

MOBILE ARTIFICIAL INTELLIGENCE, A NEW ESL WRITING GURU?



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Abstract

This paper presents an in-depth literature review of the challenges faced by English as a Second Language (ESL) learners in writing, with a focus on the role of Mobile Artificial Intelligence (AI) in addressing these issues. ESL learners often struggle with mastering English syntax, structure, and vocabulary, and understanding the conventions of academic writing. These struggles are often compounded by a lack of feedback due to limited resources and time available to teachers. Mobile AI has emerged as a potential solution, offering the capacity to process vast amounts of data on the go, personalize learning experiences, provide immediate analysis and feedback, and even generate writing templates. However, the reliance on Mobile AI also raises several concerns, including the potential for over-reliance on the technology, the inability to provide nuanced feedback like a human tutor, biases in algorithms, and the risk of promoting repetitive, 'robotic' language. Thus, this paper explores the advantages and potential pitfalls of using Mobile AI in ESL writing, arguing for a balanced approach that harnesses the strengths of this technology while remaining aware of its limitations.

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1. Introduction

ESL learners face a number of challenges in writing. These challenges relate primarily to mastering the syntax and structure of English and to acquiring appropriate English vocabulary (Toba & Noor, 2019). These difficulties may be exacerbated by the fact that ESL learners may also have difficulty understanding various conventions of academic writing in English leading to writing being considered the most difficult skill for ESL learners to master (Arlina & Melor, 2018). Hashim et al. (2019) found that lack of feedback is one of the main problems in ESL writing. Lack of feedback for ESL student writing can be attributed to several factors. Most commonly, it is due to the lack of resources and time available to teachers (Alharbi, 2020). ESL students often require more time and support than native-speaker writers, making it difficult for them to provide comprehensive feedback given the amount of work they already do. Given the many problems ESL learners face that affect their writing, mobile artificial intelligence may be one of the best solutions to the problems that affect ESL learners' writing.

Mobile Artificial Intelligence (AI) has become increasingly popular in recent years, as the technology has advanced and its applications have become more widespread. AI has been used in a variety of applications, from voice-recognition software to automated customer service chatbots, and it continues to evolve as newer technologies are developed (Luo et al., 2022). In particular, AI has made a major impact in the field of mobile

What is Mobile Artificial Intelligence?

Mobile Artificial Intelligence (AI) is the use of intelligent algorithms and technologies to create intelligent mobile devices that can interact with the environment in order to achieve tasks (Kim et al. 2020). Mobile Artificial Intelligence (AI) is an emerging technological field related to the ables greater interaction between humans and their devices, as well as between devices themselves, making it essential for creating a connected world. AI-powered mobile applications can help users manage their daily tasks, solve problems, make decisions, and communicate with others (Wang & Zhao, 2022). AI can also be used to detect, analyze, and identify patterns in data, enabling businesses to gain valuable insights into customer behaviour, trends, and preferences (Pedro et al., 2019).

What is ESL Writing?

ESL (English as a Second Language) writing is a term used to describe writing that is done by students for whom English is not their first

technology, bringing a range of exciting opportunities to users. Mobile AI is the use of AI systems for mobile devices, such as smartphones and tablets (Zhang et al., 2019). AI enables mobile devices to become smarter and more capable, making them more user-friendly and powerful. AI can be used to create intelligent applications that can understand and respond to user input, automatically adjust to changing user preferences, and provide users with personalized experiences (Liu et al. 2021). Mobile AI has a range of unique advantages over traditional computing. AI can process vast amounts of data on the go, which makes it ideal for tasks such as image recognition, facial recognition, and natural language processing (Suo et al. 2021). AI-powered applications can also be trained to understand user habits and preferences, and use this knowledge to personalize experiences and simplify complex tasks (Bashar, 2020).

In light of the above, this article aims to determine the importance of mobile artificial intelligence in improving ESL learners' writing skills. This idea is based on current critical issues on the use of mobile artificial intelligence in improving ESL learners' writing skills. Furthermore, this paper contends that language learning, especially English, should not be bound only to traditional methods such as "chalk and talk", as technologies such as mobile artificial intelligence are currently revolutionising the way learning, especially in the English classroom, should be taught.

development of intelligent applications and services that operate on mobile computing platforms (Nazari et al. 2021). It combines AI methods and techniques with mobile technologies, such as sensors, cloud computing, and the Internet of Things, to enable the delivery of contextual, personalized, and optimized user experience (Liu et al. 2021). It en

language. This type of writing presents a unique set of challenges and requires a specialized skill set. For example, ESL writers often struggle with idiomatic language, syntax, and the organization of written English (Li, 2019). Additionally, this type of writing requires the use of different strategies and approaches than are used to teach native English speakers (Lee, 2014). While the challenges of ESL writing can be daunting, the successful application of appropriate strategies and approaches can enable ESL writers to effectively communicate their thoughts and ideas.

