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Investigating EFL Learners' Perceptions of Using AI to Enhance English Vocabulary Acquisition Based on The Technology Acceptance Model

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ABSTRACT

The technological advancement of artificial intelligence (AI) has been shown to confer significant benefits in both technical and educational realms. Accordingly, the study aims to investigate learners' perspectives on AI tools and attempts to assess which aspects of these tools are useful in improving vocabulary acquisition in a Saudi context. A structured questionnaire was designed based on the technology acceptance model (TAM) by using a quantitative method, and distributed to 112 undergraduate students from different colleges in Saudi Arabia, the majority of whom are Generation Z. The findings revealed that EFL learners generally hold a favorable view of AI tools for vocabulary acquisition, and gender differences were found to be statistically significant ($p < 0.00$) where female respondents report greater scores in terms of ease of use, usefulness, positive attitudes, and their intentions toward adoption. In addition, a person's intention to adopt technology is primarily influenced by their assessment of its positive attitudes, followed by its simplicity and benefits of use. This study provides a deeper understanding about implementing AI tools to enhance EFL learners' English vocabulary acquisition. The results can also nudge teachers and policymakers to further enhance their instructional strategies in ways that foster a more engaging and supportive environment for vocabulary growth.

Keywords: Artificial Intelligence (AI); EFL Learners; EFL Vocabulary Learning; Technology Acceptance Model; Students' Perceptions; Vocabulary Acquisition

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1. Introduction

Vocabulary serves as a language's basic currency. Effective communication is impossible without a rich vocabulary, just as commerce cannot thrive without financial resources. A strong vocabulary helps people communicate their ideas and thoughts more accurately and clearly, which both improves the quality of communication and lowers the possibility of miscommunication. It is the door, according to Nation[1] to help students improve their skills of reading, writing, speaking, and listening by providing the foundation for efficient language input and output. Thus, having a large vocabulary helps students succeed academically, enabling them to understand difficult texts and effectively present their ideas. However, the majority of EFL learners find it challenging to acquire vocabulary since they are not exposed to the target language input, particularly in non-English speaking environments[2]. Lacking opportunities to interact with native speakers or real materials, they struggle to experience and practice new words in real-world situations. Therefore, a suitable way should be found to enhance and memorize English vocabulary through other means such as artificial intelligence (AI), a rapidly advancing technology that has become useful not only on the technical side but also on the educational side.

AI refers to a computer system's capacity to access, learn, and understand external data sources with a precision that permits it to utilize the knowledge in doing advanced tasks and achieving desired goals[3]. Oravec[4] advocates that technologies like artificial intelligence and chatbots were innovated in the 1950s when the ideas were being tested. In today's educational system, integrating technology has become necessary to improve learning experiences. In the past decades, significant changes have occurred in the EFL classroom, as teachers move from conventional techniques to modern strategies that incorporate a variety of technological innovations[5–7]. Moreover, Stockwell[8] observed that incorporating technology alters teacher-centered traditional learning environments to create modern, student-centered, and flexible learning experiences. Peterson[9] further argues that technology integration increases student autonomy and motivation, which promotes self-directed learning or control over one's learning. There are many benefits and disadvantages of using AI to learn English. It can provide various benefits for language learning, such as assistance with writing, research, and problem-solving[10]. It may likewise improve the accuracy of pronunciation[11], writing proficiency[12, 13], and vocabulary acquisition[14]. However, prior research has also revealed that EFL students sometimes encounter negative emotions like tedium, distress, frustration, and displeasure in technologically driven environments[15, 16]. Although research on using AI tools to improve EFL students' language proficiency has been conducted, the existing literature remains limited as to the viewpoints of EFL students on the acceptance of AI tools for their studies. The technology acceptance model (TAM) can be defined as users' intention to use technology as influenced by how beneficial and simple they believe it to be[17]. According to Shoufan[18], students' perspectives on AI tools or ChatGPT, which may influence its effective use and enhancement, have not been properly investigated.

