypothesis

Creswell (2018) states that hypotheses are predictions made by researchers about the expected outcomes of relationships among variables. These predictions provide a foundation for testing theories using empirical evidence. In line with this perspective, the hypothesis in this study is designed to evaluate the effectiveness of Vocabulary.com as a digital-based learning medium for enhancing students' English vocabulary mastery. This hypothesis reflects the core focus of the research, which aims to determine whether the use of Vocabulary.com has a significant impact on vocabulary improvement among tenth-grade students. The formulated hypotheses are as follows:

1. Null Hypothesis (H_0): Vocabulary.com does not effectively improve English vocabulary among tenth-grade students.
2. Alternative Hypothesis (H_a): Vocabulary.com effectively improves English vocabulary among tenth-grade students.

H. Previous Studies

This section reviews several previous studies related to the use of digital media in enhancing students' English vocabulary acquisition. These studies demonstrate the growing role of digital tools in language learning and highlight the effectiveness of various platforms, while also identifying gaps that the present research seeks to address.

A study by Liang and Zhang (2024) examined the use of AI-driven language learning applications to enhance students' vocabulary mastery in language learning centres. The research compared the effectiveness of AI-based tools with traditional learning methods through a controlled experiment involving both experimental and control groups. Utilizing a mixed-methods design, the study measured vocabulary acquisition over time and found that personalized learning pathways and instant feedback provided by AI apps significantly enhanced learners' retention and recall. Moreover, the study highlighted the role of gamification features in increasing learner motivation and engagement. These findings suggest that AI-powered applications not only support more effective vocabulary learning but also foster a more interactive and student-centred learning environment.

Similarly, Syafutra et al. (2023) examined the effectiveness of the British Council for Teens website in improving vocabulary among tenth-grade students at SMAN 1 Palangka Raya. The study employed a pre-experimental one-group pre-test and post-test design involving students from class X-6. Vocabulary instruction was delivered using visual and auditory materials provided on the website. Data were collected through short-answer tests and student questionnaires. Statistical analysis using the Paired Sample T-Test showed a significant improvement in students' vocabulary scores. These findings suggest that the British Council for Teens website effectively supports vocabulary acquisition and student engagement through multimedia-based learning.

Further evidence of the effectiveness of digital tools was provided by Shabrina and Taufiq (2023), who investigated the use of Wordwall.net to enhance English vocabulary among students at SMP Negeri 1 Wonoayu. Using a true-experimental design, the study involved two groups of students—one taught with traditional methods and the other with interactive vocabulary games on Wordwall.net. Over a three-week intervention, the study found that students using the digital platform showed greater improvement in vocabulary mastery. The findings suggest that Wordwall.net is an effective tool for supporting vocabulary development through engaging, game-based learning.

Likewise, Alfuhaid (2023) examined the use of digital games to enhance vocabulary acquisition among Arabic-speaking secondary school students learning English. The study compared a control group using traditional methods with an experimental group that engaged with *7 Little Words*, a vocabulary-focused digital game. Conducted over five weeks, the research showed that students who used the digital game demonstrated greater improvement in vocabulary mastery. These findings highlight the potential of game-based digital tools to support effective and engaging vocabulary learning.

Finally, Riadin and Aminuddin (2024) investigated the effectiveness of Assemblr Edu, an augmented reality platform, in improving vocabulary mastery among eleventh-grade students at SMA Negeri Jatinangor. Using a pre-experimental design, the study involved 25 students who received vocabulary instruction through AR-based learning activities. Pre-test and post-test data showed a noticeable improvement in students' vocabulary scores after the intervention. The findings suggest that Assemblr Edu is an effective tool for enhancing vocabulary comprehension through interactive and immersive learning experiences.

In light of these findings, it is evident that various forms of digital media—ranging from AI applications and websites to digital games and AR platforms—can significantly enhance vocabulary learning. However, despite the abundance of research on digital tools, few studies have specifically examined the effectiveness of Vocabulary.com in the context of senior high school students using a pre-

experimental design. Therefore, this study aims to fill this research gap by evaluating how Vocabulary.com supports vocabulary acquisition.

