

ChatGPT Usage Patterns in Essay Writing: A Case Study of Advanced, Intermediate, and Low-Proficiency English Learners

Zitong Liu¹, Zeting Yuan¹, Miao Jia¹, Yuhan Tong¹, You Su^{1*}

¹ Beijing University of Posts and Telecommunications

*suyou@bupt.edu.cn

Abstract: *This study examines how second language learners at different English proficiency levels interact with ChatGPT during argumentative essay writing. By analyzing three university students' writing processes and interviews, the research reveals distinct AI tool usage strategies: high-proficiency learners critically refine language and structure, medium-proficiency students adaptively generate content, and low-proficiency participants heavily rely on AI for argument development and translation. The findings underscore the importance of understanding AI's role in language learning and developing critical AI literacy.*

Keywords: academic writing, ChatGPT feedback, second language learners, students' usage patterns

1. Introduction

ChatGPT shows exceptional advantages in real-time text generalization and revision, which may help solve student essay writing challenges. Despite research on ChatGPT's use in revision (e.g., Fathi & Rahimi, 2024; Koltovskaia et al., 2024), few studies have explored how students' language proficiency influences their interaction with the tool. Therefore, this study investigated ChatGPT's feedback effects on students' essay writing across different language proficiency levels, exploring usage patterns among advanced, intermediate, and low-proficiency L2 learners.

2. Method

The study recruited three university students with varying English proficiency levels (IELTS scores ranging from 8.0 to 6.5, majoring in English, History, and E-commerce Engineering and Law) to investigate their ChatGPT usage strategies. The experiment comprised two phases: a 1-hour IELTS argumentative essay writing assisted by ChatGPT and a 40-minute Chinese stimulated recall interview. Data analysis examined students' writing process through video recordings and interviews, revealing AI tool usage strategies across proficiency levels.

3. Results

3.1. Learner F1: Advanced Proficiency, High-level Self-monitoring, with Critical Evaluation of AI Feedback.

High-proficiency participant demonstrated advanced self-monitoring of her interactions with ChatGPT, while critically evaluating AI's role in supporting academic writing. She did not copy and paste ChatGPT's feedback directly into her writing during the earlier stages. Only after completing the initial draft did she incorporate AI feedback directly into her writing. When asked for the rationale, she explained in the stimulated recall interview, "Directly copying and pasting in the content generalization stage would diminish self-motivation. Paraphrasing based on ChatGPT's feedback could enhance my language skills. However, in the revision stage, copying and pasting is more efficient. (F1-1)"

In the evaluation phase, she critically reflected on ChatGPT's role in academic writing. (F1-2).

F1-2: "The primary function of ChatGPT in academic writing is to assist with grammar and vocabulary improvement. Subsequently, I'm inclined to seek feedback from peers or instructors for further enhancement. Moreover, GPT can't critically assess my arguments, it accepts them without evaluating the internal coherence."

3.2. Learner F2: Med-level proficiency, Strategic Prompt Iteration, and ChatGPT-Centered Learning.

The medium-language-proficiency participant frequently refined her prompts according to ChatGPT's responses and primarily relied on ChatGPT's outputs as the main source of material.

Interestingly, when participant F2 did not receive her desired response, she repeatedly revised her prompts and specified her requirements (F2-1). Moreover, participant F2 primarily used the summary generated by ChatGPT as the main framework and arguments, incorporating minor revisions and personal supplementary content (F2-2).

F2-1: "When I didn't get my desired answer, I first revised my prompt because I believed that ChatGPT had the ability to provide the ideal feedback; I just needed to adjust my prompt. I needed to repeatedly emphasize the need for 'concise' in my prompts and explicitly limit the word count to receive my desired response."

F2-2: "Since the summary generated by ChatGPT aligned with my pre-existing viewpoints and the length of it was also acceptable. Therefore, I used it as the main body of my writing."

3.3. Learner M1: Low-proficiency, Heavy Dependence on ChatGPT Feedback Especially in Content Generalization

The low-proficiency participant showed heavy dependence on ChatGPT feedback. This reliance was so pronounced that he expressed disappointment when unable to incorporate more ChatGPT-generated arguments into his work (M1-1). Furthermore, participant M1 showed a distinct L1-mediated approach when engaging with ChatGPT during his writing. He first composed a Chinese version essay, utilizing L1 prompts to interact with ChatGPT. Finally, he used ChatGPT to translate his completed Chinese essay into English at the end of the writing process. When asked for the reason in using L1, he expressed in the stimulated recall interview, "Writing in English is less efficient for me than using Chinese. With Chinese, I can quickly assess whether the AI-generated content aligns with my views. Additionally, I frequently rely on AI for translation and have great trust in its translation capabilities (M1-2)."

M1-1: "The adoption rate for arguments should reach 50% or higher. For example, if ChatGPT provides me with four arguments, I should be able to use at least three."

4. Conclusion

This study provides valuable insights into the differentiated use of ChatGPT by students of varying English proficiency levels. The high-proficiency participant strategically used AI to refine her writing, maintaining a critical stance toward its outputs. The Medium-proficiency participant demonstrated adaptive strategies to maximize the benefits of AI, while the low-proficiency participant relied heavily on AI to overcome L2 challenges as an EFL learner.

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