Specifically, this study seeks to highlight and understand EFL learners' perceptions of utilizing AI tools in pursuit of vocabulary learning as these attitudes may inform teaching practices and student outcomes for educators, curriculum designers, and policymakers. The study aims to especially investigate learners' perspectives on AI use in vocabulary acquisition in a Saudi context. It attempts to assess the usefulness of these tools for EFL learners and make recommendations for improving educational materials. Moreover, the study seeks to give instructors a guide and key insights on ways to integrate AI to improve teaching and student learning. Further, it advises developers and policymakers on how to allocate resources, adopt new technologies, and improve learner motivation and engagement. The current study is guided by these three research questions below:

1. What are learners' overall perceptions of AI tools for vocabulary acquisition in terms of ease of use, usefulness, positive or negative attitudes, and their behavioral intentions toward adoption?
2. How do perceived ease of use, usefulness, and attitudes (positive or negative) influence learners' intention to adopt AI tools?
3. Does gender play any role in the perception of AI tools for learning English vocabulary?

2. Literature Review

2.1. Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was significantly informed and founded on the theory of reasoned action (TRA). TAM was first conceived by Davis [19] to predict and evaluate acceptance of a new information system before its introduction. It was meant to assist in determining how users feel about technology and how to accept it. According to Davis [17, 19], people's intention to use a particular technological innovation depends on two key aspects: "perceived usefulness" and "perceived ease of use" ([20], p. 985). Perceived usefulness (PU) is defined as "the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context", and perceived ease of use (PEOU) is "the degree to which the prospective user expects the target system to be free of effort." According to TAM (**Figure 1**), the possible user's behavioral intention (BI) to embrace a new information system is a major determinant of how that system will be used in reality. BI is impacted by the user's attitude (A) toward the new technology. User attitude, meanwhile, is formed by two key constructs: PU and PEOU, in which PEOU has an impact on PU. Furthermore, external variables can have a direct impact on both PU and PEOU. According to Davis [21], it can be concluded that the more an application is viewed as simple to use, the more likely it is to be considered useful, which consequently increases the possibility of the technology being accepted. It has been demonstrated that this model is useful for forecasting AI adoption. For example, Vo & Nguyen [22] used the TAM model to investigate how students perceived AI tools for their homework. Similarly, Maheshwari [23] used the TAM model's "perceived ease of use" and "perceived usefulness" constructs to provide insight into the factors impacting students' intention and adoption of ChatGPT.

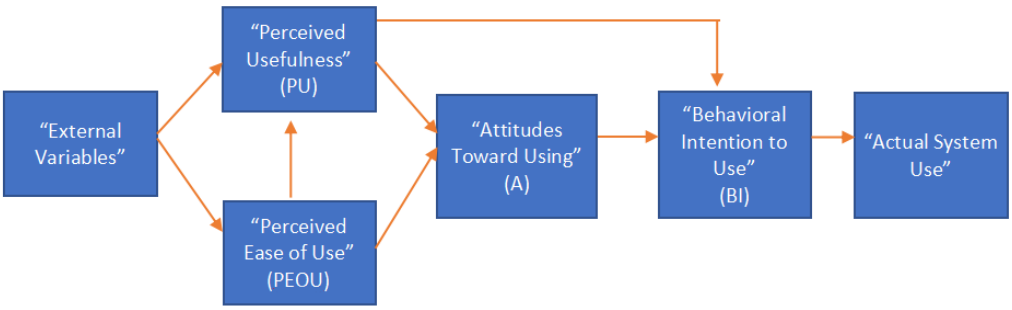

Figure 1. The Technology Acceptance Model (TAM) formulated by Davis [19] in 1986.

2.2. Related Studies

Most students had a positive perception of utilizing AI tools, according to earlier studies. In a descriptive quantitative study, Losi et al. [24] examined how students perceive using ChatGPT to acquire vocabulary in English via a Likert scale questionnaire given to thirty Indonesian students. The results showed that students held favorable opinions of ChatGPT, which successfully improved their vocabulary and learning motivation. Students in Generation Z are often more passionate than other age groups about utilizing AI tools for learning English. Although AI in education has received a lot of attention, the study discovered a dearth of targeted research on students' usage of AI tools for vocabulary learning.

Alharbi and Khalil's [25] study investigates how teachers and students view AI in ESL vocabulary learning. It focuses on their attitudes, beliefs, and the advantages and difficulties of utilizing AI toward this end. Two distinct Likert scale questionnaires were used in the study to gather information from 22 English language instructors and 77 college students in Pakistan regarding their thoughts on the use of AI in learning vocabulary. The findings demonstrated that students have a positive opinion of AI because they believe it can offer more individualized and engaging vocabulary learning experiences than conventional approaches. But teachers' responses differed; younger educators expressed optimism while more experienced educators expressed worry about students' reliance on technology.

