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Developing EFL Writing with AI: Balancing Benefits and Challenges

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Abstract

This study explores the impact of AI-powered writing assistance on the writing quality and creativity of English as a Foreign Language (EFL) students. The study reveals that AI platforms like ChatGPT enhance grammatical accuracy, structural coherence, and student engagement, improving overall writing quality. Integrating AI into EFL writing tasks significantly reduces grammatical and lexical errors, promoting more cohesive and coherent texts. Students report increased motivation and engagement due to the immediate feedback provided by ChatGPT. However, the study also highlights content density and authenticity challenges, as AI sometimes includes unrelated ideas and may dilute the students' intended messages. Despite concerns over AI's ability to preserve students' authentic voices and the potential risk of over-reliance, students' positive attitudes and the pedagogical implications of AI integration indicate that AI holds promise for enhancing EFL education. The study underscores the need for educators to address issues such as inaccuracies, biases, and the balance between AI assistance and students' authentic expression. This guidance is crucial to fully leverage the benefits of AI in writing instruction. Ultimately, while AI significantly improves the technical quality of writing, its impact on creativity and authenticity requires careful management to ensure enriched learning experiences.

Keywords:

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Introduction

Integrating artificial intelligence (AI) in educational contexts has revolutionized how students learn and engage with various subjects, especially in language learning. Among these AI advancements, ChatGPT, a powerful language model developed by OpenAI, has become a pivotal tool in English as a Foreign Language (EFL) education. This technology offers AI-powered writing assistance, providing immediate feedback and suggestions and enhancing EFL students' learning experience. Recent studies have indicated that AI writing tools like ChatGPT significantly improve the quality of EFL students' writing by enhancing grammatical accuracy, structural coherence, and engagement levels (Mun, 2024; Rahmi et al., 2024). The immediate feedback provided by ChatGPT motivates students and encourages active participation in writing tasks, which is essential for language acquisition and skill development (Roy & Swargiary, 2024).

Despite the benefits, the effective use of AI in writing tasks requires careful management by educators. AI tools often struggle with maintaining content density and authenticity and can sometimes introduce unrelated ideas that dilute the student's intended message (Rahmi et al., 2024). This raises concerns about the potential over-reliance on AI and its impact on students' ability to express their authentic voices. Additionally, the accuracy and reliability of AI-generated content can vary, necessitating vigilant oversight by educators to ensure that students benefit from AI assistance without compromising their learning experiences (Kim et al., 2024).

The potential of ChatGPT to enhance EFL education lies in its ability to complement traditional teaching methods, providing students with a more dynamic and interactive learning environment. However, to fully leverage the benefits of AI in writing instruction, educators must address issues related to biases, inaccuracies, and the ethical implications of using AI tools in educational settings. It is crucial to ensure that AI does not overshadow EFL students' unique voices but enriches their educational experiences. As AI continues to evolve, exploring its role in fostering creativity and authentic expression among EFL students is crucial. This study explores the impact of ChatGPT's AI-powered writing assistance on EFL students' writing quality and creativity. By examining both the benefits and challenges of integrating AI into EFL writing tasks, this research seeks to provide valuable insights into the pedagogical implications of AI in language education and offer recommendations for its practical use.

AI's impact on the quality and creativity of EFL students' writing

ChatGPT's AI-powered writing assistance significantly impacts EFL students' writing quality and creativity by enhancing grammatical accuracy, structural coherence, and

