



EFL Writing Courses in the Age of Generative AI: University EFL Students' Perceptions

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Abstract

At this point, the positive effects and challenges of using AI-based chatbots and tools in EFL classrooms are increasingly prominent in the scholarly literature. Nevertheless, Saudi EFL students' perceptions of the impact, benefits, and challenges of using AI chatbots to enhance their writing skills remain underexplored. To address this gap, the present study investigates the perceptions of 100 Saudi EFL students regarding generative AI chatbots, particularly ChatGPT, in writing instruction through an online survey. The survey data were analyzed in SPSS using multiple analytical methods, including descriptive statistics, correlation, and regression. The results show that the students have very high perceptions of the benefits of using ChatGPT to enhance their writing. In addition, results indicate that students' perceptions of ChatGPT's impact and limitations, and their awareness of factors to consider when using it, were rated highly. Furthermore, the results demonstrate that students' perceptions are significantly correlated with self-reported proficiency, suggesting that higher proficiency is associated with more positive attitudes towards AI tools for enhancing EFL students' writing skills. Practical implications for EFL students and educators are discussed, emphasizing the value of incorporating AI to facilitate the development of writing skills. Directions for future research are also highlighted at the conclusion of this study.

1. INTRODUCTION

It is well known that writing is one of the most challenging skills for EFL students (Sarwar et al., 2022) because it requires the ability to organize ideas, using genre-specific vocabulary in addition to general language proficiency (Aldayel et al., 2026). Thus, it is not surprising that EFL students would need to use any resources available to help them improve their writing skills and abilities. With the rise of Artificial Intelligence (AI) tools and their many educational applications, students have found new ways to stimulate their learning. Since 2016, ELLs have been using deep learning to improve and review their spelling, grammar, punctuation, and writing style (Tsai, 2019). Indeed, ELLs have always used AI-based tools like Google Translate for translation accuracy, identifying contexts, and providing comprehensive translation in sentence units (Lee et al., 2024), and Grammarly, which helps ELLs with checking their grammar, proofreading, and plagiarism (Hakiki, 2021). Nonetheless, unlike those traditional AI tools that address isolated issues, the newer generation of AI tools – particularly generative

AI chatbots such as ChatGPT – are used to mimic students' language acquisition, in which English language learners (ELLs) use these tools whenever they face trouble writing and/or formulating ideas in English (Bahri & Mahadi, 2016; Stapleton & Kin, 2019). With AI-based chatbots like ChatGPT, students have easy access to tools that can simultaneously translate, proofread, and generate texts. In fact, AI integration into educational settings has transformed the reality of instruction by providing students with personalized interactive learning opportunities (Sekewael & Anaktototy, 2024). As a result of these advancements in AI, AI chatbots have become increasingly woven into the texture of English as a foreign and/or second language (EFL/ESL) students' learning experiences.

The advantages and challenges of employing AI tools in EFL and ESL classrooms are now well-recognized. While some studies seem to focus on its shortcomings (e.g., errors in direct literal translation), others show its great potential in advancing the field as it helps ELLs with fluency of expression and grammar for writing (Lee et al., 2024). Students' views on using AI tools to enhance their language skills are crucial for understanding their usage and how educators and curriculum designers can effectively support them. However, the issue of using ChatGPT in ESL classrooms and its impact on students' skills development still needs to be comprehensively addressed, not only for academic interests but rather to ensure its effective and responsible integration in educational settings. This is because over-reliance on AI tools can potentially negatively affect students' critical thinking skills as well as their agency (Drushlyak et al., 2024).

Additional empirical evidence is required in this domain, as the utilization of these chatbots has become a reality and an essential element of students' educational experience. Research examining EFL students' perceptions about using AI tools to improve their writing skills is still scarce, especially in the Saudi context. Therefore, to address this gap, the present study aims to investigate Saudi university ESL students' perceptions of the benefits and challenges of using AI chatbots, ChatGPT in particular, in English writing classes. Utilizing a quantitative approach, the present study incorporated an online attitudinal survey to explore students' perspectives on the impact, benefits, and challenges of using ChatGPT to enhance Saudi EFL university students' writing skills.

