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Students' Perceptions on the Use of ChatGPT as a Vocabulary Learning Medium: A Case Study of the Second Semester Students at the English Department University of Mataram

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Abstrak

This study explored second-semester students' perceptions of using ChatGPT as a vocabulary learning tool at the University of Mataram. Using a qualitative method through questionnaires and semi-structured interviews, data were collected from 92 students, with 15 selected for interviews. The data were analyzed using thematic analysis to identify patterns in students' perceptions. The findings showed that most students had positive perceptions of ChatGPT, citing its usefulness in understanding word meanings, receiving instant feedback, and facilitating flexible and independent learning. However, challenges such as long or unclear explanations and limited internet access were reported. The most common issue was difficulty understanding complex responses (46.74%), while the least common was lack of motivation (7.61%). Despite these issues, students showed a strong interest in continuing to use ChatGPT. Practically, this study suggests that teachers can integrate ChatGPT as a supplementary tool for vocabulary learning by providing students with effective query guidelines and scaffolding to maximize its benefits. Nevertheless, the study has limitations in terms of the small interview sample (15 students) and the short research duration, which restricts the generalizability of the findings. Overall, the study concluded that ChatGPT supports vocabulary acquisition positively but should be guided and adapted to learners' needs.

Keywords: ChatGPT, vocabulary learning, student perception, AI-assisted learning, language education

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INTRODUCTION

Learning English at the university level, particularly for students in English education programs, presents a range of challenges, with vocabulary acquisition being one of the most significant. Vocabulary is a fundamental component of language proficiency, as it directly influences students' ability to comprehend and express ideas effectively. As noted by Zhu, Zhang, and Irwin (2023), adequate vocabulary acquisition is vital for language development because learners with limited vocabulary often encounter difficulties in both comprehension and self-expression. This highlights the importance of enhancing vocabulary not only through classroom instruction but also by utilizing diverse learning resources and contexts.

Vocabulary development contributes substantially to the improvement of listening, speaking, reading, and writing skills (Teymouri, 2024). Despite its importance, many university students continue to struggle with expanding their vocabulary. One contributing factor is the tendency of traditional teaching approaches to rely heavily on class-provided materials, which may be monotonous and less effective in stimulating learning (Umar & Purwanto, 2025). Furthermore, the absence of engaging and interactive learning media exacerbates the problem, leading to decreased motivation and poor vocabulary retention (Mugableh, 2024).

At the University of Mataram's English Education Department, vocabulary mastery remains a significant obstacle for many learners. Initial observations and consultations with lecturers reveal that students are encouraged to engage in self-directed study of vocabulary elements such as affixation and suffixes, especially amid growing technological integration in education. Artificial intelligence (AI)-based learning tools like ChatGPT have been recommended as supplementary media, offering quick access to additional materials and explanations (Aeni et al., 2024; Afifah et al., 2024). ChatGPT, an AI-powered platform, can provide diverse references, clarify complex topics, and deliver interactive exercises that facilitate better vocabulary comprehension and retention. Moreover, it gives immediate feedback, accelerating the learning process and helping students overcome their difficulties in vocabulary learning, ultimately enhancing their overall English proficiency.

ChatGPT, developed as an AI chatbot, offers promising support for vocabulary learning by instantly providing word definitions, example sentences, and contextual uses (Clark et al., 2023). Unlike traditional rote memorization techniques, ChatGPT enables dynamic interaction with language, making the learning process more engaging and effective. Recent research indicates that AI-assisted tools improve vocabulary retention, boost motivation, and increase student engagement through personalized feedback and adaptive learning experiences (Su & Yang, 2023; Kim et al., 2023). Additionally, AI platforms provide flexibility, allowing learners to practice vocabulary anytime and anywhere, which encourages autonomous learning (Chien, Hsieh, & Chen, 2020). However, the effectiveness of ChatGPT for vocabulary acquisition among second-semester university students remains underexplored.

