The Importance of Artificial Intelligence Writing Tools in Enhancing English Writing of EFL Students

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ABSTRACT

This study focuses on the role of AI writing tools in promoting EFL students' writing from students' perspectives. The aims are to explore students' perceptions of the different AI writing tools and to evaluate the impact of AI writing applications on students' progress in writing. Mixed method approach is employed and 50 Libyan EFL students are chosen purposively from two faculties. Questionnaire and semi-structured interview are used to generate data. The findings indicate that Chat-GPT is the most common tool that is used by students to get prompt feedback. The results also reveal that Copilot tool plays a significant role in supporting students' writing in terms of generating ideas and offering suggestions. Furthermore, it has been found that QuillBot is another AI writing application that helps students to summarize long texts and to paraphrase. In addition, the findings show that Grammarly assists students to check plagiarism, whereas Hemingway helps students to ensure readability and clarity of the content. Moreover, students' responses indicate that Worldtune is the least writing tool that is used to improve sentence structure and coherence. However, the findings show that few students have fear of using AI writing tools because they believe that AI writing applications may adversely affect their ability to think creatively and critically. Moreover, the results indicate that over-reliance on AI writing tools can inhabit ideas generation. By investigating the use of AI writing tools, educators and policymakers can raise awareness of the benefits of using AI writing applications to promote students' writing skills and performance.

Keywords: Artificial Intelligence, EFL students, writing tools, writing skill

الملخص

تركز هذه الدراسة على دور تطبيقات الذكاء الاصطناعي في دعم كتابة الطلبة من وجهة نظرهم. وتهدف إلى اكتشاف آراء الطلبة حول أدوات الذكاء الاصطناعي المختلفة وتقييم تأثير هذه الأدوات على تطور مهاراتهم الكتابية. اعتمدت الدراسة على منهج كمي وكيفي، وتم اختيار خمسين طالبًا وطالبة من كليتين مختلفتين. أدوات جمع البيانات كانت الاستبيان والمقابلة. أظهرت النتائج أن ChatGPT هو أكثر أنواع الأدوات استخدامًا، إذ يساعد الطلبة من خلال تقديم تعليقات سريعة على كتاباتهم. كما أن Copilot ساعد الطلبة في الحصول على أفكار واقتراحات لتحسين كتاباتهم. وأظهرت النتائج أيضًا أن Grammarly ساعد الطلبة في إعادة الصياغة وتجنب السرقة الأدبية، في حين أن Hemingway ساعدهم على التأكد من وضوح الكتابة وخلوها من الغموض. كذلك، تبين أن QuillBot ساعد

الطلبة في التلخيص وإعادة الصياغة. غير أن هناك العديد من الأضرار لاستخدام الذكاء الاصطناعي، إذ إن الاعتماد المفرط عليه قد يؤثر سلبًا على التفكير النقدي والقدرة على توليد الأفكار. واختتمت الدراسة بالتأكيد على أن الأكاديميين وصناع القرار نبهوا إلى أهمية الذكاء الاصطناعي وفوائده في تحسين أداء الطلبة ومهاراتهم الكتابية.

الكلمات المفتاحية: الذكاء الاصطناعي، طلبة الاجانب، أدوات الكتابة، مهارات الكتابة

Introduction

There are many definitions to Artificial intelligence (AI) and most of them consider AI as a "sub-field of computer science" (Viktorivna et al., 2022, p.264). AI plays an important role in the educational process and according to Viktorivna et al. (2022), since the 21st century; there has been a significant change in the educational system in terms of adopting AI applications in teaching and learning processes. AI tools play a crucial role in the teaching process. Al-Gayyar (2013) stated that AI applications can enhance the education system in many aspects. Recently, the integration of AI in educational settings has revolutionized traditional methods of teaching and learning and provided interactive platforms for engagement (Dickson, 2017). According to Borge (2016), AI applications can assist teachers to meet their students' needs, to monitor their progress accurately, and to identify any problems in the educational materials and the content.