2. LITERATURE REVIEW

As discussed in the introduction section above, integrating AI-based tools for different purposes – including developing writing performance – by both students and teachers has become a reality in ESL classrooms. These tools include Google Translate and Grammarly,

which are considered the old generation of AI. More recently, AI chatbots have gained popularity as the newest wave of technological advancements is integrated into language skills instruction. Chatbots are systems based on artificial intelligence and natural language processing algorithms (Alqahtani, 2024) that analyze text inputs and generate human-like responses and language, ensuring their ability to understand and produce contextually appropriate feedback (Sekewael & Anaktototy, 2024; Alrefaee et al., 2025). These features make AI chatbots, like ChatGPT, essential and beneficial in language education contexts in general and in writing classrooms in particular. This is crucial not only because ChatGPT can provide students with instant feedback that accommodates their personal proficiency level, but also because it improves their agency and power within the lesson through personalized feedback tailored to individual writing styles and linguistic needs (Zhang, 2024). Thus, since its launch, the impact of ChatGPT to bring individualized, efficient, revolutionary, and diversified classroom experiences to both teachers and students was predicted (Tan, 2023). Nevertheless, some predicted the rise of potential challenges including privacy of information, misleading information, and potential suppression of students' independent thinking (Zhang, 2024). The following sections review the literature on the potential benefits and challenges of implementing ChatGPT into writing classes to improve students' writing skills.

2.1. The positive impact of ChatGPT in English writing classes

As generative AI tools have taken precedence in teaching and learning settings, ChatGPT was perceived as a disruptive technology; however, over time, it started to be seen as a huge opportunity to transform education (Rudolph et al., 2023). Previous research into the matter has shown that using ChatGPT has the potential to improve students' writing skills due to its interactive feedback mechanism that allows students to recognize and correct their errors insistently (Gozali et al., 2024). Gozali et al. (2024) investigated, albeit using a qualitative case study design, the impact of AI-based tools, including ChatGPT, on the development of learners' feedback literacy in higher education writing classes. The study findings revealed that ChatGPT could potentially enhance students' feedback processing abilities.

Additionally, studies have shown that generative AI tools can potentially enhance students' linguistic repertoires, their grammar, and editing skills. One such study was Sekewael & Anaktototy (2024), which investigated the impact of ChatGPT on students' English writing skills. The results revealed that ChatGPT significantly enhanced students' writing skills through personalized, real-time feedback, resulting in notable improvements in grammar, vocabulary, and self-editing. Previous research has also demonstrated that ChatGPT can be used to enhance EFL students' writing skills across various writing genres. A case in point is

Annamalai et al. (2025), which investigated the integration of ChatGPT in argumentative writing tasks. The study findings revealed that although habitual use is still in its early stages, students reported improved organization, expanded vocabulary, and valuable writing prompts, enhancing their learning experience in argumentative writing. Similarly, Harunasari (2023) identified and evaluated the efficacy of effective and responsible strategies for incorporating ChatGPT into an EFL writing class. The study findings indicated that integrating ChatGPT into English writing classes has proven effective in assisting EFL students in generating ideas and correcting grammar and spelling

Previous empirical evidence indicated that AI-based tools have the potential to encourage creativity and independent learning. For example, Alqahtani (2024) indicated that university students and their teachers believed that ChatGPT has the potential to promote creativity by presenting unique ideas or techniques to overcome issues like writer's block. The study also indicated that students valued the fact that ChatGPT gave them the opportunity for independent learning, suggesting a potential for using generative AI tools to facilitate autonomy and self-directed learning.

Other studies, like Wang (2024), have focused on how students engaged with ChatGPT throughout different stages of their writing process. Wang (2024) indicated that when students integrated ChatGPT into their composition process – such as searching for content, planning, language editing, and revising – their writing process was accelerated, their cognitive load and anxiety were reduced, and it provided them with prompt feedback.

Nevertheless, the successful integration of ChatGPT into teaching and learning is contingent upon taking certain precautions into consideration. These include encouraging students to use their critical thinking skills to verify and fact-check their work (Harunasari, 2023).

All in all, ChatGPT can be an effective writing tool for EFL students because it helps them with editing, formatting, proofreading, and enriching their linguistic repertoire. EFL Students can use generative AI during the writing process to simplify complicated sentences and summarize texts. However, as with any other learning tool, using ChatGPT should be done with full awareness of the concerns and its negative impacts on students. The next section addresses the challenges of using ChatGPT in writing classrooms.

