

Saudi Female EFL Learners' Perceptions of the Impact of ChatGPT on Vocabulary Improvement

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Abstract—This study investigated the Saudi female EFL students' perceptions of the effect of using ChatGPT on their vocabulary enrichment. Specifically, it explores their opinions regarding the effectiveness, advantages, and disadvantages of the utility of ChatGPT as a tool for vocabulary improvement. This study adopted a mixed-methods approach, combining quantitative data obtained from a questionnaire answered by 101 Saudi female EFL learners with qualitative insights gained by interviewing 13 of the participants who have been enrolled in Majmaah University. The findings of this study demonstrated that ChatGPT is advantageous when utilized for vocabulary building. Among the advantages reported by the participants was the ability of ChatGPT to provide accurate definitions, explanations, and examples. Moreover, the capability of ChatGPT to give contextual alternatives was considered useful for EFL students to allow them to select appropriate words for specific contexts. In addition, the interactive nature of ChatGPT enables users to be engaged in real-time practice opportunities and accordingly improve their vocabulary skills. Furthermore, ChatGPT allows EFL learners to expand their lexical repertoires by being exposed to unfamiliar words. However, disadvantages such as repetitive word suggestions, affordability issues, and occasional inaccuracies in ChatGPT's responses were also indicated. This study contributes to the existing literature by exploring the effectiveness, advantages, and disadvantages of using ChatGPT for vocabulary enrichment based on EFL learners' perceptions in the Saudi context. It gives insights into the advantages and disadvantages of ChatGPT as a tool to expand EFL students' lexical repertoires, providing practical implications for EFL educators and learners.

Index Terms—ChatGPT, artificial intelligence, online, vocabulary, building

I. INTRODUCTION

Recently, technology has played a vital role in altering the process of language learning by providing EFL learners with convenient and interactive tools through various digital resources such as language learning websites, mobile applications, and online platforms. EFL learners have opportunities to get access to a wide range of sources and materials that improve their language proficiency. Technology easily facilitates access to authentic language content like articles, videos, and podcasts, exposing EFL students to real-life language usage and language skills enhancement. Specifically, the interactive nature of language learning applications and software allows users to practice their language offering them features like speech recognition for practicing pronunciation and grammar correction for written communication. Moreover, technology encourages global connections, enabling EFL learners to integrate into conversations with native speakers and language enthusiasts leading to evolving their fluency and cultural understanding. One notable advancement is developing language models like ChatGPT. According to Javaid et al. (2023), ChatGPT is an OpenAI (Artificial Intelligence) language model that reads and establishes human-like writing. ChatGPT has revolutionized the approaches to language learning by providing a unique and interactive platform for enhancing language abilities.

EFL learners often struggle when trying to expand their vocabulary because of the complexities of a language, especially with the unlimited number of words included in this language. However, traditional teaching methods, even effective ones, cannot fully address individuals' needs and preferences. Therefore, engaging ChatGPT in language classes offers a promising chance for improving vocabulary skills due to many reasons. First, ChatGPT, as a deep learning-based AI language, can produce consistent and relevant text-based output depending on input prompts. Second, it enables EFL learners to be engaged in conversations, emphasizing its potential as a valuable tool to increase their vocabulary (Monika & Suganthan, 2024).

To the researcher's best knowledge, there is a paucity of research regarding the investigation of EFL learners' perceptions of the effect of ChatGPT on vocabulary building while there has been limited research on using ChatGPT in English language classrooms. Specifically, there are no published studies, which have adopted a mixed-methods approach, conducted in this area, in the Saudi context. Therefore, the purpose of this study is to investigate the perceptions of Saudi female EFL learners regarding the impact of the utilization of ChatGPT-generated dialogues on their vocabulary enrichment. The research questions are:

1. How do Saudi female EFL learners perceive the effectiveness of using ChatGPT for vocabulary improvement?
2. What advantages do Saudi female EFL learners identify that contribute to the effectiveness of using ChatGPT for vocabulary improvement?

3. What disadvantages do Saudi female EFL learners identify that hinder the effectiveness of using ChatGPT for vocabulary improvement?

This study is of considerable significance for teachers, academics, and policymakers engaged in developing language education policies to meet EFL students' needs, as it aims to shed light on the role and function of ChatGPT in EFL contexts of vocabulary development. By providing valuable insights and perspectives on the efficiency of using ChatGPT as a complementary tool by EFL learners to improve their vocabulary skills, this research explores the potential influence of this technology from the users' viewpoints. Moreover, the findings of this study may contribute to developing future language learning technologies and instructional techniques that fit EFL learners' various needs. In this digital age, it becomes pivotal to investigate the features and challenges associated with developing technologies like ChatGPT. By filling the research gap in the literature, this study contributes with informed perspectives on the integration of ChatGPT in the process of vocabulary building, thereby enriching the discourse on effective language pedagogy.

II. LITERATURE REVIEW

What is ChatGPT? Its benefits and challenges

ChatGPT is an advanced chatbot, which was available in November 2022, employing OpenAI's powerful Generative Pre-trained Transformer-3 (GPT-3) models (Ray, 2023). This tool is used for various purposes as a virtual assistant, catering to human-like dialogues (Kocoń et al., 2023). It is worth noting that ChatGPT is not a typical search engine such as Google or Bing. Instead, it is a language tool that generates and responds in a written form (Gordijn & Have, 2023). Conversely, search engines enable individuals to make the internet sources and websites accessible (El-Seoud et al., 2023). In other words, ChatGPT is a language tool generating several types of texts. It can provide an innovative, constructive, and inspiring experience and a creative, exciting, and dynamic environment to produce texts such as emails, exam questions, conversations, essays, etc. According to Taecharungroj (2023), ChatGPT is highly customizable as it enables users to adjust their responses and behavior to their needs. In comparison to other natural language processing (NLP) that might be strict and less flexible and produce more predictable output, ChatGPT is a unique and reliable model that excels in generating realistic-sounding texts for conversational interactions. Its versatility and adaptability make it a valuable and well-suited tool for a vast variety of applications (Cooper, 2023).

