



ChatGPT-Assisted Writing: Learners' Perceptions of AI Feedback and Influencing Factors

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ABSTRACT

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This study explored the effects of using ChatGPT 3.5 (ChatGPT) on the attitudes and perceptions of English writing by 17 intermediate and 17 advanced university students. Paired *t*-test results for pre- and post-surveys found that both groups experienced a significant increase (intermediate: $t=-3.392$, $p=.004$; advanced: $t=-3.050$, $p=.008$) in confidence towards English. ChatGPT was found to be beneficial for creating ideas, strengthening vocabulary, and enhancing writing abilities by the two groups. While advanced students noted ChatGPT's usefulness in organizing ideas and conveying complicated concepts with an emphasis on language proficiency, several intermediate students stated its importance for motivation, and grammar improvement. Both groups expressed concerns over dependency on ChatGPT and production of erroneous data. Six intermediate students reported no detrimental feelings toward use of ChatGPT and only two students from the advanced class reported no detrimental effect. Findings from the research demonstrated that although English language learners of varying proficiency levels share some similar opinions about ChatGPT, there are also significant distinctions between the two groups in this study. To properly employ AI chatbots as writing aids, instructors should take into account the competency levels of their students. They should also customize strategies to match the unique needs of learners, so that goals can be attained at every step in the writing process.

KEYWORDS

ChatGPT, English writing, AI feedback, perception, factors, university students, English proficiency, AI-assisted learning

1. Introduction

The educational climate teaching and learning foreign languages is in the midst of a transformation given the evolution of artificial intelligence as well as developments in the area of information and communication technology. Machines are commonly used as an additional instrument for foreign language acquisition, interpretation, and translation due to their improving precision due to the integration of AI technology (Kim 2022, Kim and Han 2021, Lee and Cha 2023, Tsai 2019). In particular, advancements in machine translation have contributed to the enhancement of language learning access and the development of learner's language acquisition (Lee and Cha 2019). Still, the main objective of machine translation has been to convert user-provided source sentences into a target language. Although voice technology is often offered as a supplement to the translated text, it has also been limited by the source information provided by the speaker.

AI ChatGPT 3.5 released in 2022 enables users to take greater control over the interaction with machines through the ability to format and modify AI prompts. This produces significant improvements in foreign language learning and opens new educational opportunities through the use of smart machines rather than simple translation. The steps involved with developing an English essay often include choosing a topic, brainstorming, organizing ideas, first draft, second draft and final version tools (Folse et al. 2023). Learners have tasks to do at every stage of this procedure. When AI chatbots are employed as writing tools for English composition, students are able to get personalized, real-time insights based on their unique requirements.

In this regard, the AI chatbot possesses the ability to align with the students' interests and suggest a variety of ideas during the topic selection phase. It also has the potential to broaden and arrange different ideas during the brainstorming stage and assist with creating an orderly and systematic outline during the organizing phase. It also assists by providing feedback on grammar, vocabulary, and sentence structure during the draft and secondary writing phases. Furthermore, it might confirm the consistency and cohesion of the overall work, offering insights for improving the flow and structure of the writing.

It is a common practice for instructors to use pre-tests of English competency to create homogenous learning classes of students with the goal of maximizing the learning experience. Therefore, when instructors seek to use novel educational materials for their lessons, they have to determine if these materials affect students at different levels in distinct manners. Given its recent development, research into the use of AI-based technology for English learners at different levels is sparse. With this in mind, the study seeks to gather information about learners' attitudes toward and perceptions about English writing and the impact that utilizing AI chatbots will have in the classroom. The objective of this study is twofold.

- 1) How do students at different proficiency levels engage with and utilize AI feedback in their writing process?
- 2) What factors influence students' perceptions of ChatGPT-assisted writing?

2. Literature Review

2.1 Use of ChatGPT in Language Education

Since ChatGPT's development, research into its effectiveness and utility as an English language learning tool has gained widespread attention (Afkarin and Asmara 2024, Kohnke et al. 2023, Lee 2024, Teng 2023). Kim and Lee (2024) examined Korean college students' perceptions regarding the use of ChatGPT by native English instructors. This study administered eight types of questionnaires to a total of 568 Korean students choosing to

participate in the study. The results of the questionnaires showed that students had more negative than positive responses to the use of ChatGPT in class. Among Korean college students enrolled in courses taught by native English instructors, 6% (35 people) strongly agreed and 35% (200 people) agreed with the future use of ChatGPT. This outcome stems from a broader study that investigated the perceptions of these students concerning the employment of ChatGPT by Korean instructors in English language courses.

Liu and Ma (2024) developed a model of structural equations to assess the findings of survey based on the technology acceptance model that investigated how EFL learners perceive and utilize ChatGPT as an extracurricular English learning resource. The model indicated that, by influencing learners' attitudes and behavioral intentions, the impression of students preconceived notion about the effectiveness of ChatGPT can be positive. This study showed how ChatGPT can be a useful language-learning resource for EFL students.