2.2.Challenges of ChatGPT in English writing classes

One major concern about integrating ChatGPT into EFL writing classrooms is its impact on

students' ethical and academic integrity. Previous studies indicated that while ChatGPT can be beneficial in developing students' hard and soft skills, its impact on critical issues like academic integrity violations and ethical considerations should be taken into account by teachers and learners (Alqahtani, 2024; Synekop et al., 2024). This is important because previous studies indicated that using ChatGPT might lead to plagiarism and a decline in writing and critical thinking skills (Jumriah et al., 2024). In order to minimize such risks, students could be asked to submit their ChatGPT chat history for their writing tasks (Harunasari, 2023).

Other limitations of using generative AI in writing classrooms include challenges that affect qualities essential for good academic writing. These include the lack of in-depth insights, originality, creativity, and reliability. For instance, students in Wang (2024) identified two key challenges associated with ChatGPT-assisted writing. First, the challenge of balancing between incorporating AI to enhance writing and maintaining authenticity and students' own voices. Secondly, the dilemma of balancing the potential loss of learning experiences with the emergence of new learning opportunities. Additional scaffolding and feedback from teachers and peers might be beneficial for addressing these inherent limitations (Rudolph et al., 2023).

Having reviewed both the opportunities and challenges that are presented by ChatGPT in EFL writing classrooms, it is now clear that students' perceptions of the impact of using AI tools, particularly ChatGPT, on their English writing skills are key to understanding how they use these tools and how teachers and curriculum designers can support them in doing so. Thus, the current study explores Saudi university EFL students' perceptions of the impacts, benefits, challenges, and factors to consider while using ChatGPT in writing classes. It is worth noting that ChatGPT was used as an example of generative AI tools and chatbots to make it easy for students to respond to the survey statements. Consequently, this study intends to answer the following questions:

RQ1. What is the impact of using ChatGPT on improving English writing skills from the perspective of Saudi university students?

RQ2. What are the benefits of using ChatGPT in English writing classrooms from the perspective of Saudi university students?

RQ3. What are the limitations of using ChatGPT in English writing classrooms from the perspective of Saudi university students?

RQ4. To what extent are Saudi university students aware of the factors to consider when using ChatGPT in English writing classrooms?

RQ5. Is there a statistically significant relationship at the significance level ($\alpha \leq 0.05$) between Saudi university students' level of English proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills?

RQ6. Is there a statistically significant relationship at the significance level ($\alpha \leq 0.05$) between Saudi university students' level of English writing proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills?

RQ7. Can Saudi university students' perceptions of using ChatGPT applications to improve their writing skills be predicted based on their level of English proficiency?

RQ8. Can Saudi university students' perceptions of using ChatGPT to improve their writing skills be predicted based on their level of English writing proficiency?

3. METHODOLOGY

3.1. Participants and Context

The convenience sampling method was used to select participants because it involves choosing available individuals. The total survey sample consisted of 100 Saudi EFL students from both the free (32%) and paid (68%) tracks at the Applied College of Umm Al-Qura University in Saudi Arabia (see Table 1). As part of their program, students in the Applied College study 12 hours of English for business, with 4 hours dedicated to genre-specific writing, including writing reports, formal and informal emails, and writing notes. In the demographic data section of the survey, participants were asked to self-report their English language proficiency levels (see Table 2): 14.0% identified as Beginner, 31.0% as Intermediate, and 55.0% as Advanced. They also reported their English writing proficiency (see Table 3): 23.0% as Beginner, 45.0% as Intermediate, and 32.0% as Advanced. The first section of the survey obtained informed consent and ensured participants' confidentiality.

Table 1: Description of the study sample according to the track/specialization variable

Track/Specialization	Frequency	Percent
Paid Diploma (Applied College)	68	68.0%
Free Diploma (Applied College)	32	32.0%
Total	100	100.0%

Table 2: Description of the study sample according to the self-reported level of English proficiency variable

Self-reported level of proficiency	Frequency	Percent
Beginner (< 65)	14	14.0%
Intermediate (65 to < 80)	31	31.0%
Advanced (80 and above)	55	55.0%
Total	100	100.0%

Table 3: Description of the study sample according to the self-reported level of writing proficiency variable

Self-reported level of proficiency	Frequency	Percent
Beginner (< 65)	23	23.0%
Intermediate (65 to < 80)	45	45.0%
Advanced (80 and above)	32	32.0%
Total	100	100.0%

3.2. Instrument

The survey items were adapted from the relevant literature (e.g., Wang, 2024b) and based on expert reviewers' opinions to ensure clarity and content validity. The survey consisted of four main dimensions: the impact of ChatGPT use on students' English writing skills, the benefits of using ChatGPT in writing, the limitations of using ChatGPT in writing, and considerations for using ChatGPT in writing. The four dimensions consisted of 25 items in total. A link to the full survey is in Appendix 1. Participants could simply respond to each item in line with their own opinions on a 5-point Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, to 5 = strongly agree. The survey also included mandatory sections for informed consent, demographic information, and a brief description of the study and its aims.

