

Enhancing Cyber Foreign Language Writing Education with ChatGPT

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Abstract

This study investigates an educational approach for enhancing foreign language writing skills in cyber university students by promoting the self-directed use of ChatGPT. Using a case study method, the research explores both the potential benefits and limitations of ChatGPT, a generative AI that can support writing tasks by providing real-time feedback, text summaries, and support for various writing forms, including essays and stories. While ChatGPT offers advantages such as reducing instructors' feedback workload and fostering improvements in students' writing, concerns arise regarding ChatGPT's provision of inaccurate information and its potential to encourage plagiarism if students submit ChatGPT-generated content without proper revision. To address challenges, this study proposes instructional strategies for creating effective prompts that can elicit meaningful feedback from ChatGPT, alongside methods for students to integrate and reflect upon this feedback throughout each stage of the writing process. These instructional strategies are designed to enhance students' independent learning and encourage the responsible use of ChatGPT in educational settings.

Keywords: *ChatGPT, Foreign language writing, Self-directed learning, Feedback, Writing process.*

1. Introduction

The recent rapid development of artificial intelligence (AI) technology is opening up new possibilities for foreign language learning. In particular, ChatGPT, a generative AI based on a large-scale language model, has the ability to understand and generate natural language, and it has been gaining attention as an effective tool for supporting foreign language writing education since its launch in 2021. Responding to prompts users enter, ChatGPT can provide feedback, summarize texts, or complete writing tasks such as essays, poems, and stories [1]. These functions have the great potential to help learners handle various challenges they may face during the writing process. A growing number of studies have shown that ChatGPT serves as a valuable supplementary educational tool. It can not only provide feedback that enhances learners' foreign language writing skills but also reduce teachers' workload for offering feedback [2]. As a result, more and more learners and teachers start to use ChatGPT to meet their own purposes.

However, as the use of ChatGPT increases, concerns are also being raised about its negative impact on educational aspects. ChatGPT can sometimes provide hallucinations, that is, information that does not actually exist or is inaccurate, and if learners accept this information without criticism, they risk learning incorrect information. Furthermore, if learners focus solely on outcomes rather than the learning process, using ChatGPT primarily as a Performance Support System for short-term problem solving, they may lose opportunities for in-depth, self-directed learning and fail to develop advanced writing skills in the long term

[3]. In the worst-case scenario, if students submit ChatGPT-generated text as it is, there is a risk of facing ethical issues such as plagiarism. Therefore, to overcome the potential educational drawbacks of ChatGPT and utilize it as a tool for long-term success in foreign language writing education, teachers need to provide explicit guidance that emphasizes the learning process over learning outcomes.

Recently, there has been a rapid increase in cyber university students using ChatGPT to complete foreign language writing assignments. However, most students primarily use ChatGPT as a quick solution to complete their assignments, and their reliance on ChatGPT continues to increase. The purpose of this study is to propose educational solutions to address issues in ChatGPT use among cyber university students. To this end, this study examines existing research findings on the educational use of ChatGPT and presents prompt-writing methods that will help students elicit useful feedback from ChatGPT for learning purposes. Additionally, it offers strategies for integrating ChatGPT feedback in a self-directed manner throughout each stage of the writing process. These strategies are designed to guide cyber learners in using ChatGPT as a tool that supports deeper learning and encourages independent skill development.

2. Prior Research

Several studies have confirmed that using ChatGPT as a tool for foreign language education provides various benefits in writing instruction. First, ChatGPT provides real-time feedback on grammar, vocabulary, expressions, logical development, and writing structure for the writing of learners based on natural language processing technology [4]. This allows learners to identify and correct problems in their writing, providing an opportunity to improve their writing skills. The feedback provided by ChatGPT promotes learners' self-directed learning and serves as a tool that supports more in-depth writing learning.

ChatGPT's feedback can sometimes be inaccurate or inappropriate, occasionally leading to hallucinations or an inability to recognize subtle grammatical nuances [5]. If learners accept such feedback without question, they risk acquiring incorrect information. However, with the continuous improvement of GPT models, the accuracy and reliability of ChatGPT's feedback have significantly increased. Consequently, more learners report satisfaction with ChatGPT's feedback, and some studies even suggest that ChatGPT's feedback is more detailed and easier to understand than teacher feedback [6]. This improvement in feedback quality highlights ChatGPT's potential as a reliable and accurate tool for evaluating learners' writing [7].