Given these factors, this study investigates students' perspectives on using ChatGPT as a tool to enhance vocabulary acquisition among second-semester English Language Education students at the University of Mataram. By integrating AI technology into vocabulary instruction, the research aims to determine whether ChatGPT can improve students' vocabulary skills, engagement, and overall language competence. The study also seeks to contribute to the expanding research on AI-

supported language learning and offer valuable insights for educators aiming to incorporate technology in language teaching. The results are expected to guide the optimization of vocabulary learning methods, making English language acquisition more interactive, efficient, and tailored to the digital age.

Although recent studies have shown that AI-based tools like ChatGPT can enhance vocabulary acquisition in various contexts (Mugableh, 2024; Sapan & Uzun, 2024), most of these investigations were conducted in foreign contexts such as Saudi Arabia or Turkey. In the Indonesian higher education context, particularly at the University of Mataram, empirical studies exploring ChatGPT's effectiveness as a vocabulary learning medium remain limited. This lack of localized research highlights a gap that this study seeks to fill.

Apart from improving vocabulary retention, AI-based tools like ChatGPT encourage self-directed learning, which is critical at the higher education level. Traditional classrooms often limit personalized learning opportunities due to time constraints and varying student proficiency levels (Jones & Wiliam, 2022). In contrast, ChatGPT allows learners to progress at their own speed, revisit explanations, and engage in repeated exercises suited to their individual needs. Furthermore, AI tools can adjust the difficulty of vocabulary tasks based on learner progress, ensuring material is neither too challenging nor too simplistic (Lai & Saab, 2022). Research also indicates that AI chatbots reduce language learning anxiety by providing a non-judgmental environment for practice (Lee & Drajati, 2023). Understanding students' views on ChatGPT for vocabulary learning can reveal how this technology transforms language education into a more interactive, flexible, and learner-centered experience.

RESEARCH METHODS

Research Design

This study employed a qualitative research approach with a case study design. Qualitative research is characterized by the exploration of problems in depth, developing a detailed understanding of phenomena, collecting data based on words, analyzing data through text analysis techniques, and interpreting deeper meanings from the findings (Mohajan, 2018).. A case study is defined as research that examines a program, event, activity, process, or one or more individuals to gain an in-depth understanding of the subject (Mtisi, 2022). The case study was chosen because it allows for a comprehensive and in-depth exploration of students' perceptions within a specific real-life educational context. By focusing on second-semester students in the English Language Education Department at the University of Mataram, the design provided rich insights into experiences, benefits, and challenges related to the use of ChatGPT for vocabulary learning. The case study approach was therefore appropriate to capture students' interaction with AI technology in a natural setting. In this study, the objective was to determine students' perceptions of using ChatGPT as a medium for vocabulary learning, especially on topics such as affixation and suffixes, among second-semester students at the University of Mataram. Data were collected through questionnaires and semi-structured interviews, with descriptive results from both instruments presented to answer the research questions.

Research Setting

The study was conducted from March to June 2025 at the English Education Study Program, Faculty of Teacher Training and Education (FKIP), University of Mataram, Indonesia. Second-semester students from classes F, G, and H were purposively selected as they had used ChatGPT as a supplementary tool in the Vocabulary Building course. This setting provided a relevant context for exploring students' perceptions of ChatGPT in enhancing vocabulary learning, particularly in areas such as word formation, affixation, and academic vocabulary.

Research Participants

The subjects of this study were selected using purposive sampling, a non-probability sampling technique based on specific objectives and criteria. This technique permits selecting participants who are capable of providing rich and relevant data to the study's aims. The criteria included second-semester students of the English Language Education Study Program enrolled in the Vocabulary Building course (classes F, G, and H), totaling 92 students. Moreover, the sample consisted of students actively using ChatGPT, as this application was integrated as a supplementary learning tool in the Vocabulary Building course. From this group, 15 students (five from each class) who seriously completed the questionnaire were selected for interviews to validate and deepen the data collected.

Data Collection Procedures

The empirical data in this study were collected through questionnaires and semi-structured interviews. The data collection process followed a structured approach to ensure the accuracy and depth of the findings. The main objective was to explore students' perceptions of ChatGPT as a supplementary learning tool for vocabulary development, particularly in the context of word formation, affixation, and academic vocabulary. Two primary instruments were employed for data collection: a questionnaire and semi-structured interviews.