ChatGPT gets benefits from a powerful natural network that effectively utilizes extensive databases to establish varied connections. It reshapes the nature of human-AI-interactions, representing a significant breakthrough in chatbot technology. Built upon vast databases, ChatGPT's ability to integrate learners into creative, natural, and dynamic conversations encourages a sense of familiarity and comfort, causing more meaningful and satisfactory interactions. Another essential advantage is flexibility and variety of the ways of text generation. More specifically, ChatGPT can produce texts in various formats, ranging from the simplest to the most complex texts, from the informal to more formal texts, and from the literary to the most scientific texts. Accordingly, this enables individuals to personalize their use of ChatGPT depending on their preferences. Furthermore, ChatGPT allows users to acknowledge and correct their mistakes providing corrected versions, leading to more self-confidence and self-improvement. In addition, it goes beyond simple answer-question, actively challenges any wrong assumptions made by users. The integration into constructive conversations fosters critical thinking and intellectual development as ChatGPT offers learners ongoing opportunities to deeply understand the subject matter and refine their perspectives. Besides, ChatGPT has been commended as it facilitates preparing teaching materials, supports the teaching process, provides opportunities to practice, and delivers feedback (Govindarajan & Christuraj, 2023).

A notable feature of using ChatGPT, as a language AI tool, is that it is designed to prioritize and highly supports ethical standards safely and protects users from potential harm. In other words, ChatGPT uses mechanisms that can filter inappropriate content or harmful language, adherence to community guidelines and policies. Additionally, according to Hong (2023), ChatGPT is successful in imitating human dialogues and provides EFL learners with opportunities to practice authentic language with having all necessary elements of authentic conversations available, such as summarizing opinions, asking follow-up questions, clarifying unclear ideas, giving information, etc. Furthermore, ChatGPT contributes to learning vocabulary since it expresses using words in detail and provides examples if required. Best of all, ChatGPT's feedback is immediate, unlike feedback provided by a teacher, which understandably takes time (Hong, 2021b) due to many reasons such as the teacher's busy schedule. It can be concluded that ChatGPT is a free, sufficient tool working (Hong, 2023) to be an assistant/alternative to human tutors. According to Kanade (2023), there are some features that characterize ChatGPT as a unique tool. First, ChatGPT uses NLP to comprehend daily language, encompassing sarcasm and cultural references. Second, ChatGPT has an extensive vocabulary including both common and technical terms due to its vast training dataset of 570 GB. In particular, it demonstrates contextual understanding by considering previous messages and conversations to generate relevant responses. Third, ChatGPT supports multiple languages enabling users to communicate effortlessly in several languages. Fourth, ChatGPT encourages creative abilities by generating poems, jokes, and other forms of creative writing. Fifth, ChatGPT benefits from continuous self-improvement because it receives feedback on its responses from users over time.

On the other hand, chatbots are not capable of thinking and problem-solving as humans exactly are. More specifically, chatbots are able to provide pre-programmed answers to common inquiries and are unable to analyze complex

situations or make decisions depending on incomplete, vague, or unclear information, leading to a lack of the capability to deal with situations that occur outside of their programmed scope (El-Seoud et al., 2023). Moreover, chatbots are not able to recognize and comprehend human feelings and experiences. In other words, although ChatGPT can provide users with accurate and adequate answers, it is unable to empathize with people exactly as humans can (Borji, 2023). This is because ChatGPT works based on algorithms and data, unlike humans who have subjective emotions and experiences that shape their thoughts and actions. Furthermore, it is notable to acknowledge the possible drawbacks associated with excessive dependence on AI tools, including the negative influence on creativity and professional growth (Nazaretsky et al., 2022) hindering learning outcomes as well as some potential concerns related to plagiarism arising from the utilization of ChatGPT (Khalil & Erkan, 2023). Additionally, ChatGPT is incapable of empathy on the part of the person responding to users (El-Seoud et al., 2023). ChatGPT also offers non-personalized solutions that do not consider the individualized needs of each user (Deng & Lin, 2022).

Previous studies

Vocabulary building plays a crucial role in several aspects of language acquisition, including reading, listening, speaking, writing, and communication. Monika and Suganthan (2024) conducted a study to investigate the EFL learners' perceptions of the effectiveness of using ChatGPT on their general language proficiency, specifically on their vocabulary improvement. The findings revealed that ChatGPT has revolutionized learning patterns and language acquisition because it is not time-consuming and is able to collect data in a short period of time. Moreover, it was demonstrated that ChatGPT greatly improved the participants' vocabulary acquisition. Jeon (2021) implemented an empirical study to examine the impact of chatbots-Assisted Dynamic Assessment (CD-DA) on vocabulary development. Using chatbots created Google's Dialogflow, the CD-DA group showed significantly higher vocabulary gains compared to other groups. The results emphasized the role of chatbots not only in boosting vocabulary acquisition and individualized assessment but also in offering valuable diagnostic information about learners' vocabulary learning progress.