There has been a rapid increase in using AI writing tools in English as foreign language classroom. AI writing programs can save students' time and effort because they can write essays without human assistance (Gayed et al., 2022). They can also enhance collaborative learning and peer review (Umamah & Cahyono, 2022). The aims of this study are to explore the different types of AI writing applications and to evaluate the impact of AI writing tools on students' writing abilities and skills. The research questions are:

1.What are the main AI writing applications that are used by EFL undergraduate students?

2.Does AI writing tools contribute to students' progress in writing? If so, how?

This study seeks to inform educators and policymakers about the effective role of AI tools in learning English. By investigating the most

effective AI writing tools in writing, educators and policymakers can assist students to develop the essential skills that are crucial in lifelong learning.

Literature review

This section includes AI applications and its benefits and the challenges of using AI.

AI applications and their benefits

AI applications can be used to promote writing skills. There are many AI-powered tools that are beneficial in writing such as Grammar Checkers, Grammarly, Translation Tools, Writing Assistants, and Pattern Checkers (Crompton et al., 2023). Lo (2023) said that the most common use of AI in writing is AI Grammar Checkers and Grammarly that assist students to learn grammatical structure and improve their vocabulary. Students who use Grammarly and Grammar Checker make less grammatical errors and are able to use more different vocabularies than students who do not use them (Dizon and Gayed, 2021). Furthermore, Nazari et al. (2021) indicated that English language students who use Grammarly as a feedback tool make significant outcomes.

Wagner et al. (2022) stated that "KAKU" is AI writing application which can provide students with a large number of articles in a short period of time, and this is significant, particularly for students and researchers who are in literature review stage. Moreover, Chon et al. (2021) conducted study with South Korean college students about the use of Machine Translation as an AI technology tool for writing. Their study found that Google Translator plays a significant role in developing students' proficiency because students develop the ability to produce well-structured paragraphs and essays. However, Ben Zayed (2024) made a comparison between Chat-GPT and Google translator in accuracy and Fidelity, the study found that although Chat-GPT can provide conversational ability, it cannot offer accurate translation.

AI communicative applications may enhance students' abilities in speaking. For example, Barnes-Hawkins (2016) and Viktorivna et al. (2022) indicated that Automatic Speech Recognition can promote real-life communicative situations that can help students to develop and improve their pronunciation in order to be able to speak fluently. The study of Liu and Hung (2016) about Taiwanese students' use of AI found that their pronunciation has been improved significantly. AI can be

considered as a conversational partner and according to Dizon and Tang (2020), AI has the potential to enable students to have conversation with Alexa and Personal Voice Assistant, and this can lead to promoting interaction, improving skills, and creating enjoyable atmosphere for learning. Moreover, Hew et al., (2023) pointed out that ChatBot plays an essential role in supporting students' social participation in online activities. It enables them to create a 'learner-generated context' that can foster learner autonomy (Lee et al., 2023).

AI applications have many advantages. For instance, the use of AI can contribute to address the challenges that students face such as teacher's insufficient feedback (Rusmiyanto et al., 2023). AI can offer prompt feedback that has the potential to contribute to develop students' levels and increase students' motivation (Viktorivna et al., 2022). Similarly, Borge (2016) and Marzuki et al. (2023) make clear that using AI writing tools can assist students to receive instant feedback on grammar, vocabulary, and content, and this has the potential to enhance students writing skills and abilities. The prompt feedback is crucial in helping students to get directions for their writing, understand the essential elements in writing, and to correct errors (Rudolph et al., 2023).

AI tools can facilitate independent learning. Rusmiyanto et al. (2023) indicated that they can offer tutorials through programs that can provide advices to students (Kamuka, 2015; Garlinska et al. 2023; and Nykyporets, 2023).