Reliability and internal consistency were confirmed by distributing an initial version to a pilot sample of 19 students. The internal consistency of the scale was calculated, and Pearson correlation coefficients between items (see Table 4) and between dimensions (see Table 5) were found to be statistically significant, indicating an interrelationship between them. The questionnaire's reliability was verified using Cronbach's Alpha (see Table 6); all dimensions and overall questionnaire values are statistically high. According to Field (2013), a reliability

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coefficient above 0.80 indicates that the questionnaire has an appropriate level of reliability.

Table 4: Pearson correlation coefficient between the score of each Item and the total score of the dimension to which each statement belongs.

No	The impact of ChatGPT usage on students' English writing skills	No	Benefits of ChatGPT in writing	No	Limitations of ChatGPT as a tool for writing	No	Considerations for AI-assisted writing
1	.874**	12	.778**	17	.819**	22	.883**
2	.917**	13	.712**	18	.849**	23	.832**
3	.669**	14	.747**	19	.792**	24	.840**
4	.678**	15	.818**	20	.801**	25	.931**
5	.756**	16	.819**	21	.657**		
6	.658**						
7	.782**						
8	.950**						
9	.715**						
10	.772**						
11	.892**						

***. Correlation is significant at the 0.01 level*

Table 5: Pearson correlation coefficient between the score of each dimension and the total score of the questionnaire

No	Dimension	Pearson Correlation
1	The impact of ChatGPT usage on students' English writing skills	.709**
2	Benefits of ChatGPT in writing	.732**

3	Limitations of ChatGPT as a tool for writing	.700**
4	Considerations for AI-assisted writing	.821**

***. Correlation is significant at the 0.01 level*

Table 6: Cronbach's Alpha Reliability Coefficient of the Questionnaire.

No	Dimension	Number of Items	Cronbach's Alpha
1	The impact of ChatGPT usage on students' English writing skills	11	.941
2	Benefits of ChatGPT in writing	5	.831
3	Limitations of ChatGPT as a tool for writing	5	.831
4	Considerations for AI-assisted writing	4	.886
5	Overall	25	.925

3.3.Data Collection Procedure

To answer the research questions about Saudi university EFL students' perceptions of the challenges and benefits of using ChatGPT in writing classes, this study adopted an attitudinal scale, which is commonly used to measure perceptions. As highlighted in the previous section, a pilot study (N = 19) was conducted to assess the reliability and validity of the adapted scales. After the revision of the scale, the formal study was initiated. As soon as the ethical approval was obtained from the designated committee at Umm Al-Qura University, the survey link was sent to students via their university email accounts. The data were collected using an online questionnaire distributed via Google Forms; the link was available for students for the last two months of the first semester to ensure that they progressed in their writing course and thus had the opportunity to use ChatGPT in their writing. All survey items were provided in both Arabic and English to ensure that students fully understand the meaning in whichever language they prefer.

3.4.Data Analysis

Frequencies and percentages were used to describe the study sample according to the variables of (track/specialization, English proficiency, and English writing proficiency). The Pearson Correlation Coefficient was used to assess the questionnaire's internal consistency and to answer RQs 5 and 6, determining the relationship between Saudi university students' levels of English and writing proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills. Cronbach's Alpha coefficient was used to verify the reliability of the questionnaire. Descriptive statistics, including the mean and standard deviation, were used to analyze data collected across the four dimensions (to answer RQs 1, 2, 3, and 4). The items within each dimension were ranked according to the highest mean and the lowest standard deviation. To answer RQs 7 and 8, Regression analysis was used to predict students' perceptions of using ChatGPT to improve their writing skills based on their English proficiency and English writing proficiency levels.

4. RESULTS AND FINDINGS

4.1. Students' Perceptions of the Impact of Using ChatGPT in Writing Classes

Data collected from items in the first main dimension of the scale, which pertains to the impact of utilizing ChatGPT to enhance students' writing skills, were analysed to answer RQ1. The mean, standard deviation, ranking, and grade classification were used.