Cha and Im (2023) examined a study to assess students' satisfaction and comprehension outcomes from utilizing ChatGPT in English liberal arts reading tasks. For this investigation, 100 students from a university in Chungcheong Province participated in a ChatGPT-assisted English reading task and subsequently completed an online survey to evaluate their experiences. The task using ChatGPT consisted of a total of six steps: logging in to ChatGPT, requesting reading materials on a topic of interest, learning, receiving problems on the reading materials from ChatGPT, solving them, and writing a self-activity study sheet. Students were generally positive about performing tasks using ChatGPT and mentioned that its use not only helped them acquire words, expressions, and information contributing to learning effectiveness in their areas of interest, but also helped them improve their overall literacy.

Kostka and Tonnelli (2023) explored the application of ChatGPT in English language teaching, focusing on how the tool can support instruction and address challenges related to language acquisition. The researchers reviewed existing studies focusing on the educational use of ChatGPT and conducted an experiment at Northeastern University to evaluate its effectiveness. Their findings showed that ChatGPT supported several aspects of ELT, such as grammar correction and conversational practice, but that careful integration and human supervision were needed to optimize these instructional benefits. The researchers concluded that ChatGPT has the potential to transform instructional practice, but that clear guidelines and ethical considerations are needed to effectively integrate it into instructional strategies.

Balci (2024) examined 21 research published on Web of Science to shed light on ChatGPT's function in teaching and studying English as a foreign language. The results of the research suggested that ChatGPT was effective in strengthening motivation, language proficiency, self-directed learning, adapted instruction, and writing abilities. Despite this, both educators and learners expressed ethical concerns for its use and might be required.

Monika and Suganthan (2024) aimed to discover how ChatGPT influenced the language proficiency of English as a second language learners, and engineering students who were enrolled in ESL courses at different educational institutions in Vellore, India were tasked with completing a cross-sectional survey to gather their opinions and experiences using ChatGPT. The study's findings found that ChatGPT boosted learners' language proficiency and creatively altered their learning styles and approaches to language acquisition, notably in the areas of time efficiency and information gathering.

To date, studies on ChatGPT in English education tend to focus on the extent to which it performs as an educational tool, how it affects the learning experience, and how it can be analyzed in different ways on a global scale. Research is being carried out to get more insight into how students utilize ChatGPT and its effectiveness in improving English reading skills. Furthermore, studies are being carried out to examine learners' attitudes and acceptance of technology, as well as dealing with ethical and arising from the integration of ChatGPT into language instruction.

2.2 Trends in Use of ChatGPT as an English Writing Tool in South Korea

ChatGPT has been utilized in English writing courses in Korea for a variety of ways to enhance the educational and learning experience of students (Jung 2024, Rha and Baek 2024, Shin et al. 2023, Shin and Lee 2024). ChatGPT has been utilized in English writing courses in Korea in a variety of ways with the goal of enhancing the educational and learning experience of students. This section focuses on a review of the way learners engage with ChatGPT as well as the factors influencing their perception when using it to assist them with English writing.

In terms of engagement with ChatGPT as a writing tool in a classroom setting, Park and Kim (2024) examined how ChatGPT feedback influenced writing skills and motivation of Korean college students engaged in a film-based writing course. While the experimental group (21 students) obtained both instructor and ChatGPT feedback, the control group (20 students) received only teacher feedback. The outcomes illustrated that while both groups' English writing skills improved, the experimental group showed a broader utilization of vocabulary. While the experimental group was satisfied with ChatGPT's vocabulary and sentence feedback, they had a negative opinion regarding the content-related feedback. By contrast, the control group's motivation to write was higher as the outcome of the instructor's suggestions.

Cha and Im (2023) investigated the perceptions of 15 instructors using ChatGPT in their writing class. The instructors evaluated ChatGPT as a useful learning tool but indicated that there were some difficulties in applying it to actual teaching-learning activities. Park (2023) looked at the issues that have been brought about instruction in writing since ChatGPT's launch and highlighted the significance of process-based writing. The methods used in the study involved investigating ChatGPT's impact on the process of writing as well as determining why process-oriented writing effectively accomplishes the objectives of learning too. The study concluded that even in the ChatGPT era, traditional process-oriented writing education should be maintained to ensure that mastery of the writing process is not compromised by AI tools such as ChatGPT.

Jeon and Lee (2024) contrasted feedback remarks provided by native English instructors and ChatGPT for writing completed by English language learners. Twelve Korean college students volunteered their writing for feedback and two native English instructors pointed out errors and offered comments along with ChatGPT. For both teachers and ChatGPT, feedback was characterized by showing the corrected form that should replace the error. In the case of the teachers, grammatical errors were the focus while ChatGPT highlighted content errors. The researchers noted that ChatGPT was less likely to provide feedback related to paragraph construction than the teachers.

With regard to the factors influencing learner's perception of ChatGPT as a writing tool, Oh (2023) sought to investigate ChatGPT's potential utilization in liberal arts writing courses at universities with an end goal of providing recommendations for optimal procedures for its use in the field. In this study of sixty-two university students from South Korea, ChatGPT was seen favorably as a tool for time-saving and improving writing process efficiency. However, students also reported concerns about information quality and source credibility. In conclusion, Oh noted that ChatGPT has been utilized in English writing courses in Korea for a variety of ways to enhance the educational and learning experience of students, and several recent studies have been undertaken to investigate its impact and utility.