The relationship between Mobile AI and ESL Writing

Mobile Artificial Intelligence (Mobile AI) and ESL Writing are two distinct disciplines of technology that have become increasingly intertwined in recent years. AI is a field of computer science devoted to the development of intelligent machines that can interpret, reason and learn from data (Suo et al. 2021), while ESL writing is focused on the use of English as a Second Language, or ESL, by individuals who are not native English speakers (Cunningham, 2019). The development of artificial intelligence technology has enabled mobile applications to become increasingly more intelligent and efficient in helping those who have a limited understanding of the English language improve their writing (Abdalkader, 2022). In particular, AI technology helps mobile apps to provide personalized writing support by using natural language processing (NLP) to understand, analyze and generate meaningful responses to user queries (Sumakul et al. 2022). This helps ESL students benefit from the virtually endless resources of the online world and increase their literacy skills. One particular application of AI that has been gaining traction in recent times is machine-aided writing, which enables ESL students to generate high-quality written content with little to no effort (Ryan, 2020). He further emphasized that machine-aided writing utilizes AI technology to identify grammar and spelling mistakes, suggest synonyms, and even provide automatic rewrites and summaries of text. This type of technology can be used to drastically improve the quality of ESL writing, by helping students to become more efficient and time-savvy in their writing tasks. Moreover, AI has also been helping teachers of ESL writing by creating opportunities for more personalized instruction (Gayed et al. 2022). For example, AI-powered assessment tools can quickly analyze and provide feedback on student essays, helping teachers to save time and resources (Dizon & Gayed, 2021). AI can also be used to automatically generate personalized learning plans based on students' specific needs, thus reducing the amount of time teachers need to spend preparing lesson plans (Wang, 2021). In general, the relationship between mobile artificial intelligence and ESL writing is one of mutual benefit. The use of AI technology to enhance the quality of ESL writing has drastically improved the learning experience of students, and at the same time, has made it easier and more efficient for teachers to provide personalized instruction. As mobile AI continues to evolve, its applications and benefits to ESL writing are sure to become even more valuable.

2. Discussion

Integrating Mobile AI in ESL Writing : The Good and The Bad Mobile AI has gained popularity in

the field of English as a Second Language (ESL) writing (Zhao, 2022). In the past, ESL students have often struggled with their writing, as they were required to write in English without the benefit of a language program or assistance from a tutor. Mobile AI is changing this, as ESL writing applications are now becoming available that can provide assistance with grammar, spelling, and sentence structure (Kim et al. 2019). These applications use AI technology to analyze a student's writing and provide feedback on any errors or areas that need improvement. This can drastically reduce the time that ESL students spend on their writing, as they can now get an immediate analysis of their work (Pikhart, 2020). In addition to providing feedback on errors, mobile AI can also be used to provide personalized language instruction (Taşkıran & Göksel, 2022). For example, AI-powered applications can recognize patterns in a student's writing and suggest ways to improve their writing. This can provide valuable insight and guidance for students who are new to the language, as well as for students who are struggling to make progress. Mobile AI also has the potential to help students with their writing by providing templates and guidance (Wang et al. 2022). For example, some mobile AI applications can generate an outline or template for a student's essay that they can then use to construct their essay. This can be particularly useful for students who are unfamiliar with the structure of the English language, or who are having difficulty organizing their thoughts. The AI can also suggest relevant vocabulary and help guide a student's writing (Park, 2019). Mobile AI can also provide a bridge between ESL students and their native language by enabling them to recognize words and phrases in a student's native language and substitute them for the correct English equivalents using Mobile AI features (Fitria, 2021). This can be invaluable for students who are having difficulty expressing themselves accurately and for those who are still learning the language, as it can help them to communicate more effectively. Mobile AI is revolutionizing the way that ESL students approach their writing (Chang et al. 2021). AI-powered applications can provide guidance and assistance, reducing the time that students spend on their writing and providing invaluable insight (Alsadoon, 2021).