The challenges of using AI applications

While many studies have focused on the advantages of AI applications, others have highlighted drawbacks. Kornfeld and Roy (2021) and Iskender (2023) argued that students may depend too heavily on AI writing tools without understanding, and this may adversely affect their learning, development, and growth in writing. Furthermore, AI writing applications may have a negative impact on creativity since they may prevent generating thoughts and ideas (Johinke et al., 2023). In other words, over-reliance on AI writing tools can affect critical thinking and creativity adversely. Huang and Tan (2023) make clear that dependence on AI applications may inhibit critical thinking. Although AI writing tools can help students to improve their writing skills, high order skills such as building an argument, critical thinking, and coherence may be

difficult to be addressed because they need thinking, ability to link ideas together, and deep understanding (Farrokhnia et al., 2023). In addition, Viktorivna et al (2022) raised aspects of ethics such as lack of trust of AI applications because of personal information (i.e. fear of how it will be saved). Furthermore, Mozumder et al. (2023) pointed out that not all students can get access to AI applications, and this may be due to such applications require high speed internet connection and modern devices. Moreover, Kornfeld and Roy (2021) stated that AI writing tools can lead to plagiarism when students depend on suggestions rather than developing their writing abilities.

It is clear that most of the studies have been conducted on postgraduate students and teachers, undergraduate students' perceptions on AI systems have not been studied yet. Although many studies have highlighted the impact of AI writing tools on students' writing, it is still unclear how AI writing tools can promote undergraduate students' writing skills. Thus, it is crucial to investigate the types of AI writing tools that enhance students' writing and the impact of these tools on students' progress in writing from Libyan EFL undergraduate students' perspectives. This study has been conducted in order to fill the gap in knowledge and to provide a more comprehensive understanding of the effective role of AI writing tools in enhancing students' writing.

Methodology

Mixed method approach was used to investigate the role of AI in enhancing undergraduate students' academic writing. It is concerned with "collecting, analyzing and mixing both qualitative and quantitative in a single study" (Creswell and Clark, 2007, p. 5).

In the current study, mixed method approach was chosen in order to add depth and understanding to the topic under investigation (Johnson et al., 2007). Furthermore, the use of mixed method approach can decrease the weaknesses that can be found in either qualitative or quantitative research (Johnson and Onwuegbuzie, 2004), and this can strengthen the study. Mixed method approach was selected to address the research questions that might have been difficult to be answered by using only one approach. Moreover, the use of mixed method approach can validate the findings and promote triangulation as stated by Creswell and Clark (2007).

Non-probability sampling was adopted in which 50 Libyan EFL undergraduate students: 25 males and 25 females selected purposively (i.e. hand-picked for purpose) from two faculties. The selection was according to the following: they are all Libyan EFL students who are

willing to participate, studying in different semesters at English language department; however, they are different from each other in their background and their prior learning experiences.

First of all, a questionnaire was used to get statistical data and to inform the interviews (Cohen et al., 2018). The methods that were used to collect the data were questionnaire and semi-structured interview.

The questionnaires were distributed to Libyan EFL students at Faculty of Humanities and Faculty of Education. The questionnaire included an introduction on the cover sheet which explained the researcher's role and the aims of the research (See Appendix I). 5-Likert scale with closed-ended questions was used in order to elicit data to answer research questions and to achieve the aims. Closed-ended questions consisted of ten statements in which the participants should specify their level of agreement in five points (1) strongly agree; (2) agree; (3) disagree (4) strongly disagree (5) neutral. This type of scale was utilized because according to Anderson and Arsenault (1998), it is practical and sufficient in the analysis. The questionnaires were given face-face to the participants at Faculty of Humanities and Faculty of Education.

Interview was also used to collect data. According to Creswell (2003), the interview can validate data and ensure the credibility of the findings. Semi-structured interview was chosen because it has the potential to allow the researcher to probe unexpected responses and to ask for clarification, if necessary, as stated by (Kvale, 2007). In the current study, 20 participants from questionnaire volunteered to participate in the interview. The interviews allowed the researcher to probe and to add depth into undergraduate students' experiences in using AI in academic writing. (See appendix II)

The participants were informed about the research process and their right to withdraw at any point of time if they felt uncomfortable (i.e informed consent). They were also ensued told that the interviews were recorded and the data were saved in my Hard driver and USB (i.e confidentiality). Furthermore, the participants were told about anonymity in which they were given another name (i.e anonymity) in order to enhance objectivity and to protect them. The data were collected in Arabic language, then transcribed and translated into English language. The data from the questionnaire were synthesized and analysed by using excel software,

whereas qualitative data were organised into themes, sub-themes, codes, and sub-codes (i.e thematic analysis) (Clark and Brown, 2006).