Jomaa et al. [26] investigated Omani pupil perceptions

regarding the use of AI tools for vocabulary learning. This mixed-method study of both quantitative and qualitative data drew from 236 Omani participants. It was observed that academic level, gender, and age did not affect the usage of AI tools as per the outcomes. However, it was indicated that there was low confidence in the trust placed on AI-generated vocabulary despite extensive and high usage of AI tools. Xiao and Zhi [27] also examined learners' experiences and opinions on the utilization of ChatGPT to learn language using qualitative methods on a small scale. The study was conducted in a Chinese learning institution. It used semi-structured interviews that assessed five undergraduate students on AI's impact on vocabulary, grammar, and writing, as indicated by IELTS preparation and essay writing. Therefore, the students reported that AI was effective in broadening their vocabulary, enhancing grammar, and giving them personalized feedback for better learning.

In previous studies, Rajendran et al. [28] and Ebadi and Raygan [29] found that gender differences were key factors in the perception of the effectiveness of AI in language acquisition. The study by Rajendran et al. [28] was designed to examine how student gender disparities impact interaction, engagement, and motivational behaviors through the use of mobile-assisted language learning (MALL). Based on the outcome, female learners indicated they were more motivated and interested in using AI tools than their male counterparts. Ebadi and Raygan [29] also sought to understand how experience and gender affected the student's perception of usefulness in the utilization of mobile-assisted language learning. The study was done in Iran, and it involved the collection of data from 190 EFL learners who were enrolled and instructed in English language acquisition. Female learners indicated that the usage of smartphones gave them an advantage and a favorable environment to learn language compared to male learners, who exhibited little gain.

3. Methodology

To gain a comprehensive understanding of Saudi EFL learners' perceptions of AI tools for vocabulary acquisition, a structured questionnaire was designed and distributed using Google Forms. A quantitative method was used in order to collect at large scale as well as to gather and analyze data. According to Watson [30], a quantitative methodology encompasses a wide range of approaches for the systematic analysis of social phenomena using statistical or numerical data.

3.1. Participants and Procedure

The current study contains 112 undergraduate students from different colleges in Saudi Arabia: Applied College, College of Science, and Preparatory Year Program. Participants were 54.5% male and 45.5% female. The vast majority of responders (86.6%) in this study were younger, falling between the ages of 18 and 23; 6.3% were between the ages of 24 and 26; and 7.1% were 27 or older. The study primarily targeted Generation Z, who were born between 1997 and 2012, and are familiar with AI tools. Generation Z students are hyper-cognitive, true digital natives, whose learning styles differ from previous generations [31]. According to Szymkowiak et al. [32], the AI sector needs to focus on younger generations since they are more inclined to become early adopters of innovative technology, hence the predominance of Generation Z in this study.

The students were notified by email and WhatsApp about the Google Forms online questionnaire. After receiving the consent form, participants expressed their willingness to participate by responding in the positive. However, it was mandatory that only participants with AI tool experience be involved in this study, so the first question in the questionnaire was about their knowledge of using AI tools. Those who chose "no" were excluded. Participants were given three weeks to respond, after which the researcher proceeded to the analysis phase

3.2. Instrument

The study was based on the TAM model hypothesis, which was initially developed by Davis [19]. TAM was selected because it aids in gauging the adoption of new technologies, which aligns with the current study's objectives in investigating EFL learners' perceptions of using AI tools to enhance English vocabulary acquisition. The questionnaire was created by the researcher to cover four key areas of perception. First, perceived usefulness, which evaluates the extent to which learners find AI tools helpful in enhancing vocabulary acquisition. Second, ease of use, which focuses on the level of access to AI tools and the internal feeling of its usage. Third, positive and negative attitudes, which cap-

tures learners' emotional responses to using AI tools. Fourth, behavioral intention, which focuses on the learner's willingness to adopt AI to learn vocabulary. The questionnaire used for this study was further enhanced and evaluated by involving two experienced professors in the subject of English who majored in computer-assisted language learning. The step sought to verify if the questionnaire adequately covered the target participants' context and the questions' effectiveness for learning vocabulary acquisition. A Likert scale was adopted to rate participants' responses and attitudes on a scale of 1 to 5, with 1 representing "strongly disagree" and 5 for "strongly Agree." Gathering demographic information like gender to analyze subgroup variations was considered necessary.

