

Navigating the Influence of ChatGPT on the Writing Skill: An Exploratory Narrative Review

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Abstract: Generative Pre-trained Transformer (ChatGPT), is an artificial intelligence (AI) model that has revolutionized the educational landscape in recent years. Its use has been explored across various educational fields; however, given that this AI model is language-based, it has attracted particular interest in language teaching, especially in developing the writing skill. Due to the importance of the writing skill in language learning, and the extensive body of research investigating the best ways to support this skill using ChatGPT, the current study aims to provide an overview of the latest findings regarding the use of ChatGPT in developing writing. Through a narrative literature review approach, this paper will offer comprehensive documentation of the various ways ChatGPT can be used to support the writing skill, as well as the potential risks associated with its implementation. These objectives will be achieved by addressing two key research questions: In what ways can ChatGPT be useful in developing the writing skill? and what are the possible risks of implementing this tool in developing the writing skill? By answering these questions, the paper will help equip educators and learners with a comprehensive understanding of the most effective ways to use this tool to enhance the writing skill.

Keywords: AI, ChatGPT, Education, Writing skill.

1. INTRODUCTION

Throughout history, technology has offered the field of language teaching many innovative materials that brought a significant change in language teaching environments and instructional strategies. Due to the increasing demands for innovative teaching methods, it is becoming a truism that any technological advancement will inevitably impact the language teaching profession (Gilakjani, 2017). The emergence of AI models such as ChatGPT can represent an authentic example. ChatGPT is an AI-based model that was launched in November 2022 (Atlas, 2023). The model's numerous attributes have resulted in several research papers attempting to make use of it in developing various language skills including writing.

The writing skill is a productive skill that has often been described as one of the most complex skills required for language learning. This difficulty is attributed to the fact that acquiring this skill requires the mastery of other language aspects such as punctuation, syntax, vocabulary, cohesion, and coherence (Jusun & Yunus, 2018) as cited in (Bhandari, 2024). The inherent complexity of this skill derived so much attention from educators and researchers and

made the hunt for innovative ways to make the process of teaching and learning a priority for many. This is what has made the investigation of the effectiveness of various technological tools widespread in language teaching research, and perhaps the latest AI tools, such as ChatGPT, has led to considerable discussion. Taking that into account, the current paper attempts to provide a general overview of the available literature that showcases how ChatGPT can be used in teaching the writing skill. In addition, the paper will discuss the possible benefits of using such a model in teaching the writing skill through answering the following questions:

- In what ways can ChatGPT be useful in developing the writing skill?;
- What are the possible risks of implementing this tool in developing the writing skill?

2. METHODOLOGY

Attempting to discover the influence of ChatGPT on the development of the writing skill, the current paper adopted a narrative review approach. Narrative reviews are “qualitative summaries of the relevant literature, whether this made use of statistical tests or not” (Pautasso, 2020, p. 303). According to Baumeister (2013) as cited in (Pautasso, 2020), this type of methodology allows researchers to cover various studies based on their relevance to the topic with no consideration of the distinct questions or methodologies utilized. Following this methodology, the researchers reviewed a variety of research paper addressing the utilization of ChatGPT in developing the writing skill and other learning aspects that can influence it. The papers reviewed were published between 2022 and 2024. The researchers then, reported the findings of a selection of papers based on the significance of their results and the relevance of their conclusions.

3. REVIEWS, RESULTS AND DISCUSSION

What is ChatGPT?

ChatGPT, also known as GPT (Generative Pre-trained Transformer) (Floridi & Chiriatti, 2020), is an artificial intelligence model developed by Open AI. This model was trained on a large amount of data from different languages, enabling it to produce sensible and suitable responses to a broad variety of requests. By recognizing and answering language in a natural way, ChatGPT offers people the opportunity to have human-like conversations with machines (Adelson, 2023). In more technical jargon, ChatGPT “*is a computational system designed to generate sequences of words, code or other data, starting from a source input, called the prompt*” (Floridi & Chiriatti, 2020, p. 684). It can be very beneficial in fulfilling many tasks related to various fields, such as customer support, entertainment, healthcare, and most importantly, education (Adelson, 2023).

ChatGPT and Education

The available body of literature suggests that ChatGPT can be extremely useful in improving educational practices. As per Trust, Whalen, & Mouza (2023), Chat GPT can function as a supportive tool for educators. This model can help teachers design lesson plans, course syllabi, and assessment techniques. They also highlighted that through the help that GPT can provide in writing emails and letters, better communication between teachers and their students will be promoted. Finally, they maintained that GPT can also be helpful in providing personalized learning and easy-to-use reading and writing comprehension support that will foster better learning experiences. On the same vein, Skrabut (2023) suggested about eighty ways to use ChatGPT in education. Some of the ways that he discussed included class preparation, instructional assistance, study aids creation, and class activities development, etc.