Yu (2024) analyzed the factors affecting learners when college students received ChatGPT feedback when completing English writing assignments. Results showed that the feedback provided by ChatGPT was evaluated positively overall and was particularly useful in improving the accuracy of grammar and vocabulary usage and correcting mechanical errors. Concerns raised included excessive reliance on ChatGPT, and negative opinions about improvement in learners' English writing proficiency.

Previous studies have investigated ChatGPT's impact on perceptions of and approaches to instruction in English writing classes including student and instructor motivation, accuracy and utility of feedback, and its overall effect on process-based writing. This study expanded on the existing research by analyzing ways in which learners at competency levels utilize ChatGPT. Intermediate and advanced level learners wrote four types of English essays and then used ChatGPT to evaluate and edit their work using personal or instructor developed prompts.

3. Method

3.1 Data Collection

The research was carried out in the Spring semester of 2024, targeting freshmen at a university located in Seoul. They enrolled in the required liberal arts course, English Communication: Reading and Writing. This study investigated the impact of ChatGPT 3.5 (ChatGPT) on student's writing by comparing writing tasks using this tool with similar tasks not using ChatGPT. Two cohort groups (intermediate and advanced classes) of English communication reading and writing classes at a university during the spring semester of 2024 voluntarily participated in the study 17 intermediate students and 17 advanced students. The small sample size reflects the exploratory nature of this study given paucity of research on AI's practical use by Korean students participating in real world university EFL courses. Statistical results are supplemented with qualitative insights gathered during students' initial hands-on experience using AI in order to gain deeper understanding of student perceptions and motivation which can lay the groundwork as a catalyst for future research.

In terms of the English levels, the university assigned first-year learners 70 G-TELP Level 3 questions, categorized into three levels: Advanced (30%), Intermediate (40%), and Beginner (30%). For this study, students in the intermediate class classified between the 31st and 70th percentiles of the university English ability, while those in the advanced class made up the top 30%. Among the students enrolled in the intermediate and advanced courses, some students had experience writing in English writing in high school while others did not. As such, the findings of this research may have been influenced by those students who were not unaccustomed to writing various types of essays.

Four topics from different essay types are reflected in Table 1. These topics were chosen to be related to students' daily lives to encourage them to develop their thoughts and write in English without difficulty. For the cause-effect essay, the topic focused on the influence of social media on your day-to-day life. With respect to the comparison essay, the topic highlighted the comparisons between online shopping and instore shopping. For the third essay, a descriptive essay illustrated my university life as the main subject. A problem-solution essay in the fourth essay described the topic of generation gap. Given the academic schedule, the first and second essays were written before the midterm exam, and the third and fourth essays were written after the midterm exam.

Table 1. Essay Types and Topics

| N | Types of Essays | Essay Types |
|---|------------------------|--|
| 1 | Cause-effect essay | The influence of social media (Kakao, Facebook, Instagram, etc.) on your day-to-day life |
| 2 | Comparison essay | Online shopping vs. In-store shopping |
| 3 | Descriptive essay | My university life |
| 4 | Problem-solution essay | Generation gap |

During the one semester, it was arranged to comprise twelve classes that combined writing instruction and related activities. English writing classes for students covered basic theories of English writing related to a variety of essay types, as well as basic grammar, capitalization, and mechanics. Moreover, four types of essays were taught with emphasis given to the characteristics of each essay are. Specifically, the first draft of the four essays were written by hand without the aid of any writing tools including a dictionary, translators, and ChatGPT. For the second draft, students were permitted to use ChatGPT to assist them with their writing.

The second drafts of the four essays were accomplished in the university computer lab. Each participant produced a total of eight writing samples, with half of them written using ChatGPT.

The instructor provided the prompts targeting specific aspects of the writing process. These prompts were developed to reflect the essential elements of the writing process presented in the textbook by Folse et al. (2023) and include 34 individual prompts organized into six areas focusing on developing writing skills such as idea development, linguistic elements, grammar and error correction, essay structure and organization, and thesis and argument development (Appendix). The researcher developed ChatGPT prompts in English rather than Korean with the goal of improving students' English writing specifically and English communication skills. Kepner (1991) and Sheppard (1992) discovered that feedback on overall writing is more effective in improving learners' English writing skills than in correcting local grammatical errors. Based on this, this study sought to enhance the learners' overall English writing ability by utilizing ChatGPT during the second draft of the writing process for four essays so that learners could receive feedback on the overall structure and content of the writing.

Table 2 lists the overview of English writing activities including sessions, themes and processes. In the first writing lecture, the basics of English writing were taught including how to brainstorm and organize their thoughts. In the second writing class, the students were taught how to write topic sentences, supporting sentences, and concluding sentences for paragraphs. In addition, the students were taught how to write essay titles according to capitalization rules and various punctuation techniques. In the third writing class, the differences between paragraphs and essays were explained. In the fourth writing class, techniques for writing an introduction, body, and conclusion were taught. In the fifth writing class, the characteristics of cause-effect writing were covered in greater detail, and students wrote the first draft of a cause-effect essay.