engagement levels while presenting content density and authenticity challenges. Studies have shown that integrating ChatGPT into writing exercises improves writing quality by reducing grammatical and lexical errors, making the text more cohesive and coherent (Mun, 2024; Rahmi et al., 2024). Additionally, EFL students appreciate the immediate feedback provided by ChatGPT, which boosts their motivation and engagement in writing tasks (Roy & Swargiary, 2024). However, there are concerns about the AI's ability to maintain content density and effectively convey the students' intended messages, sometimes leading to the inclusion of unrelated ideas (Rahmi et al., 2024). Furthermore, while students find AI-assisted feedback beneficial for brainstorming and organizing ideas, they face dilemmas in balancing the enhancement of their writing with maintaining their authentic voice and in weighing the potential loss of learning experiences against new opportunities presented by AI integration (Wang, 2024). Teachers also need to address risks such as inaccuracies, biases, and over-reliance on AI, which can affect the reliability of the content generated by ChatGPT (Kim et al., 2024). Despite these challenges, the positive attitudes of students towards AI-assisted writing and the pedagogical implications for its effective integration suggest that ChatGPT has the potential to enhance EFL education significantly, provided that ethical considerations and critical AI literacy are emphasized (Mun, 2024; Wang, 2024). While ChatGPT enhances the technical quality of writing, its impact on creativity and authentic expression requires careful management to ensure that students' unique voices are preserved and their learning experiences are enriched.

AI-powered grammar correction tools for EFL writing

AI-powered grammar correction tools can significantly improve EFL students' writing accuracy and fluency by providing immediate, personalized feedback and enhancing various aspects of their writing. Studies have shown that students actively use tools like Jasper and GPT-3 to improve their writing quality, with notable reductions in grammatical and lexical errors (Mun, 2024; Sabry & Selim, 2024). Rahmi et al. (2024) state that these tools help students correct grammatical mistakes and enhance text cohesion and coherence. However, they sometimes fall short in content density and effectively convey the intended message. Integrating AI tools into EFL education fosters a more personalized learning environment, catering to diverse student needs and preferences and boosting engagement and academic achievements (Luo & Qiu, 2024). Moreover, Rizky et al. (2024) indicate that AI tools assist students in writing more quickly and accurately, enabling them to produce academic English compositions that contribute to their self-awareness, self-learning, and self-confidence. Despite concerns about reliability and over-reliance on AI feedback, students generally have a positive attitude towards these tools, recognizing their potential to enhance writing skills and academic integrity (Mun, 2024; Sabry & Selim, 2024). AI in writing instruction also aligns with modern educational practices, integrating technology to create dynamic,

tech-driven learning environments that empower students in their academic endeavors (Sabry & Selim, 2024). However, it is crucial to balance AI tools with traditional pedagogical methods and ensure ethical considerations and data privacy are prioritized in their deployment (Luo & Qiu, 2024). AI-powered grammar correction tools are valuable complements to conventional writing instruction, significantly improving EFL students' writing accuracy and fluency while fostering a more engaging and practical learning experience.

Over the past twenty years, Automated Writing Evaluation (AWE) systems have become increasingly popular in L2 writing instruction (M. Chen & Cui, 2022). Tools like Jasper, iWrite, and Pigai allow learners to submit written work or multiple drafts for instant feedback and scoring on aspects such as grammar, vocabulary, mechanics, and style, aiming to improve language accuracy and writing skills (Saricaoglu & Bilki, 2021). These tools offer learners multiple opportunities to practice and free up teachers' time to focus on higher-order writing concerns (Ranalli, 2018; Warschauer & Ware, 2006). However, the advent of advanced GPT models, such as GPT-3.5 and GPT-4, marks a significant development. According to Godwin-Jones (2022), GPT-powered programs offer more than mere error correction; they can compose entire essays. With the advent of sophisticated generative pre-trained transformer models, AWE is potentially entering a new era (Escalante et al., 2023).

Tools like ChatGPT allow learners to generate entire writing pieces with minimal input. Researchers have developed GPT-powered writing systems to explore the collaboration between AI and learners in writing practice. For instance, BunCho, based on GPT-2, facilitates story co-creation in Japanese, positively impacting creativity and enjoyment (Osone et al., 2021). Systems like CoAuthor and Wordcraft, which utilize GPT-3, focus on aiding creative and argumentative writing and promoting innovative co-writing experiences (Lee et al., 2022; Yuan et al., 2022). RECIPE integrates ChatGPT into EFL writing education, effectively facilitating interactive conversations and enhancing students' writing skills (Han et al., 2023). In non-academic settings, there has been substantial growth in interactive GPT-powered writing systems, often referred to as AI writers, including Sudowrite, Jasper, and Rytr.