Questionnaire

The first stage of data collection involved distributing a questionnaire to 92 second-semester students from classes F, G, and H at the English Education Study Program, University of Mataram. This stage took place in April 2025. Before distribution, the researcher explained the study's purpose and provided clear instructions on how to complete the questionnaire. The instrument employed a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," allowing students to indicate the extent of their agreement with each statement. Respondents were given 30 minutes to complete the questionnaire in class. Throughout the process, most participants demonstrated enthusiasm, although a few sought clarification on certain items. The overall procedure ran smoothly and yielded a complete set of responses.

Interview

The second stage consisted of semi-structured interviews conducted in June 2025 with 15 purposively selected students—five from each participating class. Selection was based on their seriousness in answering the questionnaire and their

active engagement with ChatGPT during the course. The interviews were conducted individually on campus, with each session lasting approximately 10–15 minutes. An interview guide was used to explore students' experiences, perceived benefits, challenges, and suggestions related to the use of ChatGPT for vocabulary learning. While some students faced scheduling conflicts, these were addressed through rescheduling to ensure participation. All interviews were audio-recorded with participants' consent and later transcribed verbatim for subsequent thematic analysis.

Research Instruments

The present study employed two primary instruments for data collection: a questionnaire and an interview guide, both of which are widely used in qualitative research to explore participants' experiences and perceptions in depth.

Questionnaire

A structured questionnaire was used to obtain initial insights into students' perceptions of using ChatGPT as a supplementary learning medium for vocabulary acquisition. The instrument consisted of 20 statements arranged on a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree," focusing on four key aspects: ease of access and use, vocabulary comprehension and mastery, learning motivation and engagement, and challenges or limitations encountered. Although the questions were close-ended, the questionnaire served a qualitative purpose by identifying general tendencies and guiding the selection of interview participants. This approach allowed the researcher to capture an overall picture of students' attitudes toward ChatGPT before conducting more in-depth data collection.

Interview

Semi-structured interviews were conducted to complement and deepen the findings obtained from the questionnaire. Each interview, lasting approximately 10–15 minutes, was conducted individually with 15 selected students based on their questionnaire responses and active engagement with ChatGPT. The interview guide consisted of five open-ended questions developed from themes emerging in the questionnaire, allowing flexibility for follow-up questions while maintaining thematic focus. The discussions explored students' experiences in using ChatGPT for vocabulary learning, the perceived benefits and challenges, its impact on motivation and engagement, and their suggestions for improving the use of AI tools in education. All interviews were audio-recorded with participants' consent and later transcribed verbatim for qualitative analysis.

Data Analysis Technique

Quantitative data from the questionnaire were analyzed qualitatively and descriptively using thematic analysis (Braun & Clarke, 2006). The analysis started with data reduction by grouping responses into emerging themes such as ease of access, vocabulary comprehension, motivation to learn, and technical challenges. Data were then compared to identify overall response tendencies—positive, negative, or neutral. The results were presented as a narrative supported by direct quotes from respondents.

Interview data were analyzed qualitatively and descriptively to portray and interpret students' experiences and perspectives. The analysis was guided by

questionnaire results to explore relevant themes in greater detail. This technique allowed the researcher to obtain a more comprehensive understanding of ChatGPT usage in vocabulary learning from the students' point of view.

Table 1 Likert Score

Description	Scale
Strongly Disagree	1
Disgree	2
Neutral	3
Agree	4
Strongly Agree	5

Table 1 shows the Likert scale used as the basis for measuring students' responses to statements regarding the effectiveness, ease of use, learning motivation, and challenges encountered when using ChatGPT.

FINDINGS AND DISCUSSION

This section presents the findings and discussion of the study, focusing on the perceptions of second-semester students toward the use of ChatGPT as a vocabulary learning tool, as well as the challenges they encountered in utilizing it for independent and classroom-based learning.

RQ1. How do second-semester English Education students at the University of Mataram perceive the use of ChatGPT as a learning medium for vocabulary acquisition?