In the sixth class, this mainly focused on students composing the second draft of a cause-effect essay. During this session, the instructor shared the 34 prompts and explained how to use individual English prompts to improve each area before the students wrote the second revision of their English essays. In the seventh class, the characteristics of comparison essays were explored, and students covered the first draft of a comparison essay. In the eighth class, students largely engaged in writing the second draft of a comparison essay, following a review of the prompts. The ninth class dealt with the characteristics of descriptive essays and students wrote the first draft of a descriptive essay.

In the tenth class, after the instructor reviewed the prompt, students mainly focused on writing the second draft of a descriptive essay. In the eleventh class, characteristics of problem-solution essays were the focus of class instruction and students dealt with writing the first draft of a problem-solution essay. Finally, in the twelfth class, the instructor reintroduced the prompt, and students then worked on writing the second draft of a problem-solution essay.

Students were initially asked to use ChatGPT only for the purpose of developing their writing using English prompts. Subsequently, students could use the English prompts provided by the instructor or create their own English prompts to suit their needs. In addition, students were required to submit the interactions they had with ChatGPT while working on their writing tasks to the instructor. The instructor expected that students would improve their English communication skills by using English through writing practice with the assistance of

ChatGPT prompts. A survey conducted upon completion of assigned writing tasks was used to study students' perceptions of ChatGPT's utility and valued as a writing aid.

Table 2. Summary of English Writing Activities

| Sessions | Themes | Process |
|------------|---|--------------------------------------|
| Session 1 | Brainstorming and Organizing ideas | Lecture |
| Session 2 | Writing Paragraphs and Creating Essay Titles: Capitalization and Punctuation Rules | Lecture |
| Session 3 | Understanding the differences between paragraphs and essays? | Lecture |
| Session 4 | How to Write an Essay | Lecture |
| Session 5 | Writing a Cause-Effect Essay | Lecture and Practice without ChatGPT |
| Session 6 | Revising a Cause- Effect Essay | Lecture and Practice with ChatGPT |
| Session 7 | Writing a Comparison Essay | Lecture and Practice without ChatGPT |
| Session 8 | Revising a Cause-Effect Essay | Lecture and Practice with ChatGPT |
| Session 9 | Writing a Descriptive Essay | Lecture and Practice without ChatGPT |
| Session 10 | Revising a Descriptive Essay | Lecture and Practice with ChatGPT |
| Session 11 | Writing a Problem-Solution essay | Lecture and Practice without ChatGPT |
| Session 12 | Writing a Problem-Solution Essay | Lecture and Practice with ChatGPT |

3.2 Data Procedure

For this study, a pre-survey was conducted during the first week of class, and a post-survey was conducted during the 14th week of the 15-week course. The pre-survey question consisted of six questions. Two of these questions collected basic information about whether or not the students had ever written an English essay and whether or not they had ever used a writing chatbot. The four questions collected information about interest in English writing, confidence in English writing, reduction of burden and difficulty felt about English writing, and the importance of English writing in their lives. The post-survey questionnaire consisted of a total of 12 questions, ten of which were multiple choice questions and two were short-answer questions. Four of the multiple-choice questions were the same as those used in the pre-survey to measure changes in students' attitudes toward English writing and the remaining four questions were about students' perceptions of AI chatbots as writing assistance tools. In addition, two remaining short-answer questions asked students to give their opinions about the advantages and disadvantages of using Chat GPT as a writing assistance tool. To aid in improving students' English proficiency, the researcher instructed students to use English rather than Korean (their first language) prompts when writing essays with ChatGPT. Some examples of prompts were provided to students to get them started. Students' impressions about their overall writing proficiency were also collected via a survey conducted through use of pre- and post- course surveys. The post-class survey included questions about the impact of ChatGPT as a writing aid.

3.3 Data Analysis

IBM SPSS 23 was utilized as a statistical program. Compared *t*-test analysis of frequency data for some of the survey questions was undertaken to measure the change in attitude toward English writing after using the AI

chatbot as a writing tool for two groups. Subsequently, frequency analysis is reported showing students' perceptions of the chatbot as an English writing assistance tool. Moreover, an evaluation of the advantages and challenges as an education tool, grounded in participants' qualitative responses, was assessed through content-driven classification to reflect the variety of their viewpoints.

4. Results

This section presents the findings of a survey of the students (17 in the intermediate class and 17 in the advanced class). Among the 34 participants in this study, 18 (52.9%) students had previously written essays in English, and 16 (47.1%) students had no experience writing essays in English. In addition, 25 (73.5%) of the total sample of students had experience using ChatGPT, and 11(26.5%) students had no experience using ChatGPT.

4.1 Differences in Student Engagement with AI Feedback in Writing

4.1.1 Comparative analysis of English writing interest

This section displays mean values and paired *t*-test scores the pre- and post-surveys on the importance of English writing for both groups. The average rating for the pre-survey measure of interest in English writing for the intermediate class students was 2.882, and the average post-survey rating of interest was 3.294, showing that the students' interest in English writing increased by 0.412 in numerical terms. The average rating for the pre-survey interest in English writing for the advanced class students was 2.824, compared to an average post-survey rating of 3.177, showing that the interest in English for the advanced class also increased somewhat (Table 3).