AI-powered grammar correction tools and the cognitive load in writing

AI-powered grammar correction tools reduce the cognitive load of EFL writers and enhance their writing experience by providing immediate feedback and improving various aspects of writing. Mun (2024) states that these tools, such as Jasper and ChatGPT, have significantly reduced grammatical and lexical errors, allowing students to focus more on content and organization than language mechanics. AI tools like ParagraphAI have improved grammatical accuracy, text cohesion, and coherence, although there are occasional issues with content density and relevance (Rahmi et al., 2024; Taj, 2024). Moreover, integrating AI in EFL classrooms fosters a more

personalized and engaging learning environment, which adapts to the diverse needs of students and enhances their academic achievements (Luo & Qiu, 2024). EFL learners perceive these tools positively, noting improvements in writing quality and time efficiency, although there are concerns about over-reliance and the reliability of AI feedback (Sabry & Selim, 2024). Taj (2024) states that using AI tools also encourages a shift from traditional, teacher-centered approaches to more learner-centered methodologies, which actively engage students and help them develop essential writing skills, including paraphrasing and summarization. Overall, AI-powered grammar correction tools alleviate the cognitive burden of writing in a foreign language and contribute to a more effective and enjoyable learning experience, as evidenced by various studies on their impact and efficacy in EFL education.

AI-powered tools and human feedback

AI-powered grammar correction tools and human feedback have distinct advantages and limitations in EFL writing contexts. Studies indicate that AI tools, such as ChatGPT and ParagraphAI, significantly reduce grammatical and lexical errors, enhancing text cohesion and coherence, which can improve writing accuracy and structural organization (Mun, 2024). Rahmi et al. (2024) indicate that these tools sometimes struggle with content density and may introduce unrelated ideas, potentially diluting the intended message. Regarding psychological factors, combined automated-teacher feedback has been shown to enhance students' writing self-efficacy and performance more effectively than teacher-only feedback. However, it does not significantly impact writing anxiety (Sari & Han, 2024). Lower-proficiency EFL learners also benefit from AI feedback, as evidenced by significant improvements in writing quality and positive perceptions of the feedback's impact (Pariyanto & Tungka, 2024). Despite these benefits, challenges such as accuracy issues, dependency on extensive datasets, and potential over-reliance on AI tools remain concerns (Mun, 2024; Sutrisno & Evenddy, 2024). Additionally, while AI feedback is praised for its speed, availability, and personalization, it is not always as reliable as human feedback, which can provide more nuanced and contextually appropriate guidance (Sutrisno & Evenddy, 2024). Therefore, an integrative approach combining AI and human feedback may offer the most comprehensive benefits, leveraging both strengths to effectively enhance EFL learners' writing skills (Sari & Han, 2024). This combined approach can address the limitations of each method, providing a balanced and effective feedback mechanism that supports both linguistic accuracy and content quality.

AI-Powered L2 Writing Studies

Research into GPT-powered writing has explored various aspects, such as academic assessments, student engagement, motivation, teacher feedback, and ethical considerations regarding GPT technologies. This research can be divided into two main

themes: one focusing on academic writing and the other on second language (L2) writing. Each theme investigates the specific impacts and implications of GPT applications, reflecting various interests within educational and technological contexts.

The first theme primarily examines the influence of AI, particularly ChatGPT, on academic writing and the dissemination of scientific knowledge. There are concerns about academic integrity, as Perkins (2023) highlights the need for updated guidelines to regulate AI usage by students. The role of AI in scientific manuscript preparation is debated by Alkaissi and McFarlane (2023) and Altma et al. (2023), revealing cautious optimism about incorporating AI tools like ChatGPT into scholarly work despite their limitations. Dergaa et al. (2023) delve into the authenticity and reliability of academic writing, highlighting the academic community's concerns about maintaining integrity in the era of AI. Additionally, Zou and Huang (2023) analyze doctoral students' perceptions, offering insights into ChatGPT's potential to enhance second language writing and its transformative capabilities for non-native English speakers in academic settings. These studies emphasize a complex discussion about harnessing AI's benefits in academic discourse while carefully considering its ethical and practical challenges. Zhao et al. (2024) explore how students incorporate ChatGPT into their writing processes, examining strategies, challenges, and perceptions of AI's ethical and practical implications in academic writing.

