ChatGPT-integrated English Writing: Writing Strategies and Perceptions

Hyesook Park

(Kunsan National University)

Park, Hyesook. (2024). ChatGPT-integrated English writing: Writing strategies and perceptions. *The Linguistic Association of Korea Journal, 32*(3), 85-103. The study explored Korean university students' writing strategies and perceptions of ChatGPT-integrated English writing. Twenty-seven students participated in the study, and completed the survey, which included questions on English writing strategies, English writing anxiety, and perceptions of ChatGPT-integrated English writing class. In addition, interviews were conducted with seven participants to gain deeper insights. The results revealed that the participants frequently employed strategies such as contemplating the given topic before writing in English, utilizing translation applications when writing in English, ask for help from ChatGPT for revising. The study also indicated that the participants perceived ChatGPT as a valuable tool for English writing, benefiting them both cognitively and affectively. Moreover, the results of paired samples t-test demonstrated that ChatGPT contributed to reducing the participants' English writing anxiety. The interview results reaffirmed the benefits and challenges of incorporating ChatGPT in English writing. Based on the findings, the study suggests that ChatGPT be utilized as a writing assistant in EFL writing instruction, benefiting both EFL learners and teachers.

Key Words: ChatGPT, English writing, writing strategy, writing anxiety

1. Introduction

With the rapid development of artificial intelligence and information technology, more attention has been drawn to diverse AI technology-based learning environments. In particlular, ChatGPT's emergence and development have strongly impacted all aspects of education as well as human life globally, contributing to significant transformations in the

educational field. It has made it possible to enhance learning processes and provide substantial support to EFL students and teachers.

ChatGPT is a sophisticated language model developed by OpenAI, designed to understand and generate human-like text based on the input it receives. Recent developments in ChatGPT have significantly enhanced its capabilities and applications, particularly in the field of education. It can serve as a personalized tutor, offering explanations, answering questions, and providing guidance on a wide range of subjects. Recent research has suggested that ChatGPT has great potential for EFL learners as a learning aid for improving grammar, style, and structure, as well as for enhancing motivation and self-regulated learning (Hwang et al., 2023; Lee & Davis, 2024; Su et al, 2023; Woo et al, 2023). On the other hand, despite these potentials, it has been claimed that ChatGPT presents ethical and other issues which educators should consider for effective classroom use (Gayed et al., 2022; Jung, 2023; Liu et al., 2021). Concerns about academic integrity, such as using other writers' whole block of text without citation remain crucial for EFL educators.

So far research has mainly explored the potentials or affective effects of ChatGPT in EFL education, suggesting both positive and negative impacts for EFL students (Barrot, 2023; Hong, 2024; Hwang et al., 2023; Jung, 2023; Lee et al, 2023; Lee & Davis, 2024; Lim, 2024). However, there have been very few empirical studies on the integrative use of ChatGPT in the EFL writing classroom (Choi, 2023; Jeong, 2024; Liu et al., 2021; Woo et al., 2023; Shin, 2023), let alone those investigating writing strategy use and writing anxiety in such integration. Therefore,, this study aimed to incorporate ChatGPT into English writing instruction as a supportive feedback tool; and to examine the writing strategies employed by Korean English students in ChatGPT-integrated English writing context, as well as their perceptions of such integration.

2. Literature Review

Since the emergence of ChatGPT, research has explored its potential in assisting students with the writing process, including planning, drafting, revising, and proofreading (Barrot, 2023; Cao & Zhong, 2023; Hwang et al., 2023; Hwang & Cheng, 2023; Lee et al., 2023; Su et al., 2023). For instance, Lee, Kim, & Jeon (2023) compared the feedback provided by ChatGPT, native English teachers, and Korean English teachers. They found no significant difference between ChatGPT and English teachers in terms of evaluation

and feedback on students' English writing. Interestingly, ChatGPT even made more error corrections than human English teachers. Other studies have surveyed students' experiences with ChatGPT to examine its impact on EFL students' writing performance and writing processes (Choi, 2023; Jeong, 2024; Lee, 2023; Liu et al., 2021; Shin, 2023; Woo et al., 2023). For example, Liu et al. (2021) investigated the effects of reflective thinking promotion in AI-based English writing environments. The results showed that the reflective thinking mechanism improved students' writing performance, self-efficacy, self-regulated learning, and cognitive load, demonstrating the positive effects of reflective thinking promotion in AI-based EFL writing instruction. More recently, Woo et al. (2023) examined Hong Kong secondary EFL students' motivation to learn, cognitive load, and satisfaction with the ChatGPT writing process. The findings revealed that while ChatGPT increased students' motivation to learn and satisfaction, the increments were not statistically significant.