In addition, ChatGPT is effective in supplementing learners' weaknesses and improving their writing skills by providing personalized feedback tailored to the learners' needs and levels, and it also contributes to increasing learning motivation and efficiency [8]. However, to maximize the effect of such feedback, learners' ability to write clear and specific prompts is important, and it is essential to teach effective prompt writing methods, especially for beginners [9]. This will allow learners to receive better feedback, promote self-directed learning, and contribute to improving language skills and confidence in the long term.

However, some studies have pointed out the negative aspects of ChatGPT. For example, learners tend to over-rely on ChatGPT, especially beginner and intermediate learners, who often accept feedback without critically reviewing it [3]. Over-reliance on ChatGPT can diminish learners' critical thinking and self-directed learning abilities, ultimately hindering the long-term development of their writing skills. Plagiarism is also highlighted as a significant ethical challenge [10]. Some studies have noted that learners often submit writing assignment that ChatGPT has generated, which can result in plagiarism. This problem occurs more frequently when learners use ChatGPT only as a quick solution, rather than as a tool to develop creative thinking or linguistic expression [3].

Based on a synthesis of studies applying ChatGPT to foreign language writing education, it can be concluded that maximizing ChatGPT's educational effectiveness requires consideration of both its advantages and its limitations [11]. In addition, it is essential for learners to develop the ability to critically

evaluate ChatGPT's feedback, rather than relying on it excessively. To support this, teachers should guide learners in creating clear, specific prompts and emphasize the importance of actively analyzing feedback instead of passively accepting it. Strengthening ethical education to prevent plagiarism is also necessary, encouraging learners to utilize ChatGPT outputs responsibly. By continuously providing guidance on effective usage, teachers can help learners cultivate creative thinking and language expression skills. This approach will support learners in developing independent writing abilities and building confidence in the learning process.

3. Research Method

This study was conducted in an "Introduction to English Reading" course offered at a cyber university in Seoul. Students in this course were assigned weekly paragraph-writing tasks of approximately 200 words on topics related to the lectures. Most students had a high-beginner level of English proficiency and desired detailed feedback from the instructor. However, with over 100 students submitting assignments each week, it was challenging for a single instructor to provide individual feedback to all. Consequently, starting in 2020, students were permitted to use an AI-based grammar checker, Grammarly, to correct grammatical errors in their drafts. This led to a reduction in sentence-level errors, but there was little improvement in higher-level writing skills, such as paragraph structure, topic sentences, and content development.

By 2023, the overall quality of many student assignments had markedly improved, primarily due to the use of ChatGPT. However, despite the increase in assignment quality, students' actual writing abilities had not improved significantly. Many students accepted ChatGPT's feedback without critical evaluation or submitted the AI-edited text as it was, which indicates that ChatGPT's convenience inadvertently led students to become dependent on it, hindering self-directed learning.

To address the issues of students' self-directed learning hindrance and over-reliance on ChatGPT, this study employed a case study approach to develop strategies that would enable cyber university students to use ChatGPT more effectively as an educational tool. First, to explore why students primarily used ChatGPT for short-term problem-solving, students were emailed questions about their ChatGPT usage patterns, the prompts they commonly used, and how they incorporated ChatGPT feedback in their revision process. Based on these responses, a comparison was made between the initial drafts and final submissions of student assignments. Finally, by incorporating insights from prior research, the study developed instructional strategies designed to help cyber learners engage with ChatGPT in a self-directed manner that fosters in-depth learning.

4. Results

4.1 Cases of Using ChatGPT for Immediate Task Support

According to the students' responses to email inquiries, most students, except those over 50, actively used ChatGPT to improve the quality of their assignments. However, most of them were found to use ChatGPT more as a means to obtain a well-polished final draft rather than for genuine improvement in writing skills. Many students reported that they accepted ChatGPT's feedback as it was. The reasons for this high level of reliance on ChatGPT can largely be attributed to two factors: first, a high level of trust in the feedback provided by ChatGPT, and second, a lack of knowledge on how to craft prompts to obtain learning-focused feedback. The three most frequently used prompts when students requested feedback were identified as follows, highlighting their limited understanding of how to craft prompts for constructive feedback.

The first commonly used prompt was 'Correct the grammar.' As shown in Figure 1, when students submitted drafts with this prompt, ChatGPT immediately provided corrected sentences, addressing nearly all

grammatical errors it identified.