The second theme shifts the focus to L2 writing and language learning contexts. Hockly (2023) discusses AI's benefits and challenges to educators and learners. Ali et al. (2023) investigated the effects of ChatGPT on enhancing motivation and writing abilities among EFL students, suggesting a positive impact on learners' engagement and skill development. Marzuki et al. (2023) contribute to the discourse by presenting evidence of AI writing tools' positive impact on EFL students' writing quality, especially in content and structure. Liu et al. (2024) extend the exploration to multimodal composing by investigating how ChatGPT and Bing Chat tools affect EFL students' writing processes and outcomes.

Overall, this body of research highlights the transformative potential of AI in both academic and EFL writing contexts. Most studies focus on conversational ChatGPT, with fewer examining the development of GPT-powered applications. Although Jasper incorporated ChatGPT features in 2023 to enhance its functionalities, research into such integrations' full capabilities and educational impacts is still limited, indicating a promising area for future research. Meanwhile, tools like Sudowrite are gaining popularity in professional writing and communication. Still, their integration into L2 writing remains unexplored, requiring further investigation into how learners interact with these technologies. Additionally, while research has addressed writing behaviors and perceptions during the writing process, there is a limited understanding of how learners engage with and perceive GPT-powered tools, their acceptance of this technology, and their future intentions of use in classroom settings. Understanding how

learners adapt to and view these tools is crucial for developing effective teaching strategies and ensuring AI's safe and ethical use in language classrooms. It is essential to investigate these aspects more deeply to understand the interaction dynamics between learners and tools and how this relationship influences their learning journey.

Integrating AI into EFL writing instruction

Integrating AI into EFL writing instruction can significantly address specific learning needs by providing personalized, adaptive, and interactive learning experiences. AI tools such as customized learning platforms, intelligent tutoring systems, and automated writing evaluation tools can tailor instruction to individual learners' needs, promoting engagement, autonomy, and proficiency development (Umar, 2024). For instance, the Cami AI-SAMR framework has been shown to significantly enhance EFL students' writing achievement and foster positive perceptions among learners, indicating its efficacy in supporting diverse educational settings (Afif et al., 2024). Mun (2024) also noted that AI-assisted feedback tools like ChatGPT can improve students' writing skills by reducing grammatical and lexical errors. However, addressing concerns about reliability and over-reliance on these tools is essential. Integrating AI technologies such as Writerly and Google Docs has also been proven to significantly improve writing performance by helping students produce essays with better task achievement, coherence, cohesion, lexical resource, and grammatical accuracy (Bantalem & Kassahun, 2024). Moreover, leveraging AI to enhance teaching practices can create a more personalized educational experience that adapts to the diverse needs of students while maintaining the foundational aspects of traditional pedagogy (Luo & Qiu, 2024). However, it is crucial to prioritize ethical considerations and data privacy in deploying AI technologies, necessitating comprehensive data protection measures and ethical guidelines (Umar, 2024). By embracing innovation, collaboration, and ethical practice, educators can harness the transformative power of AI technologies to create dynamic, inclusive, and effective language learning environments that empower learners to succeed in today's interconnected world (Umar, 2024). Therefore, effective AI integration in EFL writing instruction involves a balanced approach that combines technological advancements with ethical considerations and pedagogical strategies to meet the specific learning needs of students.