In the Korean educational setting, several studies have implemented ChatGPT in English writing classes. Choi (2023) investigated Korean university students' perceptions of using ChatGPT in English writing. The findings revealed that students viewed all types of feedback, including content, organization, and language use, as cognitively beneficial. They also found that the feedback positively impacted their excitement, time management, confidence, and willingness to engage. However, concerns were raised about ChatGPT's inaccuracies, ethical issues such as authorship, and the risks of overreliance. Similarly, Shin (2023) examined the effects of using ChatGPT during the planning and revising stages of writing with pre-service teachers. The findings aligned with Choi (2023), indicating that ChatGPT can play a useful role in assisting writers with generating ideas, organizing their thoughts, and revising their drafts. Furthermore, Jeong (2024) compared the writings of a control group and an experimental group after a 10-week treatment. The study indicated that the ChatGPT group significantly improved their writing skills compared to the traditional group and that the students using ChatGPT experienced psychological and emotional satisfaction.

Likewise, while ChatGPT has the potential to be an effective tutor and source of language input, there remain concerns about its negative impact on self-directed English writing and academic integrity. ChatGPT could be beneficially served in EFL writing. It can be used to generate ideas on the topic, and suggestions and explanations on the specific writing issues. Besides, it provides immediate responses to students' questions on their writing, helping them understand and correct their mistakes in real-time including various aspects of writing, from grammar and punctuation to style, structure. However,

ChatGPT, as a writing tool, can simultaneously present challenges for EFL teachers and learners (Hwang et al., 2023; Jung, 2023). As research has suggested, students might become overly dependent on ChatGPT, which is likely to hinder the development of their own English writing skills and creative thinking abilities. Furthermore, it may prevent EFL learners from uncovering the pleasure of using language to express their emotions and thought. Regarding academic integrity, there are concerns about ethical issues such as plagiarism, as students might use ChatGPT to produce entire essays or assignments without proper acknowledgment or learning from the process.

However, so far, there has been insufficient empirical research and evidence on the impact of ChatGPT-integrated English writing on students' strategy use and their perceptions of English writing with ChatGPT. Thus, to fill the gap, this study was designed to address the following research questions:

1. What writing strategies do the participants use in ChatGPT-integrated English writing environment?
2. How are the participants' perceptions of ChatGPT-integrated English writing?
3. Is the ChatGPT-integrated English writing effective in reducing participants' English writing anxiety?

3. Method

3.1. Participants

The study involved 27 university students enrolled in an English writing class during the spring semester of 2024. The participants were freshmen with overall English proficiency ranging from lower to mid-level, corresponding to levels 2 to 6 on the CSAT English scale. Most participants self-assessed their English writing skills as "very low" or "low," with only 5 students (19.2%) rating their skills as intermediate, and just one student rating his/her writing skill as "high." Informal communication revealed that the participants were already well-acquainted with and frequently used translation apps like Papago, but had little to no experience actively using ChatGPT for writing in English.