An initial 20-item questionnaire instrument was created, and its reliability and consistency were checked across a range of items by applying Cronbach's Alpha. The questionnaire's reliability was proved by the value of 0.9081, as indicated by Cronbach's Alpha. The implication is that the formulated questions revealed greater effectiveness in measuring the intended learning constructs. In this context, the high value suggests that the learner's responses closely matched the questions and that this tool was valid and reliable in evaluating attitudes and perceptions in utilizing AI tools. Pallant's[33] study proposed incorporating rating intervals into the study to check agreement levels within each category. As per the rating scale, the scores between (1.00 and 1.80) indicate a significant disagreement, scores of (1.81 to 2.60) represent disagreement, scores of (2.61 to 3.40) indicate moderate agreement, scores of (3.41 and 4.20) indicate high agreement, and scores between (4.21 and 5.00) stand for a strong agreement.

4. Results

This study examines how EFL learners perceive the use of AI tools for vocabulary acquisition. Participants rated their responses on a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Thus, I begin with the first question:

4.1. Findings Concerning the First Research Question

The questionnaire is divided into 5 different categories: Perceived Usefulness (questions 1–4), Ease of Use (5–8), Positive Attitudes (9–12); Negative Attitudes (13–16), and Behavioral Intentions (17–20). The data in **Table 1**, shows that EFL learners generally view AI tools for vocabulary acquisition positively. High average scores for Ease of Use (3.90) and Perceived Usefulness (3.83) indicate that learners find the tools practical and accessible. However, the score for Positive Attitudes (3.78) suggests room for improvement in user engagement. While Negative Attitudes have a lower mean score (2.89), the high variability (1.03) indicates that some learners experience challenges with these tools. The moderate score for Behavioral Intentions (3.63) suggests that while many learners are willing to use the tools, addressing usability and effectiveness could encourage broader adoption.

Table 1. Data analysis of categories.

	M	Std. Deviation
Perceived Usefulness	3.83	0.92
Ease of Use	3.90	0.92
Positive Attitudes	3.78	0.94
Negative Attitudes	2.89	1.03
Behavior Intentions	3.63	0.89

Table 2 shows that the mean scores are all close to 4.0, indicating that students generally agree with the statements about the usefulness of AI tools for vocabulary learning. The highest mean score (3.99) stated that AI helps them improve overall performance in learning English vocabulary. The standard deviations are around 1.1, suggesting moderate variability in responses. While most students have positive perceptions, some may have neutral or slightly negative views.

Table 3 demonstrates that the mean scores indicate that students generally agree that AI tools are easy to use, with scores close to 4.0. The statement "I find AI tools easy to use for learning English vocabulary" has the highest mean (3.99), suggesting this is the most positively perceived aspect of ease of use. Standard deviations range from 1.13 to 1.22, showing moderate variability. Most students agree with the ease-of-use statements, though some may have found the tools less intuitive.

Table 4 illustrates that the mean scores suggest mixed levels of positive attitudes. Students generally enjoy using AI tools (3.73) and feel good about incorporating them into their routines (3.79). There is less excitement about the potential

benefits (3.03) and lower agreement that AI tools make learning more engaging (2.56). Standard deviations range from 1.07 to 1.42, indicating moderate variability in responses. Some students strongly agree, while others may have neutral or slightly negative views, particularly regarding excitement and engagement.

Table 2. Data analysis of perceived usefulness.

	M	Std. Deviation
AI tools help me to learn English vocabulary more effectively.	3.88	1.12
AI tools provide me with better vocabulary learning resources compared to traditional methods.	3.77	1.11
Using AI tools improves my overall performance in learning English vocabulary.	3.99	1.13
I find that AI tools assist me to recall new vocabulary.	3.88	1.15

Table 3. Data analysis of ease of use.

	M	Std. Deviation
I find AI tools easy to use for learning English vocabulary.	3.99	1.22
It is easy to use AI tools and practice vocabulary activities.	3.73	1.19
I feel comfortable utilizing AI tools without needing assistance from others.	3.79	1.13
Learning to use AI tools for vocabulary practice doesn't take much effort from me.	3.8	1.15

Table 4. Data analysis of positive attitudes.