In addition, Shaikh et al. (2023) assessed the usability of ChatGPT for formal English language learning. They used a questionnaire-based approach with participants from various language proficiency levels and backgrounds. According to the results obtained, it was found that ChatGPT is considered a valuable, effective tool in facilitating several tasks related to language learning, involving vocabulary learning. Furthermore, Qasem et al. (2023) conducted an experimental study at Bisha University, in Saudi Arabia, focusing on online classroom of English for Specific Purposes (ESP) during the COVID-19 period, to investigate the usefulness of the Dialogflow chatbot on ESP vocabulary learning. This study included two groups, an experimental group and a control one, with pre-tests and post-tests to examine the participants' vocabulary background. The results showed that this chatbot is considered effective and interactive to enhance EFL learners' vocabulary acquisition. Petrović and Jovanovic (2021) critically investigated the current state of four chatbots used for language learning, expressing the complexity of their design and the benefits of utilizing chatbots in vocabulary building. The study showed promising results emphasizing the role of chatbots in vocabulary retention and usage.

Also, Prasetya and Syarif (2023) explored the influence of ChatGPT on language development, shedding light on the accuracy of students' self-assessment before and after interaction with ChatGPT. The findings asserted that feedback provided by ChatGPT contributes to improving EFL students' vocabulary development as this technology suggests new words and phrases when interacting with users. Moreover, it was concluded that ChatGPT is useful as it provides context-specific words, such as academic, professional, or social, and helps in comprehending and utilizing prefixes, suffixes, and root words. Accordingly, this supports expanding EFL learners' vocabulary and assisting them in expressing themselves more sufficiently. Song and Song (2023) assessed the influence of AI-assisted language learning on Chinese English as a Foreign Language (EFL) students' writing skills and writing motivation. The participants demonstrated that using ChatGPT fosters their vocabulary choices and expands their vocabulary and enhances their writing flow due to its capacity to give suggestions and examples.

III. RESEARCH METHODS

To achieve the objective of this research which investigated the Saudi female EFL learners' perceptions of the impact of using ChatGPT on their vocabulary improvement, a mixed-methods approach was adopted to collect and analyze data and discuss the results.

Participants

The population of this study consisted of Saudi female EFL students of Majmaah University enrolled in different academic levels. The sample was chosen randomly. It contained 101 female participants; 13 of them agreed to be interviewed. Among them, 47.5 % were aged between 21-23 years old, 46.5 % of were within the age range of 18-20 years; and 5.9% were 24 years old and older.

Instruments

This study used a five-point Likert questionnaire developed by the researcher consisting of five options, which were strongly agree, agree, neutral, disagree, and strongly disagree. It contained 20 items discussing the effectiveness of utilizing ChatGPT in their vocabulary acquisition. To achieve the objective of the study, analyzing the collected data was implemented through various statistical methods using the Statistical Package for Social Sciences (SPSS). SPSS

was used to calculate frequencies and percentages to identify the personal and social characteristics of the participants. Moreover, the validity and reliability of the research instruments were assessed. In addition, mean and standard deviation were calculated to recognize the responses of the participants and the one-way ANOVA test was conducted to identify any differences in the participants' responses. These statistical measures were utilized to gain valuable insights and draw meaningful conclusions from the collected data.

However, it is worth mentioning that the reliability of the questionnaire items was calculated by using Cronbach's Alpha, yielding a value of 0.868, which means that the questionnaire was reliable. In addition, the stability coefficient for the individual components of the research instrument ranged from 0.753 to 0.827 (see Table 1). Moreover, to ensure the validity of the questionnaire items, the Pearson Correlation Coefficient was calculated as shown in Table 2. The Pearson correlation coefficient ranged from 0.518 to 0.871, indicating a high level of internal consistency and strong validity indicators. It is notable that all the questionnaire items were statistically significant at the level of 0.01.

TABLE 1
THE RELIABILITY OF THE QUESTIONNAIRE DIMENSIONS

Dimensions	Reliability coefficient
Effectiveness of using ChatGPT on vocabulary building	.756
Advantages of using ChatGPT on vocabulary building	.827
Disadvantages of using ChatGPT on vocabulary building	.753
Overall Reliability	.868

TABLE 2
THE VALIDITY OF THE QUESTIONNAIRE DIMENSIONS

Effectiveness of using ChatGPT on vocabulary building		Advantages of using ChatGPT on vocabulary building				Disadvantages of using ChatGPT on vocabulary building	
Items	Person correlation	Items	Person correlation	Items	Person correlation	Items	Person correlation
1	.871**	5	.688**	11	.720**	17	.753**
2	.662**	6	.607**	12	.542**	18	.766**
3	.790**	7	.627**	13	.511**	19	.720**
4	.709**	8	.671**	14	.599**	20	.756**
-	-	9	.595**	15	.602**	-	-
-	-	10	.606**	16	.518**	-	-

In addition to using a quantitative approach, this study employed a qualitative approach. 13 Saudi EFL students willingly participated in online individual structured interviews sent to them via a Google Forms link, providing valuable perspectives on their experiences with ChatGPT as a tool for improving their vocabulary skills.