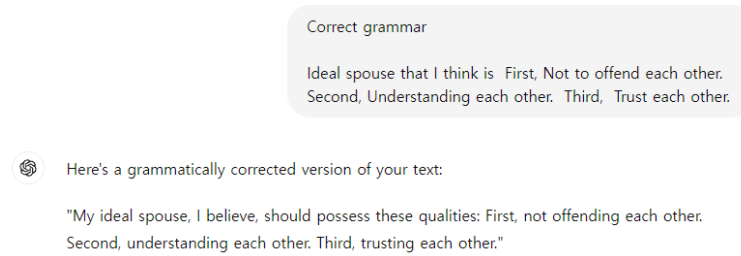


Figure 1. Prompt: Correct the grammar

Another commonly used prompt was ‘Make this paragraph better.’ As shown in Figure 2, ChatGPT revised the paragraph, enhancing its natural flow and logical coherence in response to this prompt.

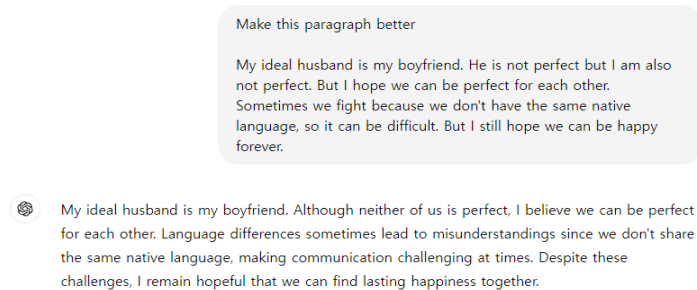


Figure 2. Prompt: Correct the grammar

Lastly, some students used a prompt like ‘Write a paragraph about [topic]’ by briefly presenting the topic, essentially asking ChatGPT to write the entire paragraph. As shown in Figure 3, ChatGPT promptly responded with a fully written paragraph.

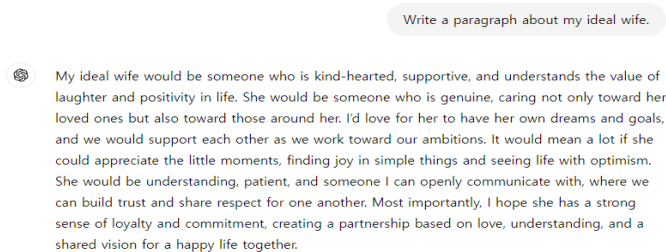


Figure 3. Prompt: Write a paragraph about [topic]

In all three cases, with just a simple prompt, ChatGPT improved the initial drafts to a level that exceeded the students' writing abilities or even created entirely new paragraphs. Many students, eager to enhance their drafts easily and achieve higher grades, accepted ChatGPT's output without making any changes or understanding the rationale behind its revisions. While this approach may efficiently fulfill immediate assignment requirements, it does not provide long-term educational benefits, leading to overreliance on ChatGPT. Particularly, students with limited English writing skills may miss the opportunity to develop their ability to independently evaluate and improve their own writing. To build these crucial skills, students need to learn how to obtain constructive feedback from ChatGPT. In response, this study developed guidance on

crafting effective prompts and offered strategies for students to effectively apply these prompts at each stage of the writing process.

4.2 Principles for Writing Effective Prompts

Studies on prompt engineering present various principles necessary for crafting effective prompts. Among these, four key principles have been selected to help learners at a high-beginner level in English obtain more effective feedback from ChatGPT. This study aims to guide learners to consider these four principles when formulating their prompts.

First, prompts should be written clearly and specifically. This aids ChatGPT in accurately understanding the learner's request, thereby providing precise feedback. Second, it is recommended to include questions that ask for reasons or explanations within the prompt. This approach allows learners to receive more than simple answers; they gain insight into the reasoning process, obtaining detailed explanations. Third, it is essential to request ChatGPT to offer more than one solution. By doing so, learners have the opportunity to compare and evaluate different approaches, broadening their perspective on how to improve their writing. Fourth, when multiple questions need to be included in a prompt, it is effective to present them step-by-step. Providing questions in a structured order helps ChatGPT generate more coherent responses, making it easier for learners to understand and incorporate the feedback.

Moreover, learners will be supported in using these four principles to independently analyze and incorporate ChatGPT feedback, ultimately enhancing their self-reliant writing skills. These prompt-crafting strategies are expected to play a vital role in helping learners view ChatGPT as a tool for in-depth learning rather than as a means for short-term problem-solving.

4.3 Integrating ChatGPT into the Writing Process

The writing process typically consists of four stages, as shown in Figure 4: prewriting, drafting, revising, and editing. Grammarly is primarily useful for the revising and editing stages, helping correct grammar, vocabulary choices, and sentence structure after drafting. In contrast, ChatGPT is equipped to provide feedback across all four stages of the writing process.