Challenges and the limitations of AI-powered tools in EFL writing

While beneficial, AI-powered grammar correction tools in EFL writing exhibit several limitations that must be addressed for optimal effectiveness. One significant limitation is the lack of content density and relevance, as these tools sometimes fail to convey the intended message and thoughts of the students, leading to the inclusion of unrelated ideas (Rahmi et al., 2024). Additionally, there are concerns about overreliance on these tools, which can hinder the development of independent writing skills among students

(Mohammad, 2024; Mun, 2024). Teachers have also expressed reservations about potential biases and the digital divide, which can affect the equitable use of AI tools in diverse educational settings (Mohammad, 2024; Rahmi et al., 2024). Furthermore, while AI tools like ChatGPT can significantly reduce grammatical and lexical errors, they do not necessarily enhance the variety of vocabulary students use, indicating a limitation in fostering linguistic diversity. Another critical issue is the reliability and accuracy of AI feedback, which can sometimes be inconsistent, leading to doubts about its dependability among learners (Mun, 2024). Ethical considerations and data privacy are also paramount, as the deployment of AI technologies necessitates robust data protection measures and ethical guidelines to ensure the responsible use of these tools in educational contexts (Luo & Qiu, 2024). Lastly, while AI tools can enhance grammatical accuracy and structural coherence, they often require further refinement to address deficiencies in content density and better meet the diverse needs of language learners and educators (Rahmi et al., 2024; Luo & Qiu, 2024). These limitations and challenges highlight the need for a balanced approach that integrates AI tools with traditional pedagogical methods, ensuring students benefit from technological advancements without compromising their overall language development.

Biases in AI-driven writing feedback

Mohd (2024) stated that AI-driven writing feedback, while beneficial in enhancing EFL writing instruction, is not without its potential biases. One significant concern is the overreliance on AI tools, which can lead to a lack of critical engagement from students and a diminished role for teachers in the feedback process. Additionally, biases in AI algorithms can result in unequal feedback quality, potentially disadvantaging certain groups of students based on their language proficiency or other factors (Mohammad, 2024; Aldosemani et al., 2023). For instance, higher-level students may benefit more from AI feedback on lexical complexity. In contrast, lower-level students might only receive surface-level corrections, thus widening the proficiency gap (Chen et al., 2023). Moreover, the reliability and accuracy of AI feedback can be questioned, as automated systems may not fully capture the nuances of human language and context, leading to inappropriate or misleading corrections (Mun, 2024). Incorporating human intervention alongside AI tools to mitigate these biases is crucial. Teachers should provide supplementary feedback to address areas where AI may fall short, ensuring a balanced and comprehensive approach to writing instruction (Aldosemani et al., 2023). Professional development for teachers is also essential, equipping them with the skills to effectively integrate AI tools while maintaining their critical role in the educational process (Mohd, 2024). Clear communication and ethical considerations should be emphasized to foster academic integrity and prevent overreliance on AI (Mohammad, 2024). However, the future of AI-driven feedback is promising, with the need for

ongoing updates and improvements to AI systems to enhance their accuracy and reduce inherent biases (Mohd, 2024).

Cultural differences impact on AI writing feedback

Cultural differences significantly impact AI writing feedback, influencing both the reception and effectiveness of the feedback provided. Research indicates that learners' cultural backgrounds shape their perceptions and engagement with automated writing evaluation (AWE) systems. For instance, a study on ethnic minority students from the Xinjiang Uyghur Autonomous Region found that their engagement with AWE systems was influenced by their multilingual proficiency, familiarity with digital technologies, learning beliefs, and sociocultural identities. Those who actively engaged with the feedback and leveraged their linguistic and cultural capital saw more significant learning gains (Zheng & Xu, 2022). Adapting feedback to cultural backgrounds is crucial, as different cultures have varying expectations and interpretations of feedback. A qualitative study revealed that participants from diverse cultures believe feedback should be tailored to align with cultural norms and values. This suggests that an algorithm could adapt feedback based on cultural differences (Muhammad et al., 2019). Furthermore, disparities in writing accuracy among learners of different proficiency levels can be reduced through the mandatory use of AWE feedback. However, the feedback's perceived usefulness varies with language proficiency, indicating that cultural and linguistic backgrounds play a role in how feedback is perceived and utilized (Xu & Zhang, 2021). These findings underscore the importance of culturally adaptive AI feedback mechanisms to enhance the learning experience and outcomes for users from varied cultural backgrounds.