Findings and discussion

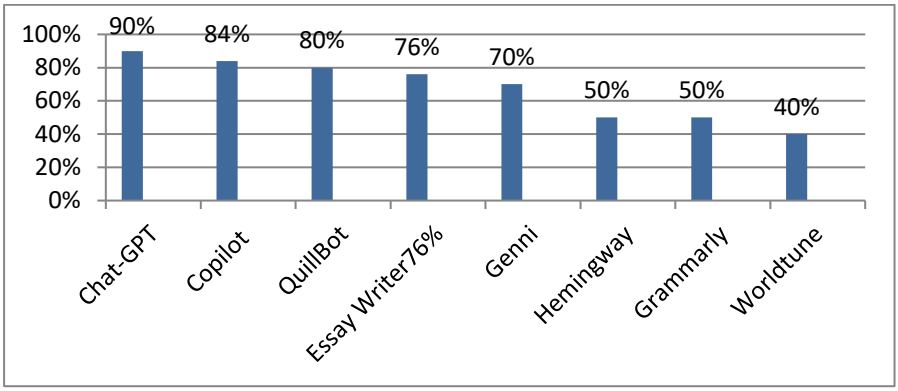
This section includes types of AI writing tools and their uses. It also involves drawbacks of AI writing applications:

Types of AI writing tools and their uses

The findings indicated that 97% of the participants have positive attitudes towards AI writing tools. It had been found that most of the participants utilized different types of AI writing applications to enhance their writing skills and performance:

Types of AI writing tools	Number of participants	Percentage	Benefits
Chat-GPT	45	**90%**	Prompt feedback Maintain consistency
Copilot	42	**84%**	Enhance the generation of new ideas Offer suggestions that relate to improvements for punctuation, sentence structure, and style Drafting and redrafting in order to ensure clarity
QuillBot	40	**80%**	Paraphrasing to avoid plagiarism
Essay Writer	38	**76%**	Create logical and coherent essays
Jenni	35	**70%**	Enhance brainstorm ideas Planning before writing
Hemingway	25	**50%**	Concentrates on straightforward, clarity, and readability of the content
Grammarly	25	**50%**	Detects punctuation Offers suggestions for improvement
Worldtune	20	**40%**	Improves sentence structure Enhances readability

The table illustrates that Chat-GPT is the most common application that had been used. Furthermore, the number of students who use Hemingway and Grammarly are the same with about 50% respectively. The table also shows that the lowest number of students used Worldtune tool. QuillBot was the second tool that had been used by students with approximately 40%. There was a slight difference between users of Essay Writer and Jenni with almost 3%.



Types of AI writing applications

The results revealed that GPT was one of the most common applications that helped students to maintain consistency and to get immediate feedback, particularly when students had limited time and they needed to improve their writing in order to pass. For instance, Mohand who was in the second semester stated that:

I used to jump from one idea to another without using any signs to the reader. By using Chat-GPT, I can use transition words and link between ideas. I can write with flow in sentences in order to assist the reader to understand what had been written. Chat-GPT provided me with quick comments. It was really helpful because I had no time to wait for my teacher's comments. Now, I can write well-structured paragraphs. (Mohand interview).

The above comment showed that Mohand had difficulty in coherence as he did not use transition words, leading to disjointed and an incoherent piece of writing. However, he overcame this obstacle because of the effective role of prompt feedback and guidance that were received from

'Chat-GPT'. It is clear that Chat-GPT facilitated coherence and organization in writing. These findings are consistent with Malik et al. (2023), who sated that AI tools promote clarity and progression of ideas and arguments logically.

