



Impact Of Metacognitive Reading Strategies on Academic Reading Engagement Through Cognitive Load In Higher Education: The Moderating Role of ChatGPT

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Abstract

Academic reading presents significant challenges to students because of its volume and density. Recent advancements in artificial intelligence have provided valuable tools such as ChatGPT to mitigate the challenges posed by academic reading. This study investigates the role of metacognitive reading strategies (MRS) in reducing cognitive load (CL) and enhancing reading engagement (RE) while examining ChatGPT's moderating effect in these relationships. Using a mixed-methods quasi-experimental design, the study involved 340 undergraduate students divided into control and experimental groups. The experimental group received training on MRS alongside ChatGPT-assisted reading support. Quantitative data were analyzed using structural equation modeling, while qualitative data from ChatGPT interaction logs provided additional insights into students' reading strategies. Results confirmed that MRS positively influenced RE and negatively impacted CL, with CL partially mediating the relationship between MRS and RE. Furthermore, ChatGPT significantly moderated these relationships, amplifying the positive effects of MRS on RE and the negative impact of MRS on CL. These findings suggest that AI-assisted tools like ChatGPT can support academic reading by making strategic reading more accessible.

Keywords: ChatGPT, Academic reading, Metacognitive reading strategies, cognitive load, reading engagement