IV. RESULTS

Quantitative data

Effectiveness of using ChatGPT on vocabulary building

To indicate the impact of utilizing ChatGPT on vocabulary building, frequencies, percentages, means, and standard deviation of the individuals' responses were computed as follows (Table 3):

TABLE 3
QUANTITATIVE DATA OF THE SECTION "EFFECTIVENESS OF USING CHATGPT ON VOCABULARY BUILDING OF EFL LEARNERS (N=101)

N	Items	Approval degree										Mean	SD	Ranking
		Strongly Agree		Agree		Neither		Disagree		Strongly disagree				
		F	%	F	%	F	%	F	%	F	%			
1	ChatGPT has helped me to improve my vocabulary.	25	24.8	45	44.6	24	23.8	7	6.9	0	0.0	3.87	0.87	4
2	ChatGPT is effective for learning vocabulary.	20	19.8	53	52.5	24	23.8	4	4.0	0	0.0	3.88	0.77	3
3	I frequently use ChatGPT for vocabulary-related tasks.	31	30.7	40	39.6	18	17.8	12	11.9	0	0.0	3.89	0.98	2
4	I would recommend using ChatGPT for vocabulary acquisition.	34	33.7	50	49.5	13	12.9	4	4.0	0	0.0	4.13	0.78	1
Overall mean												3.94	0.65	-

The table above proved that the participants generally agreed on the effectiveness of utilizing ChatGPT for improving vocabulary. As shown, item 4 "I would recommend using ChatGPT for vocabulary acquisition" was ranked first, receiving the highest mean score of 4.13 ± 0.78 . In the second position came item 3 "I frequently use ChatGPT for vocabulary-related tasks" with a mean score of 3.89 ± 0.98 . Following that, item 2 "ChatGPT is effective for learning vocabulary" was ranked third with a mean score of 3.88 ± 0.77 . Item 1 "ChatGPT has helped me to improve my vocabulary" was ranked last with a mean score of 3.78 ± 0.87 .

Advantages of using ChatGPT on vocabulary building

To determine the advantages of using ChatGPT for building vocabulary, frequencies, percentages, means, and standard deviation of the individuals' responses were calculated as follows (Table 4):

TABLE 4
QUANTITATIVE DATA OF THE SECTION "ADVANTAGES OF USING CHATGPT ON VOCABULARY BUILDING OF EFL LEARNERS (N=101)

N	Items	Approval degree										Mean	SD	Ranking
		Strongly Agree		Agree		Neither		Disagree		Strongly disagree				
		F	%	F	%	F	%	F	%	F	%			
5	ChatGPT provides accurate responses for vocabulary-related tasks.	32	31.7	41	40.6	22	21.8	6	5.9	0	0.0	3.98	0.88	2
6	ChatGPT has increased my motivation to learn new words.	33	32.7	44	43.6	16	15.8	8	7.9	0	0.0	4.01	0.90	1
7	ChatGPT has improved my ability to use new words in contexts.	23	22.8	44	43.6	29	28.7	5	5.0	0	0.0	3.84	0.83	8
8	ChatGPT has provided me with contextually appropriate vocabulary suggestions/alternatives.	29	28.7	43	42.6	21	20.8	8	7.9	0	0.0	3.92	0.90	5
9	ChatGPT has helped me expand my vocabulary across different subject areas.	27	26.7	45	44.6	21	20.8	8	7.9	0	0.0	3.90	0.89	6
10	ChatGPT makes me more confident to use newly learned words when communicating.	20	19.8	55	54.5	16	15.8	10	9.9	0	0.0	3.84	0.86	9
11	ChatGPT has increased my awareness of different word synonyms and antonyms.	26	25.7	36	35.6	31	30.7	8	7.9	0	0.0	3.79	0.92	10
12	ChatGPT makes it easier to remember new words learned through it.	28	27.7	40	39.6	25	24.8	8	7.9	0	0.0	3.87	0.91	7
13	ChatGPT has exposed me to vocabulary words that I wouldn't have come across otherwise.	27	26.7	50	49.5	18	17.8	6	5.9	0	0.0	3.97	0.83	3
14	ChatGPT has improved my ability to comprehend and interpret complex texts.	30	29.7	43	42.6	21	20.8	7	6.9	0	0.0	3.95	0.89	4
15	ChatGPT provides real-time feedback or correction, which can make it easier to identify and fix vocabulary errors.	22	21.8	36	35.6	26	25.7	17	16.8	0	0.0	3.62	1.01	11
16	Using ChatGPT for learning vocabulary has been an enjoyable and engaging experience.	18	17.8	44	43.6	19	18.8	20	19.8	0	0.0	3.59	1.00	12
Overall mean											3.86	0.53	-	

Table 4 demonstrates the consensus among the participants emphasizing that ChatGPT is advantageous for improving vocabulary. The overall mean score for this aspect was 3.86 ± 0.53 . Particularly, item 6 "ChatGPT has increased my motivation to learn new words" came first as it received the highest mean score (4.01 ± 0.90). Following that, item 5 "ChatGPT provides accurate responses for vocabulary-related tasks" received a mean score of 3.98 ± 0.88 . In the third place, item 13 "ChatGPT has exposed me to vocabulary words that I wouldn't have come across otherwise" came with a mean score of 3.97 ± 0.83 . However, item 15 "ChatGPT provide real-time feedback or correction, which can make it easier to identify and fix vocabulary errors" came in the eleventh place with a mean score of 3.62 ± 1.01 , followed by item 16 "Using ChatGPT for learning vocabulary has been an enjoyable and engaging experience" that was ranked last in this section with a mean score of 3.59 ± 1.0 .