3.2. Instruments

The instruments used in the present study included questionnaires of English writing

strategy, anxiety, and experiences with ChatGPT, as well as interviews. The questionnaire of English writing strategy consisted of 19 items, including statements such as "When writing in English, I think in Korean first and then write in English" and "When writing in English, I use an online Korean-English dictionary," derived from previous studies (Kim, 2016; Park, 2019). The Cronbach's alpha value for this questionnaire was .78. The anxiety questionnaire was adapted from Cheng (2004), with a total of 6 items comprising two dimensions: writing anxiety, and evaluation anxiety. Examples of statements were "I am very anxious when I write English compositions" and "I feel worried and uneasy if I know someone assesses my composition." The Cronbach's alpha value was .94 for the pre-test and .93 for the post-test. The questionnaire of ChatGPT experiences was created based on previous studies (Choi, 2023; Shin, 2023), which consisted of 10 items, such as "I am satisfied with the corrective feedback from ChatGPT" and "Using ChatGPT has reduced my fear of English writing." The Cronbach's alpha value of the questionnaire was .94. Additionally, interviews were designed to obtain direct and supplementary information on the participants' responses to the ChatGPT-integrated English writing class.

Together, these instruments were intended to offer a thorough insight into the participants' English writing strategies, their levels of anxiety related to writing, and their experiences with using ChatGPT in their writing process.

3.3. Teaching Procedures

The participants completed four English composition assignments throughout the semester, as outlined in Table 1. Initially, the instructor guided all students to install the free version of ChatGPT 3.5 on their laptops or smartphones, along with the EditGPT extension. After confirming successful installation, the composition process followed these steps:

Table 1. English Writing Process

Step 1	Sample composition reading and writing workshop
Step 2	1st draft: Participants' original version
Step 3	2nd draft: Revising with Peer or Self feedback
Step 4	Final draft: Editing with ChatGPT feedback
Step 5	Upload the 3 files

In the first step, students read sample compositions with analyzing the contents,

organization, vocabulary, and grammar. In the second step, they wrote out their own composition on the given topic, including brainstorming, outlining, writing a topic sentence, supporting sentences and concluding sentences. Participants then exchanged their drafts with partners to receive peer feedback, which was based on the guidelines provided in the course materials. This feedback process focused on content, paragraph structure, and grammar. After receiving peer feedback, students used EditGPT to proofread their drafts by inputting their text along with the message "Proofread this." After receiving proofreading feedback from EditGPT, students made appropriate revisions to create their final versions. They uploaded their original draft, the EditGPT feedback, and their final revised version to the course's EClass. When writing their final drafts, students highlighted the parts where they incorporated EditGPT's feedback to encourage reflection and learning from their writing process. Through this process, participants completed four English compositions on the topics of a self-introduction, my favorite food, an unforgettable memory, and festivals (Figure 1).
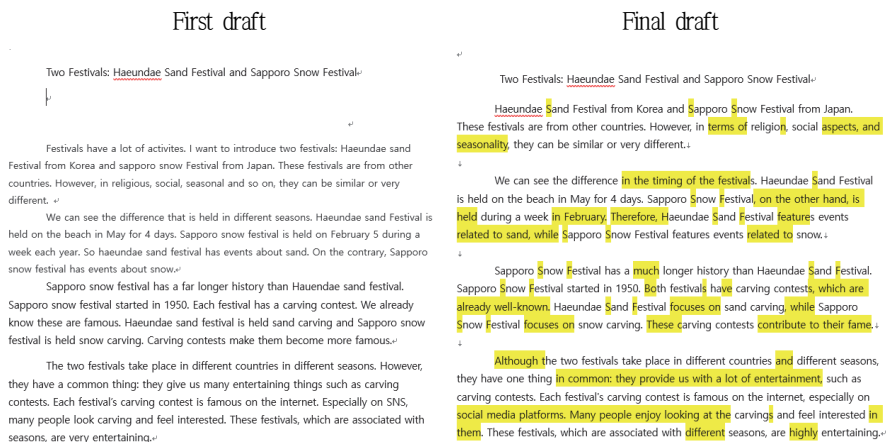

Figure 1. Examples of Drafts

3.4. Data Collection and Analysis

Students participated in the study voluntarily. They were informed about the purpose of the questionnaire surveys in advance and were asked to complete them upon agreement. Online questionnaire surveys were administered at the beginning and end of the writing course, including measures of English writing anxiety, English writing strategies, and

perceptions of writing with ChatGPT, using a 5-point Likert scale ranging from "extremely disagree" (=1) to "extremely agree" (=5).