	M	Std. Deviation
I enjoy utilizing AI tools to learn English vocabulary.	3.73	1.07
I feel good about utilizing AI tools in my vocabulary learning routine.	3.79	1.24
I am excited about the potential benefits of utilizing AI tools for learning vocabulary.	3.03	1.42
I believe that AI tools make learning vocabulary more engaging.	2.56	1.31

Table 5 reveals that the mean scores suggest that negative attitudes are present but vary in intensity. The highest disagreement comes with statements indicating that AI tools could stop effective learning (3.71) and a preference for traditional methods (3.67). Statements about finding AI tools annoying (3.20) and making the process more difficult (2.76) have lower mean scores, suggesting less widespread agreement. Standard deviations range from 1.09 to 1.29, indicating moderate variability. While some students have strong negative attitudes, others remain neutral or positive.

Table 5. Data analysis of negative attitudes.

	M	Std. Deviation
I find utilizing AI tools for vocabulary learning annoying at times.	3.2	1.29
I feel that AI tools can make the process of vocabulary learning more difficult.	2.76	1.25
I often favor traditional methods over AI tools for learning vocabulary.	3.67	1.09
I feel that utilizing AI tools could stop me from learning vocabulary effectively.	3.71	1.09

Table 6 indicates that the mean scores suggest a generally positive intention to adopt AI tools. The highest mean (3.90) indicates a strong preference for using AI tools over other resources for vocabulary learning. Students also express a willingness to regularly use AI tools (3.84) and explore more tools in the future (3.83). The lowest mean (3.29) suggests slightly less enthusiasm for recommending AI tools to peers, which may reflect individual preferences or confidence in their benefits. Standard deviations range from 0.92 to 1.15, showing relatively consistent responses across students, with some variability in their intentions to recommend AI tools to others.

Table 6. Data analysis of behavioral intentions.

	M	Std. Deviation
I plan to use AI tools regularly to enhance my English vocabulary learning.	3.84	1.11
I am likely to recommend AI tools to my classmates for vocabulary practice.	3.29	1.15
I plan to explore more AI tools for learning English vocabulary in the future.	3.83	0.92
I will focus on utilizing AI tools instead of other resources for vocabulary learning.	3.9	0.92

4.2. Findings Concerning the Second Research Question

To answer this question, I devised a correlation matrix, which is a table showing how strongly two things are related to each other. Each value in the matrix tells how much one factor (like "Ease of Use") is connected to another factor (like "Behavioral Intentions"). To illustrate, positive values (closer to +1) mean the two things move together, negative values (closer to −1) mean the two things move in opposite directions, and values close to 0 mean that there's little to no relationship between the two things.

The heat map in **Figure 2** shows substantial positive connections between categories like "Perceived Usefulness", "Ease of Use", and "Positive Attitudes" (values > 0.6), suggesting that users who find AI effective also think these tools are simple to use and have positive opinions toward them. In contrast, Negative Attitudes show minimal correlations (<0.2) with other categories, suggesting they are relatively independent of positive perceptions or behavioral intentions. The strongest predictors of Behavioral Intentions are Positive Attitudes (0.78) and Ease of Use (0.68). Perceived Usefulness (0.62) also plays a significant role but is slightly less influential compared to ease of use and positive attitudes. Negative Attitudes have a minimal impact on Behavioral Intentions (0.26), meaning that users' willingness to adopt AI tools is less affected by negativity compared to the positive aspects of the tool.

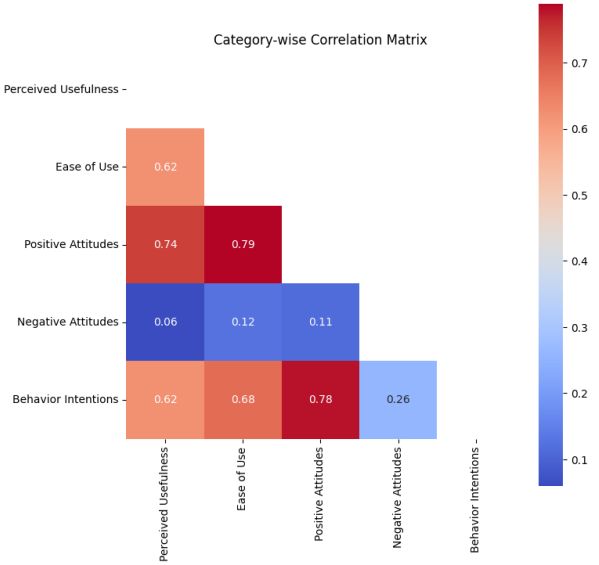

Figure 2. Category-wise correlation matrix.