Disadvantages of using ChatGPT on vocabulary building

To determine the disadvantages of using ChatGPT for building vocabulary, frequencies, percentages, means, and standard deviation of the individuals' responses were calculated as follows (Table 5):

TABLE 5
QUANTITATIVE DATA OF THE SECTION “DISADVANTAGES OF USING CHATGPT ON VOCABULARY BUILDING OF EFL LEARNERS (N=101)”

N	Items	Approval degree										Mean	SD	Ranking
		Strongly Agree		Agree		Neither		Disagree		Strongly disagree				
		F	%	F	%	F	%	F	%	F	%			
17	ChatGPT may sometimes provide incorrect definitions or examples for vocabulary words.	12	11.9	41	40.6	26	25.7	22	21.8	0	0.0	3.43	0.96	4
18	ChatGPT may struggle to understand certain words, resulting in less helpful responses.	15	14.9	36	35.6	31	30.7	19	18.8	0	0.0	3.47	0.97	2
19	ChatGPT may not always give detailed explanations for specific words.	18	17.8	38	37.6	18	17.8	27	26.7	0	0.0	3.47	1.07	3
20	ChatGPT’s vocabulary suggestions may be limited or repetitive.	32	31.7	51	50.5	9	8.9	9	8.9	0	0.0	4.05	0.88	1
Overall mean												3.60	0.60	-

According to Table 5, the participants agreed regarding the disadvantages that can hinder the usefulness of utilizing ChatGPT to enhance vocabulary. The average mean score for this aspect was 3.60 ± 0.60 . The item that was ranked first was item 20, which stated that “ChatGPT’s vocabulary suggestions may be limited or repetitive” with a mean score of 4.05 ± 0.88 . Following that, item 18, which mentioned “ChatGPT may struggle to understand certain words, resulting in less helpful responses”, received a mean score of 3.47 ± 0.97 . Thirdly, item 19, which highlighted that “ChatGPT may not always give detailed explanations for specific words”, came, indicating a mean score of 3.47 ± 1.07 . Finally, the item that was ranked last was item 17, which stated that “ChatGPT may sometimes provide incorrect definitions or examples for vocabulary words”, with a mean score of 3.43 ± 0.96 .

Qualitative data

In addition to analyzing quantitative data, this study made use of a qualitative approach to gain a deeper understanding of the effectiveness, advantages, and disadvantages of the utility of ChatGPT for vocabulary enhancement. Using Google Forms, a total of 13 Saudi female EFL students voluntarily participated in individual structured interviews, presenting valuable insights into their experiences of using ChatGPT as a tool for vocabulary building. The participants have been anonymized to keep their identities confidential. The interviews were conducted to delve into the nuances of the participants’ interactions with ChatGPT, presenting a more detailed exploration of the features and limitations identified in the quantitative data analysis. The qualitative data obtained from the interviews underwent an accurate thematic analysis process. The participants were asked the following questions:

1. Do you believe that ChatGPT has positively impacted your vocabulary learning compared to traditional methods?
2. What are the key benefits of using ChatGPT for vocabulary learning compared to other methods or resources?
3. Have you encountered any limitations or challenges when using ChatGPT for vocabulary acquisition? If so, what are they?
4. Are there any additional features or improvements you would like to see in ChatGPT to enhance its effectiveness for vocabulary acquisition?

The analysis of the interview’s first question responses

All the participants emphasized their beliefs towards the positive influence of using ChatGPT on their vocabulary skills compared to the traditional methods. They mentioned various ways of how ChatGPT contributes to expanding their vocabulary. Firstly, ChatGPT provides opportunities to practice real-time conversations, enabling them to be engaged in conversations discussing various topics, unknowingly acquiring new words and their meanings. The conversational nature of ChatGPT enables them to practice their language skills and enrich their vocabulary. For example, one participant stated that “ChatGPT has a lot of new vocabularies, many meanings, and puts them in sentences that help us learn new words.” Two participants said, “it helps me develop my English through real-time conversations, making my vocabulary broader” and “ChatGPT allows users to make a conversation, and the conversation can be about multiple topics, so we can use the language, improve it, and try to learn more vocabulary while we talk, without even being aware that we are learning”.

Secondly, the participants demonstrated that they believe ChatGPT is convenient and efficient. They asserted that using ChatGPT saves their time and effort as it can find linguistic alternatives. In addition, they affirmed ChatGPT’s clarity, ease of use, and convenience that allow them to learn and develop their vocabularies. For instance, a participant stated, “It also saves a lot of time and effort and finds linguistic alternatives for me.” Another one proposed that “from my point of view, I think it is easier to use and clearer to understand than other methods”.

Furthermore, they confirmed ChatGPT’s nature of user-friendly interface and clarity in providing feedback, explanations, and corrections, assuring that it is a more accessible tool for vocabulary building. They indicated that it fosters personalized learning and encourages critical and creative thinking skills. For instance, a participant mentioned that “ChatGPT has the potential to positively impact education by providing access to information, supporting personalized learning, enhancing critical and creative thinking, and assisting teachers. Moreover, the participants emphasized the ability of ChatGPT to explain unfamiliar words and correct mistakes, enabling them to improve their

language skills. A participant stated that “It has a positive impact because it provides feedback on vocabulary and correcting mistakes”.

The analysis of the interview's second question responses

Based on the responses provided, the participants explained several key benefits of utilizing ChatGPT for vocabulary building compared to other methods or resources. One significant advantage mentioned is the access to an extensive and various vocabulary. Particularly, ChatGPT offers an unlimited number of words and chooses the easiest instances to provide users with for quick understanding. For EFL learners, this feature is very helpful as it leads to gradually enhancing their vocabulary without overwhelming them. One participant said, “It provides an infinite number of vocabularies, through which you can use the easiest one for you”.

