

Investigating Artificial Intelligence (AI) as a Vocabulary Learning Tool: Students' Perception to Use ChatGPT

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Abstract: Artificial Intelligence (AI) is being investigated more and more in the field of education as a potential tool to help and improve language acquisition, notably in the improvement of learners' communication skills. This research aimed to investigate students' perceptions to use ChatGPT in learning English vocabulary. This research was in descriptive quantitative method by administering a questionnaire to collect the data. Then, the data was analyzed by descriptive statistics. The findings revealed that the students' showed the positive perceptions. ChatGPT contributed a good impact on their vocabulary knowledge. ChatGPT also supported them to build their English vocabulary. Students felt excited when answering vocabulary exercises in blank sentences form. Students also got the explanation of the correct and incorrect answers. In the end, ChatGPT can improve students' vocabulary in the new shape of artificial intelligence technology. The findings indicated that the majority of students are accustomed to studying English vocabulary with the aid of artificial intelligence, such as ChatGPT. They are aware of ChatGPT's objectives and think it is a useful educational tool. Students from generation Z are generally more enthusiastic about using ChatGPT to learn English. These students are more likely to use ChatGPT to advance English vocabulary.

Keywords: Artificial Intelligence, ChatGPT, Vocabulary Enhancement.

Introduction

Particularly since the introduction of ChatGPT by OpenAI in November 2022, the potential of technologically improved learning tools to support language acquisition has drawn substantial attention from educational scholars and practitioners across numerous areas. As real and engaging tools, technology offers special chances for language learners to interact with the target language, enabling the development of language abilities in a more immersive and meaningful way (Loncar et al. 2021). Additionally, technology increases students' autonomy and motivation, enabling them to take charge of their learning process (Peterson 2017). AI-powered chatbots are one major technological advancement in this area. These chatbots provide tailored and engaging language learning experiences by interacting with

learners through dialogue-based exchanges using machine learning and natural language processing algorithms (Guo et al. 2022). They can adjust to the competence levels of the learners, offer real-time feedback, and promote learner autonomy and self-correction (Chien et al., 2020).

The AI-powered chatbot ChatGPT, created by OpenAI, uses large-scale language models to produce writing that resembles that of a human (Aljohani, 2021). It has a variety of potential advantages for language learning, including as support for writing, research, and problem-solving tasks, help with language skill development, and the provision of individualized practice materials (Kasneji et al. 2023). While ChatGPT appears to be a ground-breaking and novel tool for language learning, questions have also been raised about the possible consequences of its improper use, including unfairness, copyright infringement, and

violations of academic integrity. Additionally, concerns have been expressed about the veracity and integrity of the data produced by ChatGPT.

Despite the expanding importance of technology in language acquisition, including technologies like ChatGPT, there is a significant study gap regarding the influence and efficacy of these tools from the learners' perspective. While earlier research has emphasized the potential advantages of AI-powered chatbots, more research is required to better understand how learners interact with ChatGPT and how to best meet their particular requirements and problems (Chen et al., 2020).

Preprints, multiple blog articles, and media outlets have all observed on the advantages of ChatGPT in education (Zhai, 2022); others have offered recommendations for using it in the classroom to promote research. There are, however, only a few research that have looked into students' perspectives and their intention to utilize ChatGPT due to the recentness of the technology and the topic in general. Investigating the claims made about the subject is important since it will open up possibilities for more research. In addition, specialists in education and academic fields other than undergraduate, graduate, and learner-researchers are receiving more and more attention for ChatGPT.

In the world of education, ChatGPT was met with both adoration and opposition. Some writers think that, given how calculators and computers have permeated math and science, AI-based tools like ChatGPT will unavoidably become a fundamental component of writing. In order to encourage teaching and learning, some recommend using these tools with students and teachers rather than forbidding them. In their position paper, the authors discuss the advantages and disadvantages of ChatGPT for teaching and learning at all educational levels. As a result, ChatGPT can assist students in learning how to read, write, analyze material, think critically, solve problems, create practice problems, and do research. It encourages distant learning and group learning while empowering individuals with disabilities.

For lesson planning, student assessment, and professional development, teachers can use ChatGPT. On the other hand, the authors point out a number of significant issues, such as copyright concerns, bias, unfairness, an over-reliance on ChatGPT by students and teachers, a lack of expertise in integrating this technology in the classroom, the challenge of differentiating between answers generated by models and those created by students, the cost of training and maintenance, data privacy and security, and sustainable usage. Additionally, ChatGPT operates differently from search engines like Google because it only has access to knowledge that was collected prior to September 2021 and doesn't constantly scour the internet for new information. As a result, its uneven factual correctness has been recognized as a significant flaw by (Shoufan, 2023).

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There are few studies that focus on students' real experiences by using ChatGPT in an educational setting, despite the mounting concerns and the demand for rigorous inquiry. As a result, the purpose of this study is to evaluate how students view utilizing ChatGPT for learning, with a particular emphasis on how they view the tool generally, the advantages they see, the difficulties they encounter, and any potential solutions. By completing this study, we seek to bridge the knowledge gap that currently exists and advance the field of AI in education. Being the key users and benefactors of these technologies, it is also crucial to understand how students view ChatGPT. The knowledge acquired from this study will be helpful for educational practitioners, researchers, and policymakers, directing responsible and efficient use of this technology and assisting them in understanding the impact of using ChatGPT into educational settings (Baidoo-Anu & Owusu, 2023).