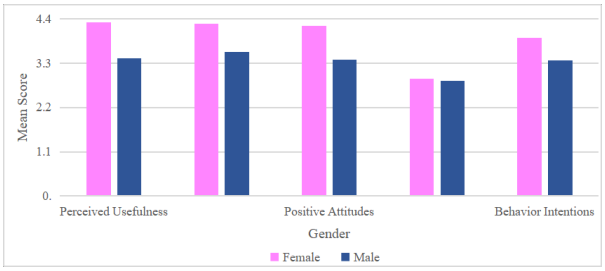

Figure 3. Mean perception scores of category by gender.

4.3. Findings Concerning the Third Research Question

Female respondents in **Figure 3** report higher scores across all positive perception categories "Perceived Usefulness", "Ease of Use", "Positive Attitudes", and "Behavior Intentions" compared to male respondents. Both genders have similar levels of negative attitudes, with scores being relatively low overall, indicating less negativity towards AI tools.

First, **Table 7** shows that the extremely small p-value indicates that there is a statistically significant difference in the perceived usefulness of AI tools between genders. Females' respondents report higher scores, suggesting that they find AI tools more useful compared to males. Second, the p-value in the Ease of Use also suggests a statistically significant difference in how easy the utilization of AI tools is perceived to be between genders. Again, females report higher scores, implying that female respondents find AI tools easier to use compared to male respondents. Third, the small p-value here indicates that there is a significant difference in the positive attitudes towards AI tools between genders. Female respondents again report more positive attitudes towards the tools.

Fourth, the high p-value for Negative Attitudes suggests that there is no significant difference between male and female respondents in their level of negativity towards AI tools. Both genders have relatively similar and low levels of negative attitudes. This could suggest a general acceptance of AI tools, irrespective of gender. Finally, the p-value for Behavioral Intention suggests a statistically significant difference in the likelihood of using AI tools between genders. Females show a higher behavioral intention, meaning they are more likely to adopt and use AI tools compared to males.

Table 7. P-values for gender differences across categories.

	P-Value
Perceived Usefulness	0.0000000463
Ease of Use	0.0000363
Positive Attitudes	0.0000007669
Negative Attitudes	0.7419
Behavioral Intentions	0.0006016

5. Discussion

EFL learners generally view AI tools for vocabulary acquisition positively. According to the intervals of ratings proposed by Pallant[33], the learners' overall perceptions of AI tools for vocabulary acquisition are in high agreement in terms of ease of use, usefulness, positive attitudes, and their behavioral intentions toward adoption, in which their average scores were between 3.63 and 3.90. The finding reveals that students generally agree that AI tools are easy to use, with this aspect receiving the highest average score (3.90). For example, the statement "I find AI tools easy to use for learning English vocabulary" has the highest mean (3.99), which suggests this is the most positively perceived aspect of ease of use. Additionally, students generally agree with the statements about the usefulness of AI tools (3.83) for vocabulary learning. For instance, the statement "Using AI tools improves my overall performance in learning English vocabulary" has the highest mean (3.99). In this case, the outcome matches the findings of Losi et al.[24], who discovered that students perceived or rated ease of use of ChatGPT to be in the highest agreement in acquiring vocabulary, followed by its utility. Similarly, Xiao and Zhi[27] found that EFL learners who utilized ChatGPT indicated they were useful and enhanced their vocabulary knowledge. Moreover, the present study finds that the perceived usefulness in the statement "AI tools provide me with better vocabulary learning resources compared to traditional methods" was in high agreement (M = 3.77). This is in line with Alharbi and Khalil[25] who investigated the perceptions of pupils and educators of AI in ESL vocabulary learning with results demonstrating that students rated AI positively for providing individualized, realistic learning experiences above traditional approaches. It could be said that students generally enjoy using AI tools in terms of positive attitudes, in which their mean scores (3.73) indicate a high agreement, and also feel good about incorporating them into their routines (3.79). Moreover, the students' intention to adopt AI tools for vocabulary acquisition showed high agreement, as demonstrated by the statement "I plan to use AI tools regularly to enhance my English vocabulary learning" (M = 3.84).