Another prominent feature of ChatGPT emphasized by the participants is its efficiency and speed. They noted that it allows for a quick search, gives prompt answers, and effectively summarizes vocabulary. This speed and efficiency are advantageous for performing tasks or assignments in a timely manner. One participant noted that “ChatGPT helped me increase speed and efficiency. It is also quick to search and summarizes vocabulary clearly.” Moreover, the interactive mode of ChatGPT was emphasized as a valuable advantage for language learning. It was mentioned by some participants that this tool can enhance their language skills as it allows them to practice their writing skills and be engaged in several conversations. In addition, they assumed that they could tailor their learning sessions according to their needs, styles, and preferences. For example, a participant proposed that “ChatGPT allows for conversational mode, personal learning, variety of topics, and provides different synonyms for words”.

The participants also highly valued the precision and clarity of academic words and their meanings provided by ChatGPT. This feature can be helpful specifically for those who are engaged in academic studies or professional language learning. Another key feature of ChatGPT is its accessibility. Particularly, it is available at any time or place, enabling EFL learners to learn at their convenience. The ease of finding information quickly and the available various options for learning were also highlighted as beneficial advantages. One participant expressed, “It is easier and faster because it is available at any time, provides different options for learning, and helps in finding the information that we need faster”.

The analysis of the interview's third question responses

The participants' responses varied when they were asked about the limitations or challenges encountered while utilizing ChatGPT for vocabulary enhancement. One major limitation mentioned was the affordability issue. For example, a participant pointed out that “one of the obstacles is that it may not be free, and this is not suitable for everyone.” They also assumed that although ChatGPT can enrich their vocabulary, it might not develop their writing skills. Another participant said, “it will improve my vocabulary, but my writing will not”.

Another challenge that emerged was that ChatGPT may potentially generate incorrect or made-up responses. For example, it was mentioned that “ChatGPT is very easy and clear to provide the vocabulary, but it sometimes has the potential to generate plausible but incorrect or made-up responses.” In addition, limitations related to pronunciation and comprehension were also highlighted. One participant identified the difficulty in catching the correct way to pronounce words (“Yes sometimes I can't catch the correct pronunciation”), while another declared that ChatGPT sometimes gives excessive details and repetitive words in which this can be challenging to navigate (“Somewhat, yes, because it gives a lot of details and repetition of vocabulary sometimes”).

Furthermore, an obstacle associated with language comprehension was highlighted. A participant noted that ChatGPT may lack the ability to interpret the meaning of literature-specific words or phrases, producing vague or nonspecific answers (“The limitation of language because they don't have the ability to understand the meaning of words and phrases like literature words or works; they don't give me specific answers”). Additionally, examples were ChatGPT failed to recognize idiomatic phrases, resulting in potential confusion for users (“Sometimes it doesn't recognize idioms phrase”).

However, not all participants illustrated encountering limitations or challenges. Some of them pointed out that ChatGPT is easy and straightforward for vocabulary improvement without highlighting any significant problems. They noted that the clarity of ChatGPT contributes to gaining the wanted words (“No, I haven't because using the ChatGPT is very easy”; “No, ChatGPT is very easy and clear to provide the vocabulary”).

The analysis of the interview's fourth question responses

Analyzing the participants' responses revealed diverse perspectives regarding additional features or suggested improvements for ChatGPT to be more helpful in vocabulary learning. One significant feature mentioned is increasing its accessibility and affordability. The participants highlighted the need for ChatGPT to be free, enabling them as EFL learners to access its vocabulary acquisition capabilities (“For sure, to become free”).

Additional features emphasized were realism and authenticity. The participants expressed that ChatGPT should become able to speak in colloquial dialects since language has various usages in different regions or communities. This contributes to providing EFL students with opportunities to be exposed to authentic language and helping them to better understand informal words (“It must be a speaker of colloquial dialects”). The idea of improving formal and informal word coverage was also stated as another suggestion. They illustrated that it is significant for ChatGPT to improve its vocabulary repertoire to include a broader range of formal and informal words. This can ensure a comprehensive learning experience for EFL learners (“Improve many formal and informal vocabulary”).

Another factor mentioned was the need to cater to special needs. The participants asserted the importance of context in generating relevant answers. They pointed out that ChatGPT should consider the wider context of a conversation or topic to provide more adequate and suitable answers. This incorporates additional information or references (“I think that ChatGPT needs to adding context for more relevant answers”). Moreover, the participants stated that ChatGPT could benefit from using the latest advancements in language modeling to foster its vocabulary learning capabilities (“creating even more advanced language models”).

One important feature was suggested regarding including audio chats alongside textual ones in order to facilitate practicing pronunciation and effectively expand vocabulary (“In order for us to practice pronouncing words correctly and expanding our vocabulary, I would like to have audio chats in addition to textual ones.”). Additionally, many participants demonstrated the significance of using multimedia features such as animations and audio clips. They identified that this feature can be helpful in understanding words more clearly and in providing a more engaging learning experience (“Sure, adding animations and audio clips also helps to understand vocabulary more clearly!”). However, while most participants provided some suggestions, others expressed satisfaction with ChatGPT’s current capabilities and asserted it is user-friendly without any particular improvements in mind (“No I don’t have any ideas to add for ChatGPT because I see the ChatGPT are a good program”; “don’t really have any, I think it's really good and pretty easy to use for anyone who would like to use it”).

V. DISCUSSION

This study aimed to explore the Saudi female EFL learners’ perceptions of using ChatGPT for vocabulary skills improvement. Regarding the first research question, which is “How do Saudi female EFL learners perceive the effectiveness of using ChatGPT for vocabulary improvement?”, the overall result indicated that ChatGPT is advantageous in enhancing vocabulary acquisition compared to the traditional methods. It was positively agreed that ChatGPT is effective in building vocabulary and would be recommended to use for this purpose. This highlights a strong belief in the sufficiency of ChatGPT as a tool for enhancing vocabulary skills.

