


# Chapter 11

## The Impact of Artificial Intelligence–Powered Writing Assistance Systems on Metacognitive Writing Strategies

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### **ABSTRACT**

*Writing plays an important role in the English as a foreign language (EFL) context, whereas metacognitive writing strategies help improve writing performance and self-regulation. AI-powered systems in writing may help learners manage their learning process and empower their metacognitive skills for writing. However, there has been a limited number of studies carried out on the impact of AI-powered writing assistance systems on metacognitive writing strategies. This study aims to examine the possible effects of integrating AI-powered writing tools on EFL learners' metacognitive writing strategies and to compare AI-powered tools and conventional activities regarding the use of metacognitive strategies. In a quasi-experimental design, the study was conducted with 40 EFL learners. The study used a background questionnaire and the Metacognitive Writing Strategies Scale to collect data. The findings revealed that there was no significant difference between the use of traditional activities and*

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## **INTRODUCTION**

Writing is of great importance in the EFL context for several reasons. First, it can help learners develop their logical thinking and cognition and enhance their capacity for creativity and communication (Liu, 2020), as it is seen as a tool for expressing creativity and self-discovery (Ghufron & Ermawati, 2018). Second, it can improve learners' ability to employ what they have learned, such as word knowledge, grammar, and structure (Yu, 2021), since it is a process of text construction. Third, it encourages learners to think, focus, and organize their thoughts and promotes the ability to summarize, analyze, and criticize (Altınay & Aydın, 2024; Rao, 2007). Fourth, it is an essential skill as it is examined in most standardized assessments, particularly those used to measure learners' academic progress and writing proficiency (Tan, 2011). Similarly, it is considered a common indicator of learners' competence (Wati, 2019). Last, it combines cognitive, social, and intercultural skills (Lin, 2016) since it requires learners to be aware of the content, writing process, target language, genre, and context they address (Hyland, 2003). It is equally important to develop an awareness of metacognition to achieve the benefits of writing.

Concerning the importance of writing skills, metacognitive writing strategies are crucial in the EFL context. First, as metacognitive writing strategies involve planning, monitoring, and evaluating, they can allow writers to manage, direct, regulate, and guide their writing (Al-Jarrah et al., 2018). Second, metacognitive strategies influence vocabulary, mechanics, content, and organization of the writing, which take their significant role beyond global levels (Dülger, 2011). Third, using metacognitive writing strategies leads learners to concentrate more on linguistic elements, task requirements, learning processes, text, accuracy, and discourse elements (Mekala et al., 2016). Fourth, they help learners adapt writing processes to changing demands (Goctu, 2017). Last, metacognitive writing strategies enable learners to reach their goals, have better command over their behavior and learning, and help them be more confident and well-planned in writing (N. Rahmat & İsmail, 2014).

On the other hand, learners might encounter some problems concerning metacognitive writing strategies. First, low achievers may not be able to implement metacognitive strategies in writing; instead, they might choose a practical but inefficient strategy (Cohen, 2011). Second, as metacognitive strategies include monitoring, planning, and evaluating, learners might be overwhelmed by the stages or monitor themselves too much; therefore, they may lose track of main task requirements while writing. Third, there are certain steps to teach metacognition: making learners aware of the importance of metacognition, empowering their knowledge of cognition,

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