At the beginning of the writing course, participants completed a pre-survey that gathered information about their background information and English writing anxiety before performing the English composition tasks. At the end of the course after completing the four English composition tasks, they completed the English writing anxiety survey again, along with questionnaires on English writing strategies and their experiences with ChatGPT (see Appendix 1).

Additionally, seven students were individually invited for interviews, lasting about 20-30 minutes, after the course concluded. These interviews aimed to gather in-depth, qualitative data on their experiences and perceptions of using ChatGPT in their English writing process.

The survey data were analyzed using descriptive statistics, and paired samples t-test to compare pre- and post-course measures. The audio-recorded interviews were transcribed, reviewed, and analyzed to extract themes and insights regarding the participants' experiences and the effectiveness of the ChatGPT-integrated writing instruction.

4. Results and Discussion

4.1. Participants' Writing Strategies

Table 2 displays the descriptive statistics of the participants' responses to how frequently they employ the writing strategies. The items "I think about the given topic before writing an English composition" and "I read what I have written after writing my composition" had the highest mean scores, 4.04 and 4.11, respectively. This suggests that they generally have a time for pondering over the topic before beginning to write an English composition, and that they review their writing upon completion. Items 4, 5, 6, and 7 pertained to the use of their native language, Korean, and the target language, English, when writing in English. The statement, "I briefly write down what I want to write in Korean" received an average rating of 3.67 from the participants. In contrast, "I write the whole text in Korean first and then translate it into English" had an average rating of 3.07. Additionally, "I think in Korean first and then write in English" scored 3.78,

while "I write directly in English" averaged 3.00. These indicate that, on average, participants tend to use the strategy of briefly writing in Korean before switching to English.

Table 2. Descriptive Statistics of Writing Strategy

Items	N	Mean	SD
Before writing an English compositon, I. I make an overall plan.	27	3.33	.88
2. I think about the given topic.	27	4.04	.76
3. I look into the model texts provided by the instructor.	27	3.48	1.19
4. I briefly write down what I want to write in Korean.	27	3.67	1.00
When writing an English composition, 5. I write the whole text in Korean first and then translate it into English.	27	3.07	1.27
6. I think in Korean first and then write in English	27	3.78	.89
7. I write directly in English.	27	3.00	.92
8. I use an online Korean-English dictionary.	27	3.70	.99
9. I use an online English–Korean dictionary.	27	3.44	1.05
10. I use translation apps such as Papago.	27	3.93	.92
11. I use ChatGPT.	27	3.30	1.20
12. I ask someone for help when I encounter difficulties.	27	2.89	1.05
After I write my composition, 13. I compare classmates' English compositions with mine.	27	2.89	1.05
14. I read what I have written.	27	4.11	.75
When I revise my composition 15. I ask someone to read and seek their feedback.		2.63	1.12
16. I ask for ChatGPT's feedback.	27	3.72	1.20
17. I almost adopt all the feedback from ChatGPT.	27	3.44	1.08
18. I try to check and learn from my mistakes based on the feedback from chatGPT.	27	3.59	.84
19. I encourage myself and try to build confidence to complete my English.	27	3.48	.75

The use of various online tools by participants revealed interesting trends. The statements "I use an online Korean-English dictionary" and "I use an online English-Korean dictionary" received average ratings of 3.70 and 3.44, respectively. "I use translation apps such as Papago" had a higher mean rating of 3.93, while "I use ChatGPT" averaged

3.30. These findings suggest that participants more frequently use translation applications when writing in English and turn to ChatGPT for revising their work.

As shown in Table 2, social writing strategies, including items 12, 13, and 15, had lower average ratings of 2.89, 2.89, and 2.63, respectively. This may be because participants lack peers or others around them to seek help from and share their English writing problems with. In this context, ChatGPT could serve as a valuable writing counselor for them. On the other hand, the statement "I encourage myself and try to build confidence to complete my English composition," an affective strategy, had a higher average rating of 3.48 compared to social strategies.

Based on the results, it can be deduced that students generally prefer to write a preliminary draft in their native Korean before starting to write in English, rather than writing exclusively in Korean or directly in English. They also tend to use translation applications like Papago more frequently in comparison to online dictionary and ChatGPT when they write an English composition. In post-drafting, they typically undertake a review their own work, and there is a preference for soliciting feedback from ChatGPT rather than seeking suggestions from other individuals.