Table 3. Mean Value of the Interest in English Writing

| Level of Students | N | Timing of Survey | Mean | SD |
|-----------------------|----|------------------|-------|-------|
| Intermediate Students | 17 | Pre-survey | 2.882 | .993 |
| | 17 | Post-survey | 3.294 | 1.160 |
| Advanced Students | 17 | Pre-survey | 2.824 | 1.074 |
| | 17 | Post-survey | 3.177 | 1.185 |

The average values for interest in both the intermediate and advanced classes increased in both groups, but the results of the paired sample *t*-test did not show a significant increase in interest in English writing in the intermediate and advanced classes (Table 4).

Table 4. Paired *t*-test for the Interest of English Writing

| Students' Level | Students Number | M | SD | 95% Confidence interval of the difference | | <i>t</i> | Sig. (2-tailed) |
|-----------------|-----------------|-------|-------|---|-------|----------|-----------------|
| | | | | lower | upper | | |
| Intermediate | 17 | -.412 | 1.064 | -.959 | .135 | -1.595 | .130 |
| Advanced | 17 | -.353 | .932 | -.832 | .126 | -1.562 | .138 |

4.1.2 Comparative analysis of the importance of English writing

This part demonstrates the average result of the pre- and post-surveys on the importance of English writing for two groups, and the results of a paired *t*-test. Table 5 shows the perceived importance of English writing for the two groups. In the pre-survey on the importance of English writing for the intermediate group, the mean was 4.177 and in the post-survey, the mean increased to 4.294. The advanced class's mean on the importance of English writing also increased from 3.882 in the pre-survey to 3.941 in the post-survey.

Table 5. Mean Value of the Importance of English Writing

| Level of Students | N | Timing of Survey | Mean | SD |
|-----------------------|----|------------------|-------|-------|
| Intermediate Students | 17 | Pre-survey | 4.177 | .728 |
| | 17 | Post-survey | 4.294 | .686 |
| Advanced Students | 17 | Pre-survey | 3.882 | .993 |
| | 17 | Post-survey | 3.941 | 1.088 |

As presented in Table 6, the paired *t*-test on the importance of English writing indicated no significant attitudinal change in either group regarding perceived importance of English writing.

Table 6. Paired *t*-test for the Importance of English Writing

| Students' Level | Students Number | M | SD | 95% Confidence interval of the difference | | <i>t</i> | Sig. (2-tailed) |
|-----------------------|-----------------|--------|------|---|-------|----------|-----------------|
| | | | | lower | upper | | |
| Intermediate Students | 17 | -.118 | .600 | -.426 | .191 | -.808 | .431 |
| Advanced Students | 17 | -.0588 | .899 | -.521 | .404 | -.270 | .791 |

4.1.3 Comparative analysis of English writing confidence

This area highlights the average data from the pre- and post-surveys on confidence of English writing regarding two groups, and the results of a paired *t*-test. Table 7 shows the average values of the pre- and post-surveys related to confidence in English writing for the intermediate and advanced classes. The mean score for the learner confidence in English writing in the intermediate class pre-survey was 2.353, while the mean score for the post-survey was 3.294. The advanced class student's confidence in English writing also increased in quantitative terms, as reflected by the average value of 2.647 in the pre-survey and 3.235 in the post-survey.

Table 7. Mean Value of the Confidence of English Composition

| Level of Students | N | Timing of Survey | Mean | SD |
|-----------------------|----|------------------|-------|------|
| Intermediate Students | 17 | Pre-survey | 2.353 | .320 |
| | 17 | Post-survey | 3.294 | .318 |
| Advanced Students | 17 | Pre-survey | 2.647 | .242 |
| | 17 | Post-survey | 3.235 | .219 |

As illustrated in Table 8, the students in both the intermediate and advanced classes showed a remarkable increase in their confidence in English writing, with the intermediate class showing $t=-3.392$ ($p=.004$) and the advanced class showing $t=-3.050$ ($p=.008$), according to the paired t -test results.

Table 8. Paired t -test for the Confidence of English Writing

| Students' Level | Students Number | M | SD | 95% Confidence interval of the difference | | t | Sig. (2-tailed) |
|-----------------|-----------------|-------|-------|---|-------|--------|-----------------|
| | | | | lower | upper | | |
| Intermediate | 17 | -.941 | 1.144 | -1.529 | -.353 | -3.392 | .004 |
| Advanced | 17 | -.588 | .795 | -.997 | -.179 | -3.050 | .008 |

4.1.4 Comparative analysis of the reduction in difficulty and burden of English writing

This part illustrates the mean values of the pre- and post-surveys on the difficulty and burden reduction of English writing in both groups, and the results of a paired t -test. In a survey question measuring the extent to which intermediate class learners felt no difficulty in writing in English, the pre-survey average was 2.882, and the post-survey average was 2.529. The extent to which advanced class learners felt no difficulty in writing in English was 2.882 in the pre-survey, and 2.706 in the post-survey. These results suggest that both groups experienced increased difficulty and burden in writing in English after gaining some experience in writing (Table 9).