Table 7: The mean, standard deviation, ranking, and grade classification of students' perceptions of the impact of using ChatGPT on improving English writing skills

No	Item	Mean	SD	Rank	Degree
11	I find the ChatGPT interface user-friendly.	4.34	0.755	1	Very High
9	ChatGPT is helpful in identifying and correcting errors in my writing.	4.17	0.829	2	High
6	ChatGPT enhanced my vocabulary and word choice.	4.11	0.886	3	High
10	ChatGPT encouraged me to explore different writing styles and genres.	4.05	0.869	4	High
8	My self-editing skills improved after using ChatGPT.	4.05	0.914	5	High
3	ChatGPT improved my ability to express ideas coherently.	4.05	0.968	6	High
2	I frequently use ChatGPT feedback for your writing assignments.	3.98	0.804	7	High

7	I am satisfied with the feedback provided by ChatGPT.	3.93	0.924	8	High
5	I feel confident tackling complex writing tasks after using ChatGPT.	3.93	1.037	9	High
1	My overall English writing ability improved after using ChatGPT.	3.82	1.019	10	High
4	My grammar and sentence structure improved with ChatGPT feedback.	3.82	1.058	11	High
	Overall	4.02	0.684		High

Table 7 shows that the overall result for the first dimension of the scale was classified as "High" with a mean of 4.02. With regard to specific statements in this dimension, item 11 (ChatGPT is helpful in identifying and correcting errors in my writing) was the top item ($M = 4.17$), closely followed by item 9 (ChatGPT enhanced my vocabulary and word choice) ($M = 4.11$), while both items 1 (My overall English writing ability improved after using ChatGPT) and 4 (My grammar and sentence structure improved with ChatGPT feedback) tied for the lowest mean ($M = 3.82$). These results indicate that students generally have a positive attitude towards the impact of ChatGPT on their writing skills. This attitude may stem from students finding ChatGPT easy to use and appreciating its value in helping them identify their errors and word-choice issues. Interestingly, however, the results show that students' feedback literacy and ability to use it for learning need improvement, as they do not seem to recognize the relationship between error correction and improvements in writing-related skills such as grammar and sentence structure.

4.2. Students' Perceptions of the Benefits of Using ChatGPT in Writing Classes

Data collected from items in the second main dimension of the scale, which pertains to the benefits of utilizing ChatGPT to enhance students' writing skills, were analyzed to answer RQ2. The mean, standard deviation, ranking, and grade classification were used. The results (see Table 8) show that students' perceptions of the benefits of using ChatGPT in English writing classrooms were generally classified as "Very High" with a mean of 4.24. Item 15 (Providing immediate feedback) ($M = 4.32$) was the most highly rated statement in the scale. Item 12 (Accelerating writing process) ($M = 4.29$) was closely followed by item 14 (Fostering new learning opportunities) ($M = 4.28$), ranking as the second rated items. The lowest rated statement in this dimension was item 13 (Reducing cognitive load) ($M = 4.13$). The overall results for this dimension indicate students' recognition of the benefits of using ChatGPT in the writing process. The results also indicate that students are aware that ChatGPT is a helpful

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tool that can be used as a learning opportunity to identify areas for development in their writing, like grammatical errors, as shown in the results discussed in the previous section, but not necessarily to be used to outsource tasks to reduce their cognitive load.

Table 8: The mean, standard deviation, ranking, and grade classification of students' perceptions of the benefits of using ChatGPT in English writing classrooms

No	Item	Mean	SD	Rank	Degree
15	Providing immediate feedback.	4.32	0.695	1	Very High
12	Accelerating the writing process.	4.29	0.671	2	Very High
14	Fostering new learning opportunities.	4.28	0.653	3	Very High
16	Promoting positive feelings about writing.	4.20	0.725	4	Very High
13	Reducing cognitive load.	4.13	0.747	5	High
	Overall	4.24	0.561		Very High

4.3. Students' Perceptions of the Challenges of Using ChatGPT

Data collected from items in the third main dimension of the scale, which addresses the limitations of using ChatGPT to enhance students' writing skills, were analyzed to answer RQ3. The mean, standard deviation, ranking, and grade classification were used. All the items in the third dimension (see Table 9) were rated "High" in the rating category ($3.40 < 4.20$), with mean scores ranging from 3.62 to 3.81. The overall result regarding students' perceptions of the limitations of using ChatGPT to improve their writing was classified as "High" with a mean of 3.75. Table 9 shows that the most highly rated item was 21 (Excessive use of AI) ($M = 3.81$), closely followed by 18 (Issues related to critical thinking) ($M = 3.79$) and 17 (False information) ($M = 3.78$). The lowest rated statement in this scale was 20 (Lack of reliable supporting evidence) ($M = 3.62$), which makes sense given the fact that the writing genres covered in the writing course would not require using supporting evidence. Otherwise, these results show that Saudi university EFL students are fully aware of some of the inherent risks – such as overreliance, reduced creativity and critical thinking skills, and unreliable information – of using generative AI tools in their writing process.