4.2. Participants' Perceptions of Writing with ChatGPT

Table 3 displays the results of descriptive statistics of the participants' perceptions of writing with ChatGPT. Among the items, the response to the statement, "ChatGPT improved the quality of my English composition," had the highest average score of 4.00. Next, overall satisfaction with ChatGPT's feedback and the desire to continue using ChatGPT received higher average scores of 3.80 and 3.96, respectively. Then, for the items of "ChatGPT reduced my fear of writing in English" and "ChatGPT alleviated the difficulties of writing in English" had the same average score of 3.72, respectively, indicating that they perceived ChatGPT as a good assistant, emotionally and cognitively. Responses to "ChatGPT helped improve my confidence in English writing" averaged 3.48, which was lower compared to the responses about reducing fear and difficulties. On the other hand, the average score for the statement of "I consider the writing completed using ChatGPT to be my own composition" was 2.84, reflecting a lower sense of ownership over their writing.

Table 3. Descriptive Statistics of Participants' Perceptions

	Minimum	Maximum	Mean	SD
Satisfaction with feedback	2	5	3.80	.816
Fear reduction	2	5	3.72	.891
Difficulties alleviation	2	5	3.72	.792
Confidence increase	1	5	3.48	1.005
Quality enhancement	2	5	4.00	.816
English improvement	2	5	3.48	.823
Ownership	1	5	2.84	.943
Future use	1	5	3.96	.935

Regarding the question about what aspect of corrective feedback from ChatGPT participants were most satisfied with, 14 participants (56%) indicated grammar. Expressions ranked second with 20%, followed by vocabulary at 16%, and overall sentence structure at 8%. In response to the question, "What aspect do you most seek assistance with from ChatGPT?" 10 participants (40%) identified awkward English expressions. Grammar was the second most common response with 6 participants (24%), followed by topic contents at 16%, sentence structure at 12%, and both paragraph organization and vocabulary at 1% respectively.

English writing anxiety was further examined by analyzing the pre-test and post-test data. A normality test was conducted to determine if the data followed a normal distribution, a requirement for a paired samples t-test. The Shapiro-Wilk test results indicated that the data was suitable for a t-test, with significance levels greater than 0.05.

Table 4. The Results of Normality test

	Statistic	df	Sig.
Pre EWA	.945	22	.248
Post EWA	.939	22	.193
Pre EA	.943	22	.231
Post EA	.977	22	.872
Pre Total	.965	22	.588
Post Total	.955	22	.387

EWA: English Writing Anxiety   EA: Evaluation Anxiety

As shown in Table 5, the results of the paired sample t-test indicate a statistically significant difference between the pre-test and post-test means of English writing anxiety. These findings suggest that participants experienced a substantial reduction in English writing anxiety through the ChatGPT-integrated lessons, showing significant decreases in both English writing anxiety and evaluation anxiety. This implies that integrating ChatGPT can effectively mitigate the negative emotions associated with learning English writing. As a matter of fact, previous studies have shown that learners' writing anxiety negatively impacts their writing performance (Choi, 2024; Jeon, 2018; Lui & Ni, 2015; Yoon, 2024). Based on the findings of previous and the present studies, it is suggested that ChatGPT integration can help reduce learners' English writing anxiety, thereby leading to more effective writing practice and improved performance.

Table 5. Results of Paired Samples t-test

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std Error Mean	95% Confidence Interval of Difference				
				Lower	Upper			
Pre EWA – Post EWA	.42424	.87397	.18633	.03674	.81174	2.277	21	.033
Pre EA – Post EA	.39773	.83331	.17766	.02826	.76719	2.239	21	.036
Pre Total Post Total	.39520	.63678	.13576	.11287	.67754	2.911	21	.008

4.3. Interviews

Seven students were interviewed as a focus group to delve into their perceptions of English writing with ChatGPT. They generally highlighted ChatGPT's positive features in writing in English, along with some negative ones. Table 6 summarizes what the interviewees commented on English writing with ChatGPT.