The heat map in **Figure 2** reveals strong positive correlations between categories such as "Perceived Usefulness", "Ease of Use", and "Positive Attitudes" (values > 0.6). This result is partially in line with the TAM model, in which, according to Davis[21], a person's intention to accept technology is strongly influenced by their assessment of its utility and simplicity of use. As demonstrated by this study, the strongest predictors of "Behavioral Intention" are "Positive Attitudes" (0.78) and "Ease of Use" (0.68), while "Perceived Usefulness" (0.62) is slightly less influential in comparison. Based on this study, it can be hypothesized that an individual's willingness to adopt technology is shaped first by evaluating its positive attitudes, followed closely by the simplicity in usage and the benefits to be acquired. As a result, prioritizing these aspects is essential to enhance the adoption of AI tools and user engagement to improve English vocabulary acquisition.

A statistically significant difference was noted when comparing gender differences in the perception of the effectiveness of AI usage to acquire vocabulary, as female respondents reported higher scores on "Ease of Use," "Perceived Usefulness," "Behavioral Intention," and "Positive attitudes." Females, compared to males, as per this study, considered AI tools more straightforward to use and more valuable and effective within the context of usage. Females indicated higher behavioral intention to use and adopt AI tools by showing greater openness, trust, and comfort. Gender differences were proved in previous studies[28, 29], in which mobile-assisted language learning (MALL) was applied. The first study indicated that women's high score was

attributed to their positive sentiments concerning the utility and usefulness of MALLS over their male counterparts. The second study noted that female students, compared to male students, engaged more with the application, were motivated in its usage, and did so for an extensive amount of time. However, a study by Jomaa et al.[26] found that there are no significant differences between female and male students in the utilization of AI to acquire vocabulary. The findings of the current study may be justified by the notion from Rajendran et al.[28] that female students are more driven than their male counterparts and use smartphone apps more frequently.

6. Conclusion

It is crucial to investigate EFL learners' perceptions of the integration of AI tools into education in order to give teachers, curriculum designers, and policymakers insights into instructional strategies that can improve vocabulary learning in English. To summarize the key findings of this study, EFL students, particularly Generation Z, have a generally positive opinion of intention to adopt AI tools for vocabulary acquisition, especially if these tools are easy to use, beneficial, and are met with positive attitudes. In addition, it was found that the strong positive correlations of students' behavioral intention to adopt AI tools are first "Positive Attitudes" (0.78), "Ease of Use" (0.68), and then "Perceived Usefulness" (0.62). These three categories should be prioritized when trying to foster learner adoption of AI tools for English vocabulary. Furthermore, the findings show a statistically significant difference between genders in that females perceive AI tools to be more useful and easier to use, hold more positive attitudes and openness toward AI tools compared to males, and accordingly express a higher behavioral intention to adopt and use these tools.

This study of students' opinions of AI use for vocabulary learning is a first step in incorporating AI into language instruction. However, considering the results, it is recommended that innovative teaching techniques for AI integration be more carefully investigated. According to Lodge et al.[34], in order to create effective teaching methods, educators and policymakers must work together to develop ways for integrating AI, as it is a relatively new development. Moreover, teachers must protect the integrity of learning by ensuring learners do not abuse AI as a cheating platform. With these considerations in mind, teachers should also obtain effective training on correctly incorporating AI into their lesson plans to promote vocabulary acquisition. To conclude, by emphasizing the favorable attitudes that students have toward learning English vocabulary through AI tools, this study adds a new facet to the corpus of current literature. Based on the results, the educational process can significantly be enhanced by incorporating AI into vocabulary instruction when student attitudes are positive. Policymakers and educators can improve their teaching methods to establish a more appropriate and encouraging learning environment to promote vocabulary development as they consider this aspect and take it into account.

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Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Informed consent was obtained from all participants involved in the study.

Data Availability Statement

The data analyzed for this study can be made available upon formal request.

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Conflicts of Interest

The author declares no conflict of interest.

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