Further study is required to close this knowledge gap and obtain understanding on how to employ ChatGPT for language learning to its full potential. By studying how students think ChatGPT functions during language learning activities, the current study seeks to fill this knowledge gap. A full understanding can be attained by analyzing how students view ChatGPT's function in language acquisition and by looking at their interactions, attitudes, and experiences with the tool. This knowledge is essential for making the most use of ChatGPT to address the unique requirements and difficulties of language learners.

Materials and Methods

Study Area

This study focused on artificial intelligence particularly the use of ChatGPT on learning vocabulary. This study was descriptive quantitative research. Descriptive designs are non-experimental because they do not require intervention or treatment. They generally aim to provide information about key parameters without testing hypotheses. This study aimed to investigate students' perception of the usage of ChatGPT on vocabulary learning. The participants were high school students at SMAN 2 Binjai, North Sumatra, Indonesia. The participants ranged from 15 to 17 years of age and learned vocabulary on ChatGPT (Losi, 2022; Losi & Nasution, 2022). Participants were requested to complete the questionnaire honestly and provide feedback on how they felt about using ChatGPT as a learning tool for acquiring English vocabulary. It received responses from thirty students.

Procedures

Using Google forms, the researchers created a web-based survey. Closed-ended five-point Likert scales were employed by the researchers because they offer a higher level of objectivity, are suited for discrimination in the research, and also make it easier for participants to understand. Asking closed-ended questions about someone is the greatest approach to learn about their ideas,

behavior, opinions, and perceptions. The replies from the participants were automatically captured and stored for quick analysis due to the electronic method of data collection. The collecting procedure was accelerated up by the process's cost-effectiveness, rapid response rate, and convenience.

Creating an online questionnaire gives the researcher the freedom to be innovative with question creation, scale adoption, and answer consistency. Perceptions and use intentions were the variables used in the questionnaire. The statements were divided into four categories: perceptions or understanding of ChatGPT (6 items), attitudes towards actual practice in using ChatGPT (4 items), perceptions regarding the advantages of ChatGPT (3 items), and perceptions regarding the disadvantages of ChatGPT (3 items). According to the five-point Likert scale, the response possibilities for the closed-ended statements were Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, and Strongly Agree=5 (Pallant, 2005).

Data Analysis

Google Form and Microsoft Excel were used for the analysis of the survey data. To determine the broad trends and distribution of scores in the data, descriptive statistics were computed. The analysis also relies on Pallant (2005) suggested rating intervals, which confirmed the average of each item with the degree of agreement. The rating interval reflects significant disagreement as 1.00-1.80, disagreement as 1.81-2.60, moderate agreement as 2.61- 3.40, high agreement as 3.41-4.20, and strong agreement as 4.21-5.00.

Results and Discussion

Results

This study aimed to determine how Generation Z students felt about using ChatGPT to gain English vocabulary and what they thought about its advantages and downsides. The four sets displayed in the questionnaire were used to frame the discussion of the findings.

Table 1. Students' perception or understanding of ChatGPT.

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I find using ChatGPT to be simple and convenient.	0	0	0	40	60
2	I believe ChatGPT can help me learn vocabulary more effectively.	0	0	0	33,33	66,67
3	Learning vocabulary with ChatGPT is enjoyable.	0	0	0	30	70
4	I feel that I can easily understand the vocabulary exercise provided by ChatGPT.	6,67	0	0	33,33	60
5	I am willing to invest time and effort to better utilize ChatGPT for learning vocabulary.	6,67	10	16,7	26,67	40
6	I expect to use ChatGPT frequently for learning vocabulary in the future.	0	0	0	50	50
7	I use ChatGPT to increase my interest and motivation in learning vocabulary.	0	0	0	30	70
8	I use ChatGPT to enhance my English vocabulary.	0	0	0	40	60
9	I use ChatGPT to enhance my vocabulary bank.	0	10	0	33,33	56,67
10	I use ChatGPT to help me gain a deeper understanding of the English language and culture.	26,67	33,33	0	23,33	16,7
11	I think ChatGPT can help me improve the quality of my vocabulary learning.	6,67	6,667	0	36,67	50
12	I believe ChatGPT can provide me with more vocabulary learning opportunities.	6,67	6,667	0	33,33	53,33
13	I think ChatGPT can help me enhance my vocabulary mastery.	0	0	0	43,33	56,67
14	I think ChatGPT's responses may contain some inaccurate information.	56,7	33,33	0	10	0
15	I think ChatGPT is not helpful for my vocabulary learning.	60	33,33	0	6,667	0
16	When I use ChatGPT to improve my vocabulary mastery, I am able to overcome obstacles.	10	6,667	0	33,33	50