Table 6. The Summary of Comments

Positive perceptions	Negative perceptions
An exciting useful tool for learning English writing	Risk of excessive reliance
Immediate and quick feedback to writing problems	Feedback reliability
Convenient access: able to receive suggestions anytime anywhere	Suppressing personal writing style
Alleviating worries about English writing	Weakening thinking abilities
Improving the quality of English compositions	Diminishing the motivation to learn English writing skills

For example, Ju, a student of higher English proficiency than other students, expressed a slight concern of ChatGPT's impact on creative writing:

"It's good when ChatGPT corrects grammar, but not so much when it changes my English expressions. It often changes the words or phrases I frequently use, making my writing seem stiff and formal. It feels like the writing becomes boring..."

Ju felt that his personal writing style was being compromised. Similarly, Tae remarked on the potential negative impacts of ChatGPT on autonomous learning abilities and its reliability:

"Generally, I don't use ChatGPT or other translation apps because I believe they don't improve my English writing skills. Instead, I think they might hinder the development of my writing skills and critical thinking abilities. . . Although I receive feedback from EditGPT and don't accept all of it, I sometimes have doubts about ChatGPT's feedback."

Tae demonstrated a strong ability to self-regulate and make informed choices in learning English. He believed that writing in his own English was crucial for improvement. While he found ChatGPT's feedback helpful, he did not entirely trust it.

Woo and Pyeong showed different opinions on writing with ChatGPT. Woo expressed concerns about the potential over-reliance on ChatGPT and the impact on her motivation

to learn English writing:

"I often ask GPT about things I don't know while writing, and so I'm worried that I might be relying on it too much. This may decrease my motivation to learn writing in English. That's my biggest concern. . . Quick feedback to my writing problems anytime, anywhere was so cool. This helped me identify the problems in my writing more clearly. I review the feedback and selectively incorporate the appropriate parts into my writing."

Woo highlighted the importance of reflection on feedback and critical thinking, despite her concerns about dependence on ChatGPT:

On the other hand, Pyeong perceived ChatGPT as an exhilirating high-tech learning tool:

"With GPT's help, writing in English turned out to be more enjoyable than I initially thought. I found EditGPT particularly impressive because it provided immediate feedback when I submitted my drafts. . . . This helped me ease my worries about English writing, improving my compositions. I didn't adopt difficult words or expressions; instead, I incorporated feedback that matched my intentions and writing style."

Pyeong appreciated the immediate feedback and found that it made English writing more enjoyable and less worrisome.

Overall, students who participated in the interview responded that using ChatGPT in their English composition was novel and interesting. They positively evaluated the convenience and accessibility of receiving immediate feedback without time and place constraints. On the other hand, some predicted that there might be excessive reliance on ChatGPT, potentially diminishing the necessity of learning English. Additionally, there were concerns that the students' own critical thinking might weaken as ChatGPT assists with many aspects of their work. Conversely, some students who desired their own unique English writing style expressed dissatisfaction or distrust toward ChatGPT's feedback. Other students expressed that they were able to more clearly identify the

mistakes in their writing, through writing the final revised drafts from ChatGPT's feedback, which positively contributed to their English learning.

5. Conclusion and Implications

The present study explored EFL students' writing strategies and perceptions of learning to write with ChatGPT through questionnaire surveys and interviews. The findings of English writing strategies showed that the participants wrote their English compositions by utilizing a variety of resources such as their native language, Korean, online dictionaries, AI translation tools, and ChatGPT.

The findings of the participants' perceptions of learning to write with ChatGPT demonstrated the potentials of ChatGPT in supporting EFL students' writing. Most students expressed ChatGPT was helpful in writing in English, perceiving ChatGPT's feedback as satisfactory. In addition, they indicated a desire to use ChatGPT in the future. Above all, as the results of paired t-test revealed there was a significant difference between pre-test and post-test, learn to write with ChatGPT was found to be substantially effective in decreasing the paricipants' anxiety about writing an English composition. The interviews with some participants affirmed the findings of previous studies. They definitely agreed on ChatGPT's utility as an assistant writing tool, and at the same time they were concerned about potential over-dependence on ChatGPT and diminishing their motivation to learn English writing skills.

