How does prompt engineering shape L2 academic writing: a self-regulation perspective

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Résumé

Academic writing is commonly viewed as a demanding task particularly for EFL (English as a foreign language) learners thus requires extensive self-regulation. With the recent penetration of generative artificial intelligence in academic writing, it is increasingly important for L2 writers to possess high levels of self-regulation in order to navigate the changing landscape. Using Zimmermann (2002)'s three-phase self-regulation framework and Hayes (2012)'s cognitive process of writing, the present study aims to examine Chinese university students' interactions with generative AI language models like ChatGPT in the process of L2 academic writing. In particular, it depicts how students engineer prompts for ChatGPT to produce desired outputs ("prompt engineering behaviors"), with the aim of identifying students' use of self-regulated writing strategies in an AI-mediated context. The existing studies that investigate prompting behaviors typically focus only on the actions taken by students (e.g. Woo, Guo and Susanto, 2023), without probing the underlying reasons for these behaviors particularly with a self-regulated learning perspective. This study adopts an exploratory mixed-methods research design. Qualitative Data will first be collected from twelve students to investigate the self-regulated strategies they use at different writing stages to craft prompts, evaluate output, and integrate prompts into their writing. Identification of the self-regulated writing strategies will be based on the nine items of the writing strategies for self-regulated learning questionnaire (Teng and Zhang, 2016) and enriched by qualitative content analysis (Schreier, 2014) from students' screenshot records and stimulated recall. These nine items will form the backbone of a self-developed questionnaire on self-regulated prompting in the second stage, which will be used to collect quantitative data from 300 students. This paper reports on the qualitative data findings.

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