Mobile Artificial Intelligence (AI) has become an essential tool for ESL (English as a Second Language) learners. By utilizing Mobile AI technology, ESL learners can better understand the complexities of the English language and, as a result, improve their writing skills (Zhao, 2022).. It eliminates the need to manually check or proofread writing (Sumakul et al. 2022). With AI technology, a single sentence can be automatically corrected

without the need for multiple iterations. This can save time and allow ESL learners to focus on more important aspects of the writing process. Furthermore, Mobile AI enables errors detection such as incorrect sentence structure, grammatical mistakes, and spelling errors, and then provide detailed, tailored feedback on how to improve the writing in a far more precise manner than manual proofreading, which can result in more accurate and personalize feedbacks (Wang et al. 2022). This is very useful for ESL learners, who may not be familiar with native English conventions and help them better understand the nuances of the English language (Nazari et al. 2021). This allows ESL learners to gain a deeper understanding of the language and its complexities, which can significantly improve their writing skills.

Although Mobile AI has its benefits, it also raises questions about the implications for ESL writing. One of the biggest criticisms is that it can be an unreliable source of feedback (Waer, 2021). AI-powered mobile tools can make mistakes, and there is a risk that students could become over-reliant on these tools and neglect other important aspects of ESL writing such as understanding tone, style and clarity (Chang et al. 2021). In addition, Mobile AI cannot provide the same level of feedback as a real human tutor, as they may not be able to identify more complex writing errors (Hsio et al. 2022). Another concern is that Mobile AI can be biased and inconsistent (Zeng, 2022). This is because AI tools rely on algorithms that have been programmed by humans. These algorithms could be based on certain assumptions and preconceptions, leading to an uneven distribution of feedback and incorrect assumptions about a student's writing (Nazari et al. 2021). Moreover, Mobile AI may not be able to adapt to a student's individual needs, as they are programmed to provide generalised feedback and advice (Kaharuddin, 2021). Another issue associated with the use of Mobile AI in ESL writing is that it can be used to automate certain tasks (Pongpuehee et al. 2022). This can lead to a decrease in the amount of critical thinking and creativity needed to produce a quality written piece. For example, Mobile AI can be used to generate resources or content that may otherwise require more thought and effort, such as outlining and summarizing (Sumakul et al. 2022). As a result, there is potential for writers to become too reliant on Mobile AI for producing written works, which may lead to lower quality pieces. Another potential negative outcome of Mobile AI in ESL writing is that it can lead to the overuse of certain language constructs (Im, 2021). AI can be used to detect patterns in language, which can be used to generate new language patterns that are more repetitive than natural language. This can lead to the emergence of "robotic" language, which can

be difficult to understand and may not accurately communicate the intended message (Kim et al. 2022). This can also lead to the development of "echo chambers" in which certain language constructions are repeated without any variety, which can limit the creative potential of writing (Zeng, 2022). Lastly, Mobile AI can lead to the erosion of certain linguistic features, as well as the ability to effectively communicate through written language (Karpova, 2020). As Mobile AI becomes more sophisticated, it can be used to detect subtle nuances in language and generate more accurate translations. However, this can also lead to the loss of certain features of language, such as idiomatic expressions and may not accurately reflect the intended meaning of the original language, which can lead to miscommunication, which can make understanding and expressing written language more difficult (Waer, 2021). The over-reliance on Mobile AI for tasks such as outlining and summarizing can lead to a decrease in the quality of written works (Kaharuddin, 2021). Mobile AI can lead to the overuse of certain language constructs, as well as the erosion of certain linguistic features and the ability to effectively communicate which are critical for ESL writers to consider the potential implications of using Mobile AI in order to ensure that their writing is of the highest quality.

3. Conclusion

Mobile artificial intelligence has the potential to revolutionise the way ESL learners write. It can provide students with personalised learning experiences and give them a better understanding of the language. It also allows them to quickly access and share resources, making the writing process more efficient and effective. With AI-powered tools, ESL learners can become confident, engaged and successful writers. Mobile artificial intelligence is an invaluable asset to the ESL learning community, and its potential to improve writing skills is immense. Nevertheless, the technology is still in its infancy and more studies are needed on how mobile artificial intelligence can be effectively integrated into ESL writing instruction. Therefore, this mini-review has contributed to the literature on mobile artificial intelligence in the context of ESL writing and serves as a reference for future research in a similar field. In addition, the findings of this paper could inform educators and researchers about current educational reforms and technological advancements in education, with a focus on one of the most important core skills in English, namely writing.

4. Reference

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