Table 9. Mean Value of the Reduction in Difficulty and Burden of English Writing

| Level of Students | N | Timing of Survey | Mean | SD |
|-----------------------|----|------------------|-------|-------|
| Intermediate Students | 17 | Pre-survey | 2.882 | 1.054 |
| | 17 | Post-survey | 2.529 | 1.125 |
| Advanced Students | 17 | Pre-survey | 2.882 | .857 |
| | 17 | Post-survey | 2.706 | 1.047 |

As shown in Table 10, the decreases in difficulty and burden associated with English writing did not show a statistically significant increase for the groups according to the results of the paired t -test.

Table 10. Paired t -test the Reduction in Difficulty and Burden of English Writing

| Students' Level | Students Number | M | SD | 95% Confidence interval of the difference | | t | Sig. (2-tailed) |
|-----------------------|-----------------|------|---------|---|-------|------|-----------------|
| | | | | lower | upper | | |
| Intermediate Students | 17 | .353 | 1.498 | -.417 | 1.123 | .972 | .346 |
| Advanced Students | 17 | .177 | 1.38000 | -.533 | .886 | .572 | .605 |

4.2 Key Factors in Shaping Students' Perceptions of ChatGPT

This section presents the results of a post-survey on the perception of ChatGPT as an English writing assistance tool for the two different groups. This section presents the results of a post-survey on the perception of ChatGPT as an English writing assistance tool for the two different groups. In this study, in order to assess the changes in

attitudes and perception of ChatGPT as a writing tool ChatGPT in English writing, the results of the survey were divided into intermediate and advanced classes and analyzed to find the similarities and differences between learners. The questions about students' experience in writing English essays and using ChatGPT gave them two options: Yes and No. In addition, the remaining multiple-choice questions and the questionnaire items on students' attitudes and perceptions toward English writing utilized a 5-point Likert scale, with 1 point for 'strongly disagree', 2 points for 'disagree', 3 points for 'unsure', 4 points for 'agree', and 5 points for 'strongly agree'. In addition, students were provided with an opportunity to share their opinion about benefits and challenges in using ChatGPT as a learning tool via a short answer option.

4.2.1 Results on the AI chatbot's role using six multiple choice questions

This portion displays students' responses to six multiple-choice questions on the role of Chat GPT. Survey 1 asked whether AI Chatbot was helpful in generating and organizing thoughts when writing in English. As shown in Table 11, among the intermediate students, 11 (64.7%) 'strongly agreed', 5 (29.4%) 'agreed', and 1 (5.9%) answered 'unsure'. Among the advanced students, 10 (58.8%) answered 'agree' 3 (17.5%), 'unsure' 3 (17.6%), 'strongly agree', and 5.9% 'disagree' with respect to the helpfulness of AI Chatbot. It is noteworthy that 11 (64.7%) of the intermediate students strongly agreed, only 3 (17.6%) of the advanced students strongly agreed.

Table 11. AI Chatbot as Idea Generator and Organizer

| Question 1 | Students' Level | N | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|-----------------------|----|-------------------|----------|-----------|------------|----------------|
| AI chatbots helped me generate ideas and organize my thoughts more effectively when writing in English. | Intermediate Students | 17 | 0 (0%) | 0 (0%) | 1 (5.9%) | 5 (29.4%) | 11 (64.7%) |
| | Advanced Students | 17 | 0 (0%) | 1 (5.9%) | 3 (17.6%) | 10 (58.8%) | 3 (17.6%) |

Question 2 was AI Chatbot helped strengthen English vocabulary when writing in English. As shown in Table 12, among the intermediate class students, 11 (64.7%) strongly agreed, 5 (29.4%) agreed, and 1 (5.9%) answered 'unsure'. Among the advanced class students, 8 (47.1%) answered 'agree', 7 (41.2%) 'strongly agree', and 2 (11.8%) 'unsure'. It is notable that 11 (64.7%) of the intermediate class students answered that it helped strengthen English vocabulary, while 7 (41.2%) of the advanced class students 'strongly agree'.

Table 12. AI Chatbot as a Vocabulary Builder

| Question 2 | Students' Level | N | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|--|-----------------------|----|-------------------|----------|-----------|-----------|----------------|
| AI chatbots helped me enhancing English vocabulary when writing. | Intermediate students | 17 | 0 (0%) | 0 (0%) | 1 (5.9%) | 5 (29.4%) | 11 (64.7%) |
| | Advanced students | 17 | 0 (0%) | 0 (0%) | 2 (11.8%) | 8 (47.1%) | 7 (41.2%) |

Question 3 is the AI Chatbot helped students use various sentence structures when writing English. As reflected in Table 13, for the intermediate class, 8 students (47.1%) strongly agreed, 8 students (47.1%) agreed, and 1 student

(5.9%) answered 'unsure' about AI Chatbot as an aid to sentence composition. Among the students in the advanced class, 6 students (35.3%) answered 'strongly agree', 5 students (29.4%) and 5 students (29.4%) answered 'agree' and 'unsure' 5(29.4%), while 1(5.9%) student answered 'disagree' on this measure.