The findings of the present study provides practical insights for EFL writing education. Primarily, the study enables teachers and educators to better understand how ChatGPT can be effectively integrated into EFL writing classroom. In particular, it highlights the potential of ChatGPT to significantly reduce students' anxiety and difficulty, while increasing their confidence in writing in English. However, without a well-prepared class design by the teacher, there is a risk of students becoming overly reliant on ChatGPT. As a solution, as in the present study, ChatGPT can be integrated as a writing assistant such as a proofreader in the writing process rather than a primary source of writing instruction. In such educational environment, students can be encouraged to have a responsibility for writing their own drafts through critically evaluating the suggestions and feedback provided by ChatGPT, enhancing the overall quality and effectiveness of English writing instruction.

Lastly, the study has its limitations. The number of participants was relatively small, so the findings should be interpreted and generalized with caution. Another limitation involves self-reported survey, which may not fully capture subjects' perceptions, despite the inclusion of interviews. Thus, future research could involve a diverse and large sample of subjects using different methods, such as observations or writing learning journals, to further validate the findings.

References

Barrot, J. S. (2023). Using ChatGPT for second language writing: Pitfalls and potentials. *Assessing Writing*, *57*, 100745. DOI: 10.1016/j.asw.2023.100745

Cao, S., & Zhong, L. (2023). Exploring the effectiveness of ChatGPT-based feedback compared with teacher feedback and self-feedback: Evidence from Chinese to English translation (arXiv:2309.01645). arXiv. DOI: 10.48550/arXiv.2309.01645

Chan, C. K., & Hu, W. (2023). Students' Voices on Generative AI: Perceptions, Benefits, and Challenges in Higher Education. *International Journal of Educational Technology in Higher Education*, *20*(43). DOI: 10.1186/s41239-023-00411-8

Choi, J. G. (2023). A study of Korean college students' perceptions on English writing anxiety. *Foreign Languages Education,* *30*(4), 25-45.

Choi, Y. (2023). Exploring perceptions of Korean pre-service English teahcers on using ChatGPT in the English writing process. *Journal of the Korea English Education Society,* *22*(2), 243-262.

Hong, K. H. (2024). Exploring Korean EFL learners' interest in using ChatGPT for their English language learning. *English Language Teaching*, *36*(1), 25-36.

Hwang, G.-J., & Chen, N.-S. (2023). Editorial Position Paper: Exploring the Potential of Generative Artificial Intelligence in Education: Applications, Challenges, and Future Research Directions. *Educational Technology & Society,* *26*(2). https://www.jstor.org/stable/48720991

Hwang, K.-H., Heywood, D., & Carrier, J. (2023). The implementation of ChatGPT-assisted writing instruction in ESL/EFL classrooms. *New Korean Journal of English Language and Literature,* *65*(3), 83-106.

Im, K. (2024). Research on English teaching and learning methods using ChatGPT. *The Mirae Journal of English Language and Literature,* *29*(2), 101-126.

Jeon, E. Y. (2018). The effect of learner-centered EFL writing instruction on Korean university students' writing anxiety and perception. *TESOL International Journal, 13*(3), 100-112.

Jeong, N.-S. (2024). Exploring the effects of ChatGPT on university students' English writing skills and their perceptions. *Multimedia-Assisted Language Learning, 27*(1), 78-95.

Jung, H. (2023). Navigating ChatGPT's challenges to English writing education: Finding a path forward. *The Journal of Modern British & American Language & Literature, 41*(3), 239-261.

Kim, J. Y. (2016). English writing strategies of Korean university students by English proficiency levels. *The Journal of Studies in Language, 32*(1), 47-74.

Lee, H., Kim, T., & Jeon, J. (2023). A study of evaluation and feedback analysis of Korean English instructors, native English instructors, and ChatGPT on college student' English writing. *The Journal of Modern British & American Language & Literature, 41*(4), 247-270.