For the second research question which is “What advantages do Saudi female EFL learners identify that contribute to the effectiveness of using ChatGPT for vocabulary improvement?”, The participants reported many advantages of using ChatGPT to improve their vocabulary. The frequent use of ChatGPT for vocabulary-related tasks was asserted. This acknowledgement of ChatGPT’s effectiveness aligns with previous studies (e.g., Jeon, 2021; Shaikh et al., 2023; Suganthan, 2024) highlighting the potential of ChatGPT in facilitating language learning, particularly vocabulary enhancement. In addition, ChatGPT provides opportunities for users to be engaged in meaningful conversations and offer relative responses, facilitating vocabulary growth and retention. This is in line with the results of Petrović and Jovanovic (2021) and Govindarajan and Christuraj (2023).

Moreover, the participants reported that ChatGPT has helped them improve their vocabulary and offered adequate responses for vocabulary-related tasks. This asserts the usefulness of ChatGPT as a resource for gaining correct definitions, explanations, and examples, accurate information, and linguistics support. This goes with what was asserted by Hong (2012b) and Govindarajan and Christuraj (2023). The capability of ChatGPT to offer contextually suitable vocabulary suggestions or alternatives was also deemed valuable, confirming what Prasetya and Syarif (2023) stated. This feature promotes, for EFL learners, selecting the most appropriate words depending on specific contexts, contributing to developing their overall language proficiency. Furthermore, ChatGPT enables EFL learners to be exposed to unfamiliar vocabulary in which it is considered a significant advantage. In other words, it expands EFL students’ lexical repertoire and fosters the exploration of various word choices when presenting users with words they would not have encountered before, aligning with what Govindarajan and Christuraj (2023) mentioned. This exposure to different words contributes to expanding vocabulary and boosting EFL learners’ overall language competence. Moreover, the participants unanimously illustrated that ChatGPT can expand their vocabulary due to its conversational nature that offers opportunities for real-time practice, allowing them to discuss diverse topics and learn new words and their meanings effortlessly. This is in line with the results of Hong (2023). ChatGPT’s convenience and efficiency were also determined, highlighting its time-saving features and clarity of use. In other words, ChatGPT was acknowledged to be user-friendly, support personalized learning experiences, and encourage creative and critical thinking skills. Its capability to provide feedback, explanations, and corrections was specifically valued.

In addition, the influence of ChatGPT on motivation and engagement in vocabulary building was another feature emphasized by the participants. The participants reported increased motivation to learn new words by interacting with ChatGPT because they become more motivated when they perceive their learning experiences as enjoyable and rewarding. This is consistent with the results of Song and Song (2023). In addition, the personalized nature of responses provided by ChatGPT helps in EFL learners’ engagement by addressing their specific needs and interests, supporting what Govindarajan and Christuraj (2023) reported. Additionally, the participants demonstrated that ChatGPT leads to the development of their capability of comprehending and interpreting complicated texts. This result signifies the value of ChatGPT in providing EFL learners with advanced vocabulary and language structure. In particular, encountering sophisticated language patterns and academic vocabulary items enables EFL students to improve the skills necessary to perceive and analyze complex written content, which is beneficial for academic or professional contexts. ChatGPT’s speed was also highlighted as it enables EFL learners to quickly search, and accordingly perform tasks promptly. In

addition, the accessibility of ChatGPT at any time or place was mentioned. Particularly, this feature encourages EFL learners to use this AI tool as it is available whenever/wherever they want if they have internet connection. The feature of the ease of finding information quickly and the diverse vocabulary options was stated. This advantage can attract EFL learners to use ChatGPT since they can find what they want so quickly.

However, despite the advantages of utilizing ChatGPT to build vocabulary, the participants also identified certain limitations associated with using it for vocabulary improvement, and this answers the third research question which is "What disadvantages do Saudi female EFL learners identify that hinder the effectiveness of using ChatGPT for vocabulary improvement?". One of these challenges expressed by the participants is the repetitive words suggestions provided by ChatGPT. This can hinder ChatGPT's effectiveness, since users look for a wider range of vocabulary options to improve their language proficiency. The repetition of vocabulary suggestions may also cause a lack of novelty, potentially decreasing EFL learners' engagement and preventing vocabulary expansion. Furthermore, the affordability issue was highly identified as a serious challenging since this tool cannot be available to all users or users cannot enjoy all ChatGPT's features unless they subscribe in which this can be difficult for students to do. Also, some instances were illustrated where ChatGPT met with difficulties in understanding some definite words, leading to less helpful responses. This disadvantage shows that, in some cases, the ChatGPT's limited understanding of vocabulary might be context-dependent or impacted by the comprehensiveness of its underlying database, corroborating what El-Seoud et al. (2023) mentioned. This can frustrate EFL learners who depend on ChatGPT to get accurate and comprehensive information, possibly undermining hamper confidence in ChatGPT's reliability.

Additionally, it is known that access to detailed explanations is pivotal for EFL learners who seek holistic insights into words meaning, usage, and connotations. The participants emphasized an obstacle which is the lack of detailed explanation provided by ChatGPT for particular words. They claimed that ChatGPT's responses sometimes lack depth or clarity, which may disturb their comprehension of complicated vocabulary concepts. This result supports the result of El-Seoud et al. (2023). Another disadvantage highlighted by the participants is that ChatGPT may occasionally give incorrect definitions or examples for specific words. This challenge raises a question about the accuracy and reliability of ChatGPT's answers. Incorrect information may mislead EFL learners and hinder their progress, potentially leading to acquiring incorrect word meanings or usage patterns. This emphasized the need for caution and critical evaluation while using ChatGPT for vocabulary learning.