Table 13. AI Chatbot as an Aid to Sentence Composition

| Question 3 | Students' Level | N | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|--|-----------------------|----|-------------------|----------|-----------|-----------|----------------|
| AI chatbots helped me use a variety of sentence structures in English writing. | Intermediate Students | 17 | 0 (0%) | 0 (0%) | 1 (5.9%) | 8 (47.1%) | 8 (47.1%) |
| | Advanced Students | 17 | 0 (0%) | 1 (5.9%) | 5 (29.4%) | 5 (29.4%) | 6 (35.3%) |

Question 4 is whether the AI Chatbot helped to use correct grammar when writing English. As listed in Table 14, 8 students in the intermediate class strongly agreed and 9 students (52.9%) agreed with the statement that they use correct grammar when writing English, and another 8 students (47.1%) agreed. Among the students in the advanced class, 6 students (35.3%) responded that they strongly agreed, while 5 students (29.4%) and another 5 students (29.4%) responded that they agreed and were unsure, respectively while 1 student disagreed. It is noteworthy that 17 students (100%) in the intermediate class responded that they either agreed or strongly agreed with the statement that the AI Chatbot uses correct English grammar, while the students in the advanced class responded that they strongly agreed (6), agreed (5), were unsure (5), and disagreed (1) in their opinion about the effectiveness of AI Chatbot in using correct grammar.

Table 14. AI Chatbot as an Assistant in Grammar Correction

| Question 4 | Students' Level | N | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|-----------------------|----|-------------------|----------|-----------|-----------|----------------|
| AI chatbots helped me use correct grammar in English composition. | Intermediate Students | 17 | 0 (0%) | 0 (0%) | 0 (0%) | 8 (47.1%) | 9 (52.9%) |
| | Advanced Students | 17 | 0 (0%) | 1 (5.9%) | 5 (29.4%) | 5 (29.4%) | 6 (35.3%) |

In question 5, the feedback provided by AI Chatbot when writing English is accurate and reliable. As shown in Table 15, 12 students (70.6%) in the intermediate class agreed, 3 students (17.6%) strongly agreed, and 2 students (11.8%) were unsure. Among the students in the advanced class, 5 students (29.4%) strongly agreed, and 2 students (11.8%) disagreed. It is noteworthy that 15 students (88.2%) in the intermediate class responded positively to the accuracy and reliability of the feedback provided by AI Chatbot, while the advanced class students responded with mixed opinions including 'strongly agree' (5), 'agree' (5), 'unsure' (5), and 'disagree' (2).

Table 15. Accuracy and Reliability of AI Chatbot

| Question 5 | Students' Level | N | Strongly Disagree | Disagree | Unsure | Agree | Strongly Agree |
|---|-----------------------|----|-------------------|-----------|-----------|------------|----------------|
| I trust the accuracy and reliability of feedback provided by AI systems for my English writing. | Intermediate Students | 17 | 0 (0%) | 0 (0%) | 2 (11.8%) | 12 (70.6%) | 3 (17.6%) |
| | Advanced Students | 17 | 0 (0%) | 2 (11.8%) | 5 (29.4%) | 5 (29.4%) | 5 (29.4%) |

Question 6: How many times is it effective to use it when doing English writing activities during a semester? As displayed in Table 16, 5 students (29.5%) in the intermediate class responded once, 5 students (29.4%) responded 5 times, 2 students (11.8%) responded 5 times, and 2 students (11.8%) responded 5 or more times. In the advanced class, 3 times per semester was the most common with 9 students (52.9%), followed by 2 times per semester with 4 students (23.5%), and 5 or more times with 2 students (11.8%). 1 student (5.9%) responded once, and another student (5.9%) answered 'four times'. In the intermediate class, 10 students responded '1 or 2 times' per semester, and in the advanced class, 9 students (52.9%) chose to write using Chat GPT three times per semester.

Table 16. Appropriateness in Frequency of AI Chatbot Use during a Semester

| Question 6 | Students' Level | Once | Twice | Three times | Four times | Five or more times |
|--|-----------------------|-----------|-----------|-------------|------------|--------------------|
| How many times do you think it is appropriate to use an AI chatbot for English writing practice in one semester? | Intermediate Students | 5 (29.5%) | 5 (29.4%) | 2 (11%) | 2 (11.8%) | 2 (11.8%) |
| | Advanced Students | 1 (5.9%) | 4 (23.5%) | 9 (52.9%) | 1 (5.9%) | 2 (11.8%) |

4.2.2 Analyzing the benefits and challenges of ChatGPT

In this section, students' feedback on open-ended questions regarding the advantages and disadvantages of ChatGPT. Table 17 illustrates the viewpoints of 17 intermediate and 17 advanced students regarding ChatGPT's benefits as an educational tool. The components have been divided into various categories such as grammar and vocabulary, writing structure, fluency and clarity growth, idea development, and time and efficiency to facilitate analysis based on the students' statements regarding the advantages of ChatGPT. The two groups were then compared. In the table, to clearly indicate the opinions of each participating student, Student 1 was denoted as S1. The remaining 16 students were marked in the same way for two groups through to S17.