Besides being a support to teachers ChatGPT can be of great benefit for learners as well. The model can function as a great tool for brainstorming, where learners can ask questions to generate ideas for their essays or presentations. It also can help in developing their professional communication skills through the samples of professional documents that it can provide. Most importantly, it can function as a tutor that learners can rely on to experience individualized learning by asking it to provide exercises or activities that suit their learning styles and needs (Atlas, 2023).

ChatGPT and the Writing Skill

As a content-generator model, ChatGPT can significantly be useful in the field of education, and particularly in language teaching. It can be utilized for a wide variety of language processing tasks, including language translation, question answering, text completion, (Skrabut, 2023) and text summarization (Adelson, 2023) and most importantly in improving writing. One of the language skills that got recognizable attention in GPT research papers is writing. The effectiveness of ChatGPT in improving the writing skill or in facilitating it has been traced in several research papers such as (Imran & Almusharraf, 2023; Buruk, 2023; Han, et al., 2023; Alberth, 2023).

In their (2023) paper, Arora & Mehta concluded that ChatGPT can be an effective tool that learners can rely on in developing their writing skills. This, according to them, was proved right through a quantitative questionnaire that they dedicated to college students. The findings indicated that a large number of students agreed that GPT can be useful as an assistance tool that generally can help in learning new vocabulary, mastering grammar rules, developing critical thinking and creativity skills, improving fluency, and developing new thinking perspectives. All these are thought to be achieved through the personalized feedback that GPT can offer throughout the writing process (2023). In a similar study, Nguyen (2023) collected both qualitative and quantitative data to investigate teachers' perception of ChatGPT usage in writing classes at a Vietnamese University. The

findings indicated that ChatGPT was found to be very useful for educators and students alike. The study demonstrated that GPT can be extremely advantageous for teachers as it minimizes their workload by providing assistance in creating learning materials and lesson plans for writing classes. It was also concluded that this AI model could function as a tutor that learners can rely on in their writing classes as it can provide immediate responses and reading recommendations that can help them develop their thinking. Lastly, (Nguyen, 2023) added that ChatGPT can be a source of motivation and a feedback provider that can allow learners to enhance their writing skills.

Although the previous conclusions were reached solely based on teachers' and learners' experiences and perceptions, many experimental studies reached similar conclusions. In a study that was conducted to draw a connection between writing, creativity, and ChatGPT, Vicente-Yagüe-Jara et.al (2024) maintained that there was a huge improvement in students' writing productivity after the integration of ChatGPT. Inferring that, GPT can work as an assistant for students and promote creativity in their writing. In another study that attempted to make another connection, and this time between writing, motivation and ChatGPT (Song & Song (2023) found that there was a significant improvement in the writing skills and motivation of the learners who received ChatGPT-based instruction compared to those who did not. This improvement was particularly apparent when dealing with writing aspects such as organization, coherence, grammar, and vocabulary. These findings led them to recommend that the integration of AI in academic writing should be considered as part of a technology-integrated approach, as the latter proved its effectiveness in enhancing both learners' academic writing skills and motivation. On the same track, Faiz et.al (2023) established that using ChatGPT as a writing aid can positively impact EFL learners' writing proficiency. According to them, the assistance of GPT resulted in significant improvements in learners' grammar accuracy, word comprehension, and writing compositional skills. Concluding that, the use of ChatCPT in

writing instruction can have a transformative positive impact that educators should take into account.(ibid)

Besides these studies that documented the effectiveness of ChatGPT in improving the writing skill in general, many papers focused on its effectiveness in developing various language aspects necessary for writing, including grammar and vocabulary. Although the potential of GPT in improving grammar was documented in many writing research, many papers afforded a detailed analysis of the use of ChatGPT to improve grammar as an independent language skill. In an experimental study, Fang, et al (2023) evaluated the capacities of GPT in the area of grammatical error correction. The results indicated that ChatGPT has an excellent capacities for error detection. The model showed strong abilities in correcting grammatical mistakes and generating sentences with human-like fluency, which can be attributed to its over-correction tendencies. The efficacy of ChatGPT in grammatical error detection was also analysed in Schmidt-Fajlik's (2023) paper. In this study, Schmidt-Fajlik compared the effectiveness of GPT as a grammar checker to two other AI models, namely Grammarly and ProWritingAid, in an EFL learning context. The results revealed that, besides providing more detailed explanations and accurate configuration of grammatical errors, GPT had the feature of translating the instructions to the user's mother language (Japanese). This led to the conclusion that, ChatGPT can be much more useful as a grammar checker, especially for novice EFL learners, in comparison to Grammarly and ProWritingAid. Even though the focus in the majority of research on this topic is on the English language, several papers examined the efficacy of ChatGPT as a grammar checker for other languages, such as Korean (Maeng, Gu, & Kim, 2023) and Chinese (Fan, Jiang, Li, & Li, 2023). In both these papers, some positive insights about the potential of ChatGPT for the grammar of both languages were observed. This suggests that it is possible for GPT to be utilized as a grammar checker for various languages, not only the English language.