The descriptive analysis in Table 1 revealed that most students have a positive perception and knowledge of ChatGPT based on the rating intervals suggested by Pallant (2005). A substantial number of students who indicating moderate agreement expressed they can use ChatGPT to be simple and convenient (60% strongly agreed and 40% agreed). The results showed that the majority of students (66,67% strongly agreed, 33,33% agreed) think that ChatGPT can help them learn vocabulary more effectively, and they agreed that learning vocabulary with ChatGPT is enjoyable (30% agreed and 70% strongly agreed). A good number of students feel that they can easily understand the vocabulary exercise provided by ChatGPT (33,33% agreed, 60% strongly agreed). They also invested time and effort to better utilize ChatGPT for learning vocabulary (26,67% agreed, 40% strongly agreed). The students expected to use

ChatGPT frequently for learning vocabulary in the future (50% agreed, 50% strongly agreed). The students used ChatGPT to increase their interest and motivation in learning vocabulary (30% agreed, 70% strongly agreed). The students used ChatGPT to enhance their English vocabulary and vocabulary bank (40% agreed, 60% strongly agreed). Overall, most of students had a positive perception on the use of ChatGPT in helping them enhance their vocabulary knowledge. It can be showed from the positive percentage which reached over than 50%. Next set of statements dealt with students' disagreement about the use of ChatGPT. The students' used ChatGPT to help them gain a deeper understanding of the English language and culture (strongly disagreed 26,67%, disagreed 33,33%). They think ChatGPT is not helpful for my vocabulary learning (strongly disagreed 60%, disagreed 33,33%).

Discussion

The results showed that ChatGPT has some important advantages for learning English vocabulary. With ChatGPT's help, students are still eager to learn English outside of the classroom and are willing to put in the time and effort necessary to improve their use of the language, which significantly improves their capacity for independent study and problem-solving. Additionally, ChatGPT is thought to increase students' learning effectiveness and efficiency. Participants agreed on the problems with wrong answers while discussing the drawbacks, but they firmly feel ChatGPT is beneficial for their acquisition of English language. The relevant technology is anticipated to advance, and clear instructions and guidelines should be provided in order to prevent the potential academic dishonesty issues, as previous studies have noted (Cotton, Cotton & Shipway, 2023). These academic issues should not be neglected.

This study's primary goal was to investigate how students felt about the use of ChatGPT in the classroom. The study's findings showed that students' opinions of ChatGPT were more favorable. Students generally expressed satisfaction with the use of this AI chatbot in their classrooms. The characteristic with the highest score in terms of how students perceived ChatGPT's usability was "ease of use," which was followed by "can serve as a search engine," "can be used with various input languages," and "be a helpful study tool." Due to its ease of use and convenience, ChatGPT was selected by the majority of participants.

Numerous academics have acknowledged these features of ChatGPT. The author found that the participants were very aware of ChatGPT's advantages in terms of its use in education. From the perspective of the kids, using ChatGPT in the classroom was a fantastic opportunity that offered them many advantages. Numerous students concurred that ChatGPT can improve their vocabulary learning and retention, save them time, offer them access to a wealth of knowledge, provide them with individualized instruction and feedback, and deliver all of these benefits. Research by Sharadgah & Sa'di (2023) as well as other

authors' conclusions were all in agreement with the findings of the study. These authors claim that ChatGPT can be utilized as "a virtual intelligent tutoring service" that enables students to submit inquiries, receive individualized responses, and obtain recommendations based on their past performance, needs, interests, and level of academic achievement. These authors claim that ChatGPT can be utilized as "a virtual intelligent tutoring service" that enables students to ask questions and receive tailored responses as well as make recommendations based on their prior performance, needs, interests, and level of learning.

Students suggested some potential remedies to enhance ChatGPT's use in learning, including confirming ChatGPT's responses with trustworthy information sources, using ChatGPT as a reference or consultant tool, providing usage instructions, and promoting the academic honesty and ethical uses of ChatGPT in academic context. To make ChatGPT a useful tool for teaching and learning, many scientists have proposed a number of strategies, such as identifying AI-generated information, instructing students on how to use ChatGPT appropriately, and encouraging academic integrity among students. In fact, many scientists are aware of the risks that ChatGPT could pose to education. As a result, they have suggested a number of solutions.

Conclusions

Understanding student attitudes is essential for implementing artificial intelligence into education in a way that is user-oriented and maximizes its capabilities. The findings indicated that the majority of students are accustomed to studying English vocabulary with the aid of artificial intelligence, such as ChatGPT. They are aware of ChatGPT's objectives and think it is a useful educational tool. The findings show a significant correlation between users' current location and their approval of ChatGPT. Students from generation Z are generally more enthusiastic about using ChatGPT to learn English. These students are more likely to use ChatGPT to advance English vocabulary. However, due to its discomfort, certain

SMAN 2 Binjai students may exhibit a relatively low motivation to use ChatGPT.

This research is limited only on students' perception to use ChatGPT. Based on the current study findings, the researchers suggest the following: teaching educators and learners the benefits of ChatGPT technology and how to use it to accomplish a variety of goals in an effective way. educating teachers on the integration of vocabulary tools into their curricula. teaching students how to use vocabulary-learning tools and also the application of artificial intelligence (AI) technology in higher education.

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