The findings of this study with regard to feedback are in line with Rudolph et al. (2023) and Marzuki (2023) who describe prompt feedback as a map that provides students with right directions that can assist students to comprehend the basics in writing and to correct errors. Instant feedback can enhance autonomous learning (Rusmiyanto et al., 2023). However, this study adds depth and detail in terms of exploring advantages of Chat-GPT in writing.

In addition, Laila highlighted the effectiveness of Chat- GPT in terms of providing various styles and samples of writing, and this can foster creativity: "Chat-GPT offered different samples of writing; I analyzed them to gain ideas" (Laila interview). However, Laila's perceptions contradict Johinke et al. (2023) who found that AI writing tools may have a negative impact on creativity. In the context of this study, Chat-GPT enhanced creativity because it assisted Laila to generate thoughts and ideas.

It had been found that 'Copilot' tool assisted some participants to write effectively because it enhanced the generation of new ideas and offered suggestions that relate to improvements for punctuation and style in order to ensure the content is concise and clear. For example, Mais who was in the fourth semester stated that**:**

> At the beginning of this semester, I was writing paragraphs without full stop, colon, semi-colon, and comma, but I did not do any more. By writing and rewriting and sending to Copilot program, I become aware of these mistakes. I got 9/10 in the home work, Copilot program was brilliant. Copilot provides suggestions for developing thoughts and ideas, and this assisted me to write easily in a short period of time. (Mais interview)

The above comment revealed that Mais had challenges in writing with regard to punctuation. It is clear that Copilot application was a strong tool that helped her to improve the quality of her writing because it offered immediate feedback that enabled her to draft and redraft, and this is quite likely to help her to write effectively.

The results also indicated some participants used a combination of two AI writing applications: Grammarly and Hemingway. The data showed

that Grammarly detects grammatical errors, and spelling, offers check plagiarism, and provides suggestions on vocabulary and sentence structure in order to ensure originality and clarity of the content. In contrast, the findings revealed that Hemingway concentrates on straightforward and readability of the content; thus, it focused on style in that it assisted students to delete redundant words in order to get concise pieces of writing:

Grammarly and Hemingway are good writing tools. While Grammarly highlighted grammatical errors and spelling mistakes; Hemingway helped me to ensure that the content is clear and readable. (Yusef interview)

In a similar vein, Samia stated that:

Grammarly assisted me to make sure of the comma and full stop; it also played an essential role to ensure the content was not plagiarized. In addition, I used Hemingway to ensure the paragraph was clear and not include ambiguous or repeated words. (Samia interview)

The findings of the current study are in line with Liu et al. (2023) who reported that AI writing tools can offer suggestions to promote the content and to support students to express their thoughts.

The participants' responses revealed that Worldtune can improve sentence structure and enhance clarity. Esra who is in the last semester said that:

Worldtune assisted me to understand concepts to improve my writing with regard to clarity and readability, and provided me with writing tips. (Esra interview)

Other participants such as Aya, Manal, and Monder pointed out the importance of QuillBot in terms of paraphrasing to avoid plagiarism and summarizing long texts. For instance, Aya who was in the stage of writing literature review reported that:

QuillBot was very helpful because it helped me to write and to express the idea in my own words without changing the meaning. QuillBot helped me in my project as it summarized long texts into concise overviews, and this was significant for writing literature review chapter. (Aya interview)

It was evident that most students who were studying in the fifth semester like Khaled, Moneer, Tareq, Hadi, and Omer employed Essay Writer tool that assisted them to create logical and coherent essays since

it offered suggestions to improve their writing. They also utilized Jenni that assisted them to brainstorm ideas and to plan before writing:

When the teacher asked us to write an essay about certain topic, I used Essay Writer application. It was fantastic as it provided me with suggestions to improve the essay. Before I started writing, I employed Jenni to give me some thoughts. (Khaled interview)

It is clear that AI writing tool (i.e Essay Writer) can enhance creativity by providing suggestions for improvement and to elaborate on initial thoughts and ideas. When Khaled faced challenges in writing, he used Jenni in order to suggest different perspectives or angles. For Khaled, AI writing tools (Essay Writer and Jenny) enabled him to express his ideas efficiently and to observe and learn how an idea can be developed, and this is beneficial in academic writing. Gayed et al. (2022) pointed out that AI writing applications can enhance the generation of ideas.