Table 9: The mean, standard deviation, ranking, and grade classification of students' perceptions of the limitations of using ChatGPT in English writing classrooms

No	Item	Mean	SD	Rank	Degree
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21	Excessive use of AI.	3.81	0.940	1	High
18	Issues related to critical thinking.	3.79	0.913	2	High
17	False information.	3.78	0.980	3	High
19	Lack of creativity and originality.	3.74	1.001	4	High
20	Lack of reliable supporting evidence.	3.62	0.962	5	High
	Overall	3.75	0.796		High

4.4. Factors to Consider while Using ChatGPT

Data collected from items in the last main dimension of the scale, which addresses students' perceptions of factors to consider while using ChatGPT to enhance their writing skills, were analyzed to answer RQ 4. The mean, standard deviation, ranking, and grade classification were used. Table 10 presents the results of this analysis. All the items in the fourth dimension were classified as "High" with mean scores ranging from 3.97 to 4.19. The most highly rated item in this dimension was 24 (Authenticity) (M = 4.19) followed by 25 (Seizing AI as a learning opportunity) (M = 4.15), indicating students' realization of the learning potential of AI-based tools. While statements 23 (Ethical use) (M = 3.99) and 22 (Critical use) (M = 3.97) were the least rated items in this dimension. The lowest-rated items here should not suggest that students are unaware of the issues because the overall classification of this dimension was "High" (M = 4.08), indicating that Saudi EFL students understand the importance of using AI-based tools ethically and responsibly.

Table 10: The mean, standard deviation, ranking, and grade classification of students' perceptions of the factors to consider when using ChatGPT in English writing classrooms

No	Item	Mean	SD	Rank	Degree
24	Authenticity.	4.19	0.761	1	High
25	Seizing AI as a learning opportunity.	4.15	0.845	2	High
23	Ethical use.	3.99	0.810	3	High
22	Critical use.	3.97	0.858	4	High
	Overall	4.08	0.682		High

4.5. Correlation Analysis

Pearson's correlation coefficient was used to answer RQ 5. As shown in Table 11, there is a statistically significant correlation between Saudi university students' level of English proficiency and their perceptions of ChatGPT's impact on improving their writing skills ($p <$

0.01). The Pearson correlation coefficient was 0.825, which reveals a positive relationship between the two variables. Similarly, Pearson correlation was conducted to answer RQ 6. Table 12 shows that there is a statistically significant correlation between Saudi university students' level of English writing proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills ($p < 0.01$). The Pearson correlation coefficient is 0.846, which reveals a positive relationship between the two variables. Overall, the correlation analysis indicates that both students' English proficiency and writing proficiency levels are positively correlated with their perceptions of the impact of using AI-based tools on improving their writing skills.

Table 11: Pearson correlation coefficient between students' level of English proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills

	Saudi university students' level of English proficiency	
Saudi university students' perceptions of the impact of using artificial intelligence applications on improving their writing skills	Pearson Correlation	.825**
	Sig	.000

***.* Correlation is significant at the 0.01 level

Table 12: Pearson correlation coefficient between students' level of English writing proficiency and their perceptions of the impact of using ChatGPT on improving their writing skills

	Saudi university students' level of English writing proficiency	
Saudi university students' perceptions of the impact of using artificial intelligence applications on improving their writing skills	Pearson Correlation	.846**
	Sig	.000