This study involved 92 second-semester students from the English Education Study Program at the University of Mataram, enrolled in the Vocabulary Building course across classes F, G, and H. These classes were selected because students had been introduced to ChatGPT as a supplementary learning tool during the semester. From this group, 15 students were purposively chosen for semi-structured interviews based on their thorough questionnaire responses and active use of ChatGPT for vocabulary study. The participants represented diverse socio-economic backgrounds, prior exposure to AI tools, and varying levels of digital literacy. While some had prior experience with AI-based applications, others accessed ChatGPT for the first time through this course.

Initial engagement with ChatGPT varied. Several students expressed hesitation and confusion at the outset; however, curiosity soon developed into enthusiasm as they experienced the tool's quick and accurate responses. Many utilized ChatGPT not only for definitions but also to generate example sentences, explore synonyms and antonyms, and create vocabulary quizzes. This flexibility allowed for autonomous and interactive learning beyond classroom hours, which students found more engaging

compared to traditional dictionary-based approaches. Nevertheless, challenges such as overly lengthy or complex explanations and occasional irrelevant outputs indicated a learning curve in effective prompt formulation.

Analysis of the 20-item questionnaire revealed four key themes: ease of access and use, vocabulary comprehension, motivation and engagement, and challenges related to usage. The following is a bar chart depicting students' perceptions about using ChatGPT:

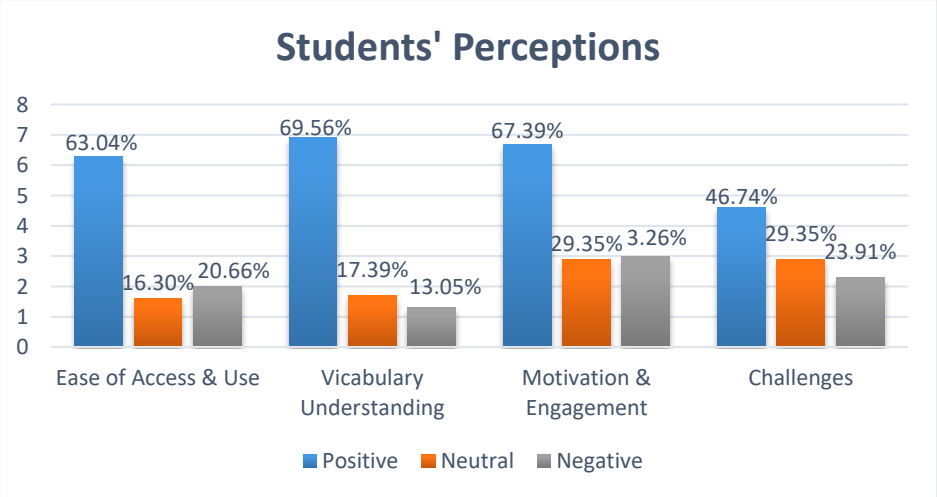

Figure 1. Students' Perceptions

Based on Figure 1. the questionnaire results show students' perceptions of ChatGPT. For ease of access and use, 63.04% of students expressed positive perceptions, citing ChatGPT's flexibility to support vocabulary learning anytime and anywhere, while 20.66% held negative perceptions due to device or internet limitations, and 16.30% responded neutrally. Regarding vocabulary understanding, 69.56% reported that ChatGPT helped them understand new words more quickly and effectively, 13.05% found the explanations difficult to follow, particularly when they were too lengthy or complex, and 17.39% were neutral. For motivation and engagement, 67.39% expressed increased interest and motivation to learn vocabulary using ChatGPT compared to traditional methods, 29.35% remained neutral, and only 3.26% felt less motivated. In terms of challenges, 46.74% reported negative perceptions due to unclear explanations, limited internet access, and difficulty formulating precise questions, while 23.91% viewed these as opportunities to improve independent learning skills, and 29.35% gave neutral responses. Overall, the data indicate that the majority of students perceive ChatGPT positively, particularly in enhancing accessibility, vocabulary comprehension, and motivation, although certain technical and content-related challenges remain. Therefore, student perceptions of ChatGPT across four themes ease of access and use, vocabulary comprehension, motivation and engagement, and challenges showed that most respondents expressed positive views, particularly regarding flexibility, comprehension, and motivation, while a small proportion reported neutral or negative perceptions due to technical or content-related issues. Overall, student perceptions were largely positive.