Drawbacks of AI writing tools

Although majority of the participants explained the significance of AI in their writing, the data showed that five of them (5 out of 50) of males reported that they had insufficient knowledge about AI. Thus, they preferred not to use it for various reasons. For instance, Hazem who was in the third semester in which he was required to write essay logically was afraid of losing creativity and criticality, and became over reliant on AI in writing. “I rarely use AI in my writing; I am aware of its negative effect on generation of my ideas and thoughts” (Hazem, interview).

The findings of this study align with the study of Kornfeld and Roy (2021), Johinke et al., (2023); Huang and Tan (2023), and Iskender (2023) who explained that over reliance on AI applications can effect on thinking and generating thoughts and ideas negatively. Furthermore, the responses from four students had concerns about humanity: “humanity will be destroyed by AI” (Rami interview). Moreover, others like Majd and Anes reported that they were afraid of losing personal information: “Personal information such as photos and recordings can track me without my knowledge” (Majd interview).

Conclusion

This study focuses on undergraduate students’ perceptions towards the different types of AI writing tools and their effective roles on students’ writing skills and performance in English at Asmarya Islamic University. The findings reveal that the participants employed different AI writing

applications including Chat-GPT, Copilot, Quillbot, Jenni, Essay writer, Grammarly, Hemingway, and Worldtune. The results indicate that Chat-GPT is one of the most common applications that assist the participants to get prompt feedback and to be consistent in their writing. The findings also reveal that Copilot application is the second tool that is commonly used by students as it helps them to generate thoughts and ideas, to improve their writing in terms of punctuation, sentence structure, and style, and to produce clear and readable texts. Moreover, the results reveal that QuillBot is significance since it offers paraphrasing and summarizing texts.

The findings also show that Grammarly and Hemingway applications play a vital role in helping students to write effectively and efficiently. The participants report that the former can check plagiarism and provide suggestions on vocabulary and sentence structure, whereas the latter can assist the participants to ensure clarity and readability of the content. On the top of that, the participants mentioned that Worldtune assist them in their writing in terms of improving sentence structure and coherence.

Although AI writing applications can enhance students' writing abilities and create a comprehensive learning environment, they can have a negative impact on students' writing. The findings reveal that few students rarely use AI in their writing for various reasons. The participants report that they are aware of losing creativity and thinking critically. In order words, students are afraid of AI writing tools since they can prevent generation of thoughts and ideas, solve-problems, deep understanding, and thinking outside the box. Therefore, there is a need for a balanced use of AI writing applications in order to enhance the quality of EFL Libyan students' writing.

While the current study promotes the use of AI writing applications in EFL classrooms, there are several limitations. Firstly, this study have focused on students at the faculties that are located within the area of Zliten, other students in other faculties may have different perspectives towards the use of AI writing tools with regard to using technology, internet connection, and electricity.

Secondly, this research includes undergraduate students only; future studies can include post-graduate students and their teachers. It is essential to address limitations in future research to gain a more

comprehensive understanding of the implications and drawbacks linked with the use of AI writing applications.

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Appendix I: Questionnaire

I am Associate Professor at Asmarya Islamic University. I am currently investigating the "The Importance of Artificial Intelligence Writing Tools in Enhancing English Writing of EFL Students". The aims are to explore students' perceptions of the different AI writing tools and to evaluate the impact of AI writing applications on students' progress in writing. I would be grateful, if you spare few moments and fill in this questionnaire. You do not need to include your name. The data obtained will be used for research purposes and will be kept confidential. Finally, I would like to thank you for help and co-operation. If you have any question, please do not hesitate to contact me on my email