School policies and the challenges of AI-generated content

School policies addressing AI-generated content's potential biases and limitations in EFL writing tasks are multifaceted, focusing on ethical considerations, academic integrity, and professional development. Teachers have expressed concerns about the overreliance on AI tools, which can lead to biases, inaccuracies in student writing, and advice that may disadvantage some students (Mohd, 2024; Sun, 2023). To mitigate these issues, schools are implementing strategies such as problem-solving activities to ensure the originality of student work. Additionally, there is a strong emphasis on the role of teachers in detecting AI-generated assignments and maintaining academic honesty, which is crucial for skill development (Mohammadkarimi, 2023). Professional development for teachers is also prioritized, enabling them to effectively integrate AI tools while addressing their limitations and biases (Mohd, 2024; Sun, 2023). Furthermore, policies advocate for a balanced approach that combines the benefits of AI, such as enhanced grammatical accuracy and structural coherence, with the need for content density and relevance to the initial topic (Rahmi et al., 2024). Tian

(2024) indicates that ethical implications are also a significant concern, with stakeholders urged to consider the potential for plagiarism and data privacy issues, advocating for the responsible advancement of AI technologies in education. Overall, school policies are evolving to ensure that AI tools are used responsibly and effectively, promoting a student-centered approach that enhances learning while safeguarding academic integrity and addressing AI-generated content's inherent biases and limitations.

Conclusion

This study examines the transformative potential and challenges of integrating ChatGPT's AI-powered writing assistance in English as a Foreign Language (EFL) education. The findings reveal that ChatGPT significantly enhances grammatical accuracy, structural coherence, and student engagement, improving EFL students' writing quality. By providing immediate feedback and personalized suggestions, AI tools foster a more interactive and motivating learning environment, which is crucial for language acquisition and development.

Despite these advantages, the study also identifies significant challenges, such as content density and authenticity issues, where AI may introduce unrelated ideas or fail to convey students' intended messages. This raises concerns about students' over-reliance on AI, potentially hindering their ability to express their authentic voices and develop independent writing skills. Additionally, the study highlights the need for educators to address inaccuracies, biases, and ethical considerations associated with AI-generated content.

Educators should integrate AI tools like ChatGPT alongside traditional pedagogical methods, ensuring that technology enhances rather than replaces human input. This approach allows teachers to provide nuanced feedback and fosters students' critical thinking and creativity. Schools must invest in professional development programs that equip teachers with the skills to incorporate AI tools into their instruction effectively. Training should focus on understanding AI limitations, addressing biases, and leveraging AI's strengths to support diverse learning needs. Teachers should encourage students to use AI for idea generation and organization while maintaining their authentic voices. Educators can help students develop more vital, more personalized writing skills by guiding them in refining AI-generated content.

Schools should establish clear policies on the ethical use of AI tools, emphasizing data privacy, academic integrity, and plagiarism prevention. This includes educating students about the appropriate use of AI and its potential pitfalls. AI systems should be designed to consider cultural differences in language learning, offering tailored feedback that aligns with students' linguistic and cultural backgrounds. This adaptation can enhance learning outcomes by making feedback more relevant and meaningful. Schools should continuously evaluate the effectiveness of AI tools in the

classroom, gathering teacher and student feedback. This iterative process allows for refining AI applications to meet learners' evolving needs better. Implement a hybrid feedback system combining AI's strengths and teachers' expertise. This approach ensures comprehensive student support, addressing linguistic accuracy and content quality. In conclusion, while ChatGPT holds significant promise for enhancing EFL education, its successful integration requires careful management and a balanced approach. By addressing the identified challenges and implementing strategic measures, educators can harness AI-powered tools' full potential to enrich students' learning experiences and foster their development as proficient and confident writers.

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