4.6. Regression Analysis

In this part, a regression analysis was conducted to examine whether students' perceptions of using ChatGPT to improve their writing skills were specifically associated with their English proficiency level, thereby addressing RQ 7. Table 13 shows that the regression model is statistically significant, with an F value of 208.808 at a significance level of ($p < 0.001$). This

suggests that the model is suitable for predicting Saudi university students' perceptions of using ChatGPT to enhance their writing skills based on their English proficiency. English proficiency level is a statistically significant predictor of students' perceptions of using ChatGPT to improve their writing skills (see Table 14), with a standardized beta coefficient of ($\beta = 0.825$), $t = (14.450)$, and a significance level of ($p < 0.001$). This indicates a strong positive predictive relationship between English proficiency level and students' perceptions. Based on the detailed statistics, the standard regression equation can be established as:

$$\text{"Students' Perceptions"} = 0.476 + 0.045 \times (\text{"English Proficiency Level"})$$

Table 13: Analysis of Variance (ANOVA) for the Regression Model Predicting Students' Perceptions Based on English Proficiency Level

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	31.513	1	31.513	208.808	.000
Residual	14.790	98	.151		
Total	46.304	99			

Table 14: Regression Coefficients for Predicting Students' Perceptions Based on English Proficiency Level

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.476	.248		1.916	.058
Level of English proficiency	.045	.003	.825	14.450	.000

In addition, regression analysis was performed to examine whether students' perceptions of using ChatGPT to improve their writing skills could be predicted based on their English writing proficiency level, thus answering RQ 8. Table 15 shows that the regression model is statistically significant, with an F value of (247.091) at a significance level of ($p < 0.001$). This suggests that the model is suitable for predicting Saudi university students' perceptions of using artificial intelligence applications to enhance their writing skills based on their level of English Writing proficiency. Table 16 shows that English Writing proficiency level is a statistically significant predictor of students' perceptions of using ChatGPT, and AI-based tools, to improve their writing skills, with a standardized beta coefficient of ($\beta = 0.846$), $t = (15.719)$, and a significance level of ($p < 0.001$). This indicates a strong positive predictive relationship

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between English Writing proficiency level and students' perceptions. Based on the detailed statistics, the standard regression equation can be established as:

$$\text{"Students' Perceptions"} = 0.625 + 0.046 \times (\text{"English Writing Proficiency Level"})$$

Table 15: ANOVA for the Regression Model Predicting Students' Perceptions Based on English Writing Proficiency Level

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	33.154	1	33.154	247.091	.000
Residual	13.149	98	.134		
Total	46.304	99			

Table 16: Regression Coefficients for Predicting Students' Perceptions Based on English Writing Proficiency Level

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.625	.219		2.849	.005
Level of English Writing proficiency	.046	.003	.846	15.719	.000

5. DISCUSSION

The current study aimed to explore Saudi university EFL students' perceptions of ChatGPT's benefits and challenges, its impact on improving their English writing skills, and their awareness of issues to consider when using it. The results would be discussed in three subsections addressing students' perceptions of the impact and benefits of using ChatGPT to improve their writing. Challenges and factors to consider when using ChatGPT will be discussed under a single section.

5.1. Students' perceptions of the impact of using ChatGPT writing classes

Based on the statistical analysis laid out in the results section above, it can be safely concluded that Saudi EFL students perceived the impact of using ChatGPT and AI-based tools as highly positive. These results are consistent with studies in the literature that reported optimistic perceptions of using ChatGPT and AI-based tools in ESL settings. Previous studies indicated that ESL learners generally expressed positive views towards using ChatGPT as a learning tool (Aljohani, 2026). More specifically, the current results align with other studies on using ChatGPT in the writing process. The results indicated a positive correlation between Saudi EFL university students' perceptions of using ChatGPT to improve their writing skills and their English and writing proficiency levels. These results confirm those of Wu et al. (2024), which established that Chinese college students' positive attitude toward AI-assisted L2 learning was positively associated with their L2 proficiency. Furthermore, the results of the regression analysis indicated that students' English and writing proficiency levels are positive predictors of their positive attitudes towards the impact of using ChatGPT to improve their writing. These results complement the qualitative work of Gozali et al. (2024b), who found that proficient, motivated students endorsed ChatGPT for enhancing their writing skills. However, these results do not mean that ChatGPT is not useful for students with low proficiency. In fact, some studies indicated that ChatGPT could help low-proficiency EFL students to improve their vocabulary and thereby their writing performance (Liu & Ma, 2025). Thus, generative AI tools have the potential to enrich the linguistic and lexical repertoires and, consequently, the writing style of EFL students at all proficiency levels.