Just like grammar, vocabulary got some special attention in the literature. This is due to the fact that ChatGPT can function as a vocabulary developer too. In an experimental study that was done in a Saudi university, the gathered data illustrated that the treatment that was adopted in developing learners' vocabulary was successful for both experimental and control groups; however, the experimental group that was exposed to ChatGPT-generated tasks established much better results in terms of the size of acquired vocabulary and strength of word families (Mugableh, 2024). In an attempt to recognize the capacities of GPT in vocabulary acquisition Atlas (2023), introduced several ways through which GPT can be used in vocabulary acquisition. These include generating flashcards and quizzes, providing immediate translation, and creating personalized vocabulary lists. According to him, these tools can be an efficient and effective way to improve students' vocabulary retention, comprehension, and fluency. Sharing the same perspective Kohnke, Moorhouse, & Zou (2023) highlighted the affordance of GPT as a tool for learning vocabulary. This was proved right after their investigation indicated that ChatGPT could be used to define new words, generate proficiency-based dialogues, and provide explanations for ambiguous vocabulary in learners' first language and second language.

In addition to grammar and vocabulary, several studies have attempted to investigate the usefulness of ChatGPT in promoting many skills that can positively influence writing development. For instance, in a study conducted by (Zheng & Stewart, 2024) it was found that ChatGPT can be an effective tool in developing learners' cultural awareness, as it was found that several cultural values were included in the moral dilemmatic stories generated by ChatGPT that can be used as a teaching material. Furthermore, in another study done by (Kartal, 2023) investigating the effect of ChatGPT on thinking skills and creativity, it was found that ChatGPT can be of a great educational benefit, which can be maximized through human-computer co-creation, engaging in critical analysis, and fostering collaboration. Finally, In his (2023) Ho concluded that ChatGPT's

features can be very effective in improving paraphrasing skills. The paper showed that ChatGPT's abilities to correct wrong paraphrases and provide clear instruction on the required changes can be extremely beneficial in developing the paraphrasing skill. Although these studies did not address the writing skill explicitly, their findings can be of a great benefit in developing it.

Possible Risks of Integrating ChatGPT in Developing the Writing Skill

Despite being considered a supportive tool that can improve the writing skill in several ways, ChatGPT misuse can be extremely detrimental to the educational field. This stems from the notion that the usefulness of ChatGPT can result in learners' overreliance on it, which will eventually limit their creativity and critical thinking (Nguyen, 2023). As argued by Trust, Whalen, & Mouza (2023), students can use this tool in several unethical ways, such as doing assignments and producing misinformation or even harmful, biased information. Holding the same view, Karthikeyan (2022) advocated that because of its single-option responses, relying solely on ChatGPT for answers may result in many drawbacks, including limited accuracy, the possibility of the generation of wrong answers, the limitation of critical and lateral thinking of the user, and the reduction of originality and the rise of bias. He also added that the overreliance on such technological tools will eventually result in decreased efficiency when it is unavailable. Finally, it was highlighted that ChatGPT has a great possibility of leading to the conduct of plagiarism, as the use of ChatGPT in generating texts will definitely limit the originality of any work (Song & Song, 2023). Therefore, it is often suggested that in order to get the best out of this tool and in order to avoid falling into the trap of these drawbacks, it is necessary to know how to use such AI model properly and know its capabilities and limitations (John, 2023).

4. CONCLUSION

This brief review of papers discussing the possible uses of ChatGPT reveals that huge attention is being put into discovering its potential in developing the writing skill. This can be attributed to the language-based nature of this AI model and its ability to generate humanlike answers. It can also be attributed to the struggle of language learners with the writing skill, as it is often described as a complex one. The findings of this paper can be summarized as follows:

- ChatGPT can function as a writing assistant that can provide personalized feedback that suits learners' needs and goals. At the same time, this AI model can be a great source of motivation and a developer of critical thinking.
- ChatGPT can be of a great importance in developing other language aspects that are central to the writing skill such as vocabulary and grammar. Several papers have revealed that GPT can be an effective Grammar tutor and a vocabulary developer.
- Although many of the documented research studies investigated the English language, this does not prevent ChatGPT from being used to promote better learning outcomes in other languages. This can be credited to the large base of data from different languages that was used when in its development.
- Besides functioning as a writing assistant, grammar checker, and vocabulary developer, there are other ways that ChatGPT can be used to promote the writing skill that still did not get the required body of research. This can mainly be ascribed to the fact that GPT as an AI model is still young and many of its capacities are still not discovered yet. Therefore, it is expected that with future research, many ways will be discovered, and new insights about its possible applications will take the lead.
- Despite ChatGPT's significant role as a writing facilitator, it raises serious concerns regarding originality, bias, and plagiarism. These can arise as a result of overreliance on this system and its misuse.

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