Suggestions to improve ChatGPT to be more beneficial were mentioned. For example, increasing its accessibility and affordability was illustrated since EFL learners tend to use it but they cannot utilize all its features without payment. Moreover, the need for ChatGPT to be more realistic and authentic was highlighted in order to be able to identify several colloquial or standard variations of languages. This may raise ChatGPT's reliability and accuracy because it will respond very accurately depending on dialects used by EFL learners to interact with. In other words, this contributes to providing EFL students with opportunities to be exposed to authentic language and helping them to better understand informal words. Additionally, the features of providing formal and informal language and the ability of ChatGPT to consider wider contexts were mentioned. Another significant suggestion related to adding audio chats alongside textual chats was indicated. This contributes to enhancing the learning process since EFL students can hear and imitate correct pronunciation if this feature is available.

In sum, the data shows the advantages and disadvantages related to using ChatGPT for building vocabulary from the participants' viewpoints. The advantages involve effective vocabulary acquisition, accurate responses and alternative word suggestions, exposure to unfamiliar words, motivation and engagement, and enhanced understanding of complex texts. However, it is important to be aware of ChatGPT's potential disadvantages such as repetitive word suggestions or alternatives, difficulties with understanding certain words, lack of detailed explanation for some particular words, and the potentiality of providing incorrect definitions or examples. Understanding these advantages and disadvantages can help EFL learners make certain decisions regarding integrating ChatGPT into their vocabulary learning strategies.

VI. CONCLUSION

This study aimed to investigate the perceptions of Saudi female EFL learners of the effectiveness, advantages, and disadvantages of using ChatGPT for improving vocabulary skills. The advantages of utilizing ChatGPT reported asserted that it is efficient in building vocabulary, providing adequate responses and vocabulary suggestions, offering opportunities for users to be exposed to unfamiliar words, keeping them motivated and engaged, and improving comprehension of complex texts. However, some disadvantages were identified, such as the inability of ChatGPT of comprehension of certain words, providing limited or repetitive vocabulary suggestions, lack of detailed explanations, and occasionally offering incorrect definitions or examples.

The purpose of this research is to gain insights into the potential of ChatGPT as a tool for vocabulary enhancement and to understand its limitations from the perspective of EFL learners. This study provides a comprehensive understanding of the use of ChatGPT for vocabulary improvement. Based on the findings, several recommendations can be made to optimize the utilizing ChatGPT to enrich vocabulary. Firstly, developers should focus on enhancing the system's understanding of specific words by incorporating more comprehensive and contextually diverse datasets. This can help improve the accuracy and reliability of the system's responses. Additionally, vocabulary suggestions provided by ChatGPT should expand, ensuring a broader range of options to facilitate learners' vocabulary expansion. Moreover,

efforts should be made to address the affordability issue of ChatGPT. This may assist all EFL students, particularly those with financial constraints, to access all its features such as offering more affordable subscription options. Additionally, steps should be taken to improve the issue of repetitive word suggestions to allow EFL learners to increase their lexical repertoire and maintain engagement.

Pedagogically, EFL educators and learners can approach ChatGPT as a valuable supplementary tool rather than a standalone solution for vocabulary learning. While ChatGPT can provide meaningful interactions and exposure to unfamiliar words, its limitations in understanding certain words and providing comprehensive explanations warrant the integration of other resources and human guidance. Learners should be encouraged to critically evaluate and verify the information provided by ChatGPT, fostering a balanced approach to vocabulary acquisition. Furthermore, this study highlights the importance of learner autonomy and metacognitive strategies when utilizing ChatGPT. Learners should be encouraged to actively reflect on their vocabulary learning experiences, monitor their progress, and employ strategies to address any limitations or challenges they encounter. By taking an active role in their learning process, learners can maximize the benefits of ChatGPT and mitigate its limitations.

To further advance research in this area, research could examine the long-term effectiveness of ChatGPT in vocabulary building. This could include investigating the ability of EFL learners to retain newly acquired words over an extended period empirically. Additionally, future studies could provide a comparative analysis to identify the most effective approaches by comparing the influence of ChatGPT with other vocabulary learning tools. Moreover, other studies could investigate the effect of using ChatGPT on other language skills such as writing or speaking skills. Exploring the influence of ChatGPT on vocabulary improvement among EFL learners belonging to different proficiency levels (i.e., beginner, intermediate, or advanced) is another suggestion. This can identify how effective ChatGPT is to cater to EFL students' various needs and abilities across proficiency levels. Furthermore, as a limitation of the current study, focusing exclusively on the female participants may limit generalizing the results. Therefore, future studies can include male participants or both male and female participants to examine the potential differences in the effectiveness of ChatGPT for vocabulary building.

In conclusion, based on the perceptions of EFL learners, ChatGPT offers promising advantages for vocabulary improvement, including its effectiveness, accurate responses, exposure to unfamiliar vocabulary, motivation, and improved comprehension. However, the limitations identified in this study should be acknowledged, and recommendations should be considered to optimize its use. By embracing a balanced and informed approach, EFL educators and learners can harness the potential of ChatGPT as a valuable tool in vocabulary learning, complementing other instructional resources and fostering autonomous and reflective language learning practices.

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