Figure 4. Writing process

However, for the cyber learners in this study, it is more educationally beneficial to limit ChatGPT use to the revising and editing stages. Since the assignment topics are not particularly challenging—such as ‘My Ideal Partner,’ a topic that draws from personal experiences—learners benefit from independently generating ideas and composing sentences during the prewriting and drafting stages. This allows them to develop basic writing skills without over-relying on ChatGPT.

The instruction on crafting prompts to receive constructive feedback from ChatGPT proceeds in the following steps. First, students are guided to enter prompts such as ‘Please answer only relevant to my question’ and ‘Adjust your response to my English level.’ This ensures ChatGPT tailors feedback optimally to the learner’s level. After drafting, learners are then provided with prompts to input at the revision stage. These revision-stage prompts request global feedback on overall structure, content, and logical consistency. The five prompts below are designed following effective prompt-crafting principles:

- Does my paragraph have a good topic sentence?

- Do the sentences in my paragraph make sense together, or should I change the order?
- Can you show some better ways to connect these two sentences?
- Which part of this paragraph might be hard for a reader to understand? Why?
- How can I make the ending of my paragraph clearer?

Learners are instructed to enter these prompts one by one, rather than all at once, to avoid an overwhelming amount of feedback that could reduce motivation. Additionally, they are encouraged to carefully read and assess each piece of feedback, deciding whether to accept or reject it rather than simply adopting it without thought. If any part of the feedback is unclear, learners are prompted to ask follow-up questions such as ‘I don’t understand. can you explain further?’ or ‘Can you provide a concrete example?’ They are then instructed to highlight any revisions made based on ChatGPT feedback to document differences between the draft and the revised version.

Once the revision stage is complete, the teacher provides prompts for the editing stage. Editing-stage prompts focus on local feedback concerning grammar and expression accuracy. The three prompts below are also based on effective prompt-crafting principles:

- Can you find any grammar mistakes in this paragraph and help me fix them??
- Can you identify any unclear sentences in this paragraph and suggest ways to make them clearer?
- Can you check for any small mistakes or typos in my paragraph?

In the editing stage, learners are also instructed to enter prompts one at a time to receive feedback. Given that ChatGPT’s feedback at this stage mainly involves grammatical and expression corrections, beginner-level learners may be inclined to accept all feedback without question. To counter this, learners are instructed to ask ChatGPT for explanations for any suggested corrections, as shown in Figure 5, to ensure they understand the rationale behind each change.

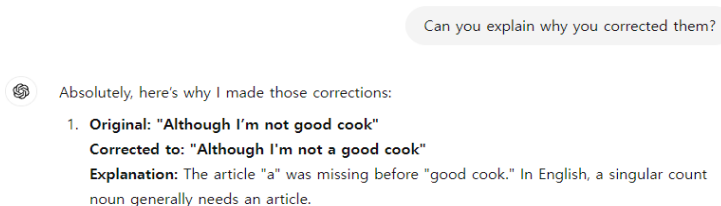


Figure 5. Explanations from ChatGPT

If learners find it difficult to comprehend feedback in English, they are encouraged to ask ChatGPT to translate it into Korean. Learners highlight changes based on ChatGPT’s feedback and document the differences between the draft and the revised and edited versions. The final assignment requires them to submit the initial draft, the revised draft, and the final edited version as separate files.

Repeatedly practicing this process is expected to enable learners to improve their creative thinking, self-expression skills, and accuracy of expression without becoming overly dependent on ChatGPT. Additionally, as teachers evaluate more polished assignments made possible through ChatGPT, they are able to reduce the burden of providing feedback and offer more effective guidance to students.

4. Conclusion

This study proposes an instructional approach to support cyber university students in maximizing the long-term advantages of ChatGPT in foreign language writing. If properly applied, this method aims to equip learners with strategies for crafting precise prompts to obtain targeted feedback from ChatGPT, fostering a more individualized learning experience. Additionally, by thoughtfully evaluating and independently incorporating ChatGPT’s feedback to improve their writing, students are expected to develop the ability to

utilize ChatGPT as a supportive tool not only for addressing immediate tasks but also as an invaluable resource for handling various writing challenges.

Despite these positive expectations regarding the ChatGPT utilization method proposed in this study, there are some limitations to acknowledge. Since the study mainly focused on the development of an effective teaching method, it did not verify the method's actual effectiveness in practice. Therefore, future research is needed to address the effectiveness of the teaching method presented in this study. Moreover, guidelines must be established to address ethical issues such as plagiarism. In addition to verifying the impact of ChatGPT in a cyber university setting, further research should explore its effectiveness in various other learning environments and conduct in-depth analysis of long-term learning outcomes to determine how to optimize the use of ChatGPT in foreign language writing education.

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