Lee, Y.-J., & Davis, R. O. (2024). A case study of implementing ChatGPT for university's general English courses: Focuing on English language learners' self-regulated learning and grit. *Secondary English Education, 17*(3), 73-87.

Liu, C., Hou, J., Tu Y.-F., Wang Y., & Hwang, G.-J. (2021). Incorporating a reflective thinking promoting mechanism into artificial intelligence-supported English writing environments. *Interactive Learning Environments*, DOI: 10.1080/10494820.2021.201 2812

Liu, M., & Ni, H. (2015). Chinese university EFL learners' foreign language writing anxiety: Pattern, effect and causes. *English Language Teaching, 8*(3), 46-58. DOI: 10.5539/elt.v8n3p46

Pae, J.-K. (2007). Wiki-based English writing: Its effect on English writing proficiency and anxiety and Korean learners' perceptions. *Multimedia-Assisted Language Learning, 10*(1), 81-105.

Park, E. H. (2019). Exploring the writing strategies perceived and actually used by less experienced students in English writing through surveys and the think-aloud method observation. *Studies in Foreign Language Education, 33*(2), 281-300.

Shin, D. (2023). Utilizing ChatGPT in guided writing activities. *Journal of the Korea English Education Society, 22*(2), 197-217.

Su, Y., Lin, Y., & Lai, C. (2023). Collaborating with ChatGPT in argumentative writing classrooms. *Assessing Writing, 57*, 100752. DOI: 10.1016/j.asw. 2023.100752

Woo, D. J., Wang, D., Guo, K., & Susanto, H. (2024). Teaching EFL students to write with ChatGPT: Students' motivation to learn, cognitive load, and satisfaction with the learning process. *Education and Information Technologies.* DOI: 10.1007/s10639-024-12819-4

Yoon, H. H. (2024). An Investigation of EFL College Students' L2 Academic Writing Anxiety. *Studies in British and American Language and Literature, 152,* 241-269.

Appendix

English Writing Strategy Questionnaire

Before writing in English,
1. I make a plan for the writing process.
2. I think about the given topic.
3. I look into the model texts provided by the instructor.
4. I briefly write down what I want to say in Korean.
When writing an English composition,
5. I write the whole text in Korean first and then translate it into English
6. I think in Korean first and then write in English.
7. I write directly in English.
8. I use an online Korean-English dictionary.
9. I use an online English-Korean dictionary.
10. I use translation tools (such as Papago).
11. I use ChatGPT.
12. I ask someone for help, when I encounter difficulties.
After finishing writing in English,
13. I compare my writing with my friends' writings.
14. I read what I have written.
When I revise my composition,
15. I ask someone to read and seek their feedback.
16. I ask for ChatGPT's feedback.
17. I almost adopt all the feedback form ChatGPT.
18. I try to check and learn from my mistakes based on feedback from ChatGPT.
19. I encourage myself and try to build confidence.

English Writing Anxiety Questionnaire

1. When I write English compositions, I'm very anxious.
2. My mind often goes blank when I work on an English composition.
3. I feel nervous and panicked when I write English compositions unexpectedly.
4. I feel worried and uneasy if I know someone assess my composition.

5. I worry that my English compositions are a lot worse than others'.

6. I worry about getting a very poor grade on my English composition.

ChatGPT Use Questionnaire

1. I am satisfied with the feedback from ChatGPT.

2. Using ChatGPT reduced my fear of writing in English.

3. Using ChatGPT alleviated the difficulties of writing in English.

4. Using ChatGPT increased my confidence in writing in English.

5. Using ChatGPT improved the quality of my English writing.

6. Using ChatGPT helped improve my English proficiency.

7. I consider the writing completed using ChatGPT to be my own work.

8. I would like to continue using ChatGPT in the future.

9. What aspect of corrective feedback were you most satisfied with?

10. What aspect do you most seek assistance with from ChatGPT?

Hyesook Park

Professor

Department of English Language and Literature

College of Humanities Contents Convergence, Kunsan National University

558 Daehak-ro, Gunsan-si, Jeollabuk-do, 54150 Korea

Phone: +82-63-469-4332

Email: sapark@kunsan.ac.k