5.2. Students' perceptions of the benefits of using ChatGPT in writing classes

The overall results for this dimension show that students perceived the benefits of using ChatGPT in the writing process as high, indicating their awareness of its potential as a learning tool and as a means to identify areas for improvement in their writing. The results indicated that students ranked the ability of ChatGPT to provide immediate feedback as the highest benefit on the benefits scale. These results are consistent with those of Sekewael & Anaktototy (2024), which revealed significant improvements in students' writing as a result of the personalized, real-time feedback they received from ChatGPT. The results also showed that students highly valued benefits such as simplifying writing tasks, using ChatGPT as a learning tool, and promoting positive feelings about writing. These results support others in the literature, which indicated that using ChatGPT has the potential to promote creativity and

independent learning (Alqahtani, 2024). Similarly, others reported acceleration in students' writing (Wang, 2024) which is in line with the results of the current study.

5.3. Students' perceptions of the limitations and factors to consider when using ChatGPT

The results showed that Saudi EFL students have high perceptions of the limitations of using ChatGPT in English writing classrooms, indicating that they recognized the limitations of using generative AI tools in their writing process, including overreliance, diminished creativity and critical thinking skills, and the potential for receiving unreliable information. Furthermore, the study results indicated that Saudi university students have high awareness of the factors, such as authenticity, ethical, and critical use, to consider when using ChatGPT in English writing classrooms. These results further support those of Rudolph et al. (2023), which showed that students felt the need to consult multiple sources due to the inherent limitations of generative AI chatbots. The results of the current study also indicated that students recognized generative AI as a learning opportunity. This is consistent with the results of previous studies. For example, Gozali et al. (2024b) concluded that students engage with ChatGPT critically, thereby mastering the art of prompt engineering and response regeneration. These results suggest that ChatGPT can serve as a learning tool to help students improve their ability to assess their own writing and make judgments by demonstrating standards of quality work.

6. CONCLUSION

This study aimed to investigate Saudi university EFL students' perceptions of the impact of, benefits, and challenges of using AI chatbots, ChatGPT in particular, in English writing classes. The results indicated that Saudi EFL students had very high perceptions of the benefits of using generative AI to improve their writing. Students found ChatGPT user-friendly and beneficial for identifying writing errors. However, the results indicated that students' feedback literacy and their ability to utilize it for learning need improvement. In addition, the results indicated that Saudi EFL students acknowledged ChatGPT's usefulness and perceived it as a learning opportunity that fostered positive feelings about writing. However, they do not view it as a means of outsourcing tasks to reduce cognitive effort. The results showed that Saudi university EFL students were fully aware of the challenges of using generative AI tools, including overreliance, reduced creativity and critical thinking, and unreliable information. Furthermore, students' attitudes indicated their awareness of ethical issues and critical use of generative AI tools in writing.

Interestingly, the results revealed a strong positive correlation between EFL students' English

and writing proficiency levels and their perceptions regarding the use of generative AI tools to enhance their writing skills. With regard to pedagogical implications, these results highlight the need for targeted interventions that integrate AI-based tools into the curriculum to improve students' academic writing skills rather than focusing on tools to improve general language proficiency. For instance, teachers can integrate ChatGPT as a formative feedback tool to help students improve their editing and proofreading skills. Additionally, EFL practitioners need to explicitly teach students how to interpret AI feedback and when to accept it or reject it to enhance their feedback literacy. In terms of the practical implications of these results, the study suggests that specialized support and training are essential for teachers to help EFL learners capitalize on the benefits and overcome the challenges of using AI-based tools to improve their English writing. Furthermore, professionals are encouraged to scaffold EFL students and support them in using AI tools ethically to avoid plagiarism, check the accuracy of the information they receive from AI-based tools, and avoid overreliance on AI.

Future research should examine structured strategies of using generative AI tools to improve writing skills. It is also recommended that future research investigates the long-term effects of using generative AI chatbots on students' writing and general English language abilities. Additionally, employing mixed-methods designs with multiple data collection tools is recommended for future studies to provide a more in-depth understanding of students' perceptions. Moreover, it would be helpful for future research to focus on specific examples of effective AI-based tools for improving language proficiency in general and writing skills in particular.

Limitations

Regarding limitations, the study's small and potentially homogeneous sample (e.g., from a single university) and use of the convenience sampling technique may restrict the generalizability of the findings. Future research should consider larger sample sizes through surveys.

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Appendix 1: The Study Survey Data

<https://docs.google.com/spreadsheets/d/1SSNuxrTjuR5z-dK2O-Mbh0egS1e5JDhPfxrJKuhQQJU/edit?usp=sharing>