Qualitative findings from interviews reinforced these results. Students consistently described ChatGPT as a helpful, flexible, and engaging learning partner that provided rapid, contextualized answers beyond the scope of traditional dictionaries or textbooks. The dialogue-like interaction made learning feel more personalized and less monotonous, thus increasing motivation. The freedom to study at any time and place was particularly appreciated, as it allowed for greater self-management of learning. However, several difficulties were noted, including verbose or overly technical explanations, unfamiliar idioms, and generic or unsuitable answers when prompts were vague. Students recommended the addition of adjustable language difficulty settings (e.g., beginner to advanced), options for concise or detailed answers, and culturally tailored features such as an "Indonesian student mode." They also suggested interactive enhancements such as vocabulary quizzes, pronunciation audio, and glossary tools.

The findings of this study affirm the potential of ChatGPT as an effective supplementary tool for vocabulary learning in higher education, aligning with established theories and prior empirical research in language acquisition. The majority of second-semester students at the English Education Study Program, University of Mataram, reported positive perceptions toward ChatGPT, indicating that it enhanced their understanding of new vocabulary and provided meaningful contextual examples. This supports Zhu, Zhang, and Irwin's (2023) assertion that vocabulary acquisition is central to the development of listening, speaking, reading, and writing skills, and that vocabulary learning is most effective when learners encounter words in context rather than through rote memorization.

Students highlighted ChatGPT's ability to generate example sentences, suggest synonyms and antonyms, and explain usage in ways that deepened comprehension. This aligns with Schmitt's (2008) emphasis that meaningful exposure is key to instructed vocabulary learning and Nation's (2001) view that vocabulary mastery requires contextual learning beyond memorization. It also supports Clark's (1993) observation that interactive and contextualized exposure can foster more effective vocabulary acquisition.

About previous studies, the results are consistent with Chien, Hsieh, and Chen (2020), who found that AI chatbots improved vocabulary retention among middle school learners, and Mugableh (2024), who reported that ChatGPT enhanced independent vocabulary learning for Saudi EFL students. Similarly, Sapan and Uzun (2024) observed that integrating ChatGPT into English instruction significantly enhanced vocabulary outcomes, reinforcing its benefits across different educational contexts.

However, this study also revealed several challenges that add nuance to these positive results. Some students expressed confusion when ChatGPT's explanations were too lengthy, vague, or advanced for their proficiency level, reflecting Lee and Drajati's (2019) concerns that students may become overwhelmed without the skills to critically evaluate AI-generated content. Technical barriers—such as limited internet connectivity and incompatible devices—were also cited, echoing Cahyani et al.'s (2023) findings that infrastructure plays a critical role in the success of mobile and AI-based learning platforms.

While the results point to ChatGPT's promise in vocabulary learning, they also highlight the need for improvements in accessibility, simplification of AI output, and pedagogical support. As Lai, Saab, and Admiraal (2022) note, AI tools are most effective when integrated into instruction with appropriate scaffolding. In the Indonesian context, this may involve providing teacher training on AI-based instruction, ensuring equitable access to technology, and embedding ChatGPT use into structured vocabulary-building activities.

Overall, the findings support the integration of ChatGPT into language learning as a means of enhancing vocabulary comprehension, motivation, and learner autonomy, while underscoring the importance of addressing technological, pedagogical, and contextual barriers to maximize its impact.

CONCLUSION

This study concludes that ChatGPT holds significant potential as a supportive medium for learning English vocabulary. It fosters deeper comprehension, encourages learner autonomy, and enhances motivation through accessible, context-rich explanations. These strengths align with the research objectives and indicate that integrating ChatGPT into language learning can enrich students' vocabulary acquisition experiences. Nevertheless, its optimal use requires careful adaptation to learners' proficiency levels, the provision of clear and simplified explanations, and integration into guided instructional practices. The findings suggest that future developments should include features such as audio pronunciation, interactive learning activities, and structured guidance to further improve its effectiveness. This research underscores the importance of collaboration between educators and technology developers to ensure that AI-powered tools like ChatGPT are pedagogically sound and responsive to learners' needs.

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