In terms of grammar and vocabulary, seven in the intermediate class and eight students in the advanced class indicated that enhanced their vocabulary and grammar. Specifically, in the intermediate class, four students stated that it enhanced their grammar, two noted that it improved their vocabulary, and one indicated that it improved both their vocabulary and grammar. For the seven advanced class students commented that ChatGPT improved their vocabulary and English grammar. In their responses, they stated that they utilized more specific vocabulary, correct spelling, synonyms, as well as correct word choices. Two students in the intermediate class and one student in advanced level mentioned that it helped them with their writing structure. One student said that ChatGPT helped them write well-structured sentences using words they didn't know, and another student mentioned that it was helpful in recommending native language sentences. One student in the advanced class said that he learned how to write neat essays and decide on essay titles.

As for English expressions, two students in the intermediate class and four students in the advanced class said that it was useful. One student in the intermediate class said that he could easily and conveniently express his thoughts in English and another student mentioned that using ChatGPT made English writing was easy. Students in advanced class noted that their fluency and clarity in terms of English ideas and their articulateness improved, their natural writing improved, and they were able to express things that they could not normally express.

With regard to idea generation, four students in the intermediate class and three students in the advanced class said that it was useful, mainly due to its capability for generating ideas. Somewhat uncharacteristically for a Korean classroom, one student in the advanced class said that it was "fun" because he could write English with a light

heart, while another student said that he “liked” that ChatGPT it suggested various options that he had not thought of.

In reference to time and efficiency, two intermediate students and three advanced students made statements about this item. In this regard, the intermediate students stated that it was convenient that they could find new information, and that they could present evidence. Advanced students stated that they could save time by writing quickly, and by dividing complex tasks.

Table 17. Benefits of ChatGPT: Intermediate vs. Advanced Students

| Categories | ChatGPT Benefits: Intermediate Students | ChatGPT Benefits: Advanced Students |
|------------------------------------|---|---|
| Grammar and Vocabulary Improvement | S1: There were benefits to receiving feedback on words I didn't know and grammar I used incorrectly. S2: It gave me unexpected ideas. I learned how to study grammar. S3: I improved my ability to use conjunctions. S4: It taught me words and allowed me to use more specialized language. S5: It is useful to be able to check my grammar that I'm not sure about. S6: It taught me words and synonyms so I could use vocabulary appropriate to the situation. It helped me get the answers I wanted by using my prompt sentences that were necessary for the questions. S7: It helps me choose words that fit the text better | S1: It is useful for correcting grammatical errors or awkward expressions. S2: The range of word choices has expanded. S3: Grammar/Contextual Accuracy S4: It was helpful in comparing the same meaning words in Korean such as make and create. S5: It helps me use correct spelling and gives me grammar advice. S6: ChatGPT can correct the grammar and words and improve the natural parts in the context. S7: It corrects the grammar and suggests more appropriate words. |
| Writing Structure | S8: The advantage is that I can write more structured text by filling in words I don't know. S9: When I wrote in Korean, I could immediately think of the structure and organization of the text, but when I tried to write in English, I couldn't write as I had planned. In this situation, the AI chatbot naturally recommended coherent sentences. The feedback was also helpful. | S8: It clearly organizes my thoughts in English, so I can write neat English essays by looking at it. It was also difficult to write essay titles in English, but I learned how to write titles through AI. |
| Development of English Expression | S10: I can express my thoughts in English easily and conveniently. S11: Writing becomes easier. | S9: Natural writing skills improved. S10: It allows me to express things that I couldn't express in English because my English skills were lacking. S11: I can refer to words when I can't translate what I want to say in Korean into English. S12: I was able to find more content to support the abstract content and complete the sentence by finding words that fit the sentence. |
| Idea Generation | S12: Using AI chatbot gives me diverse ideas. S13: It suggests things that I can find out that I did not think of. S14: I can supplement my evidence. S15: I can express my thoughts in English easily and conveniently. | S13: It broadens my existing narrow-minded way of thinking into various perspectives. S14: I was able to find more content to support the abstract content and complete the sentence by finding words that fit the sentence. S15: It provides ideas |
| Time and Efficiency | S16: It is convenient. S17: I can quickly find words and grammar I do not know. | S16: I can adapt to the system called Time Attack, and thanks to it, I can create my own way of using the AI chatbot. S17: It is more fun because I can write with a lighter mind since the chatbot can help you. |

The views of 18 intermediate and 17 advanced students on ChatGPT's disadvantages as an instructional tool are presented in Table 19. The disadvantages cited by students when using ChatGPT broadly classified into five groups: no inconvenience, increased dependency, information errors and distrust, inconvenience and difficulty in use, and hindrance to skill development. The no inconvenience grouping included six intermediate students and two advanced students. In the intermediate class, one student stated, "There doesn't seem to be any particular disadvantage", indicating that he did not feel any particular disadvantage in using ChatGPT. Another student simply stated, "There is no bad point," indicating that there was no inconvenience. The remaining four students answered "None", emphasizing that there was no inconvenience in using ChatGPT. In the advanced class, one student simply responded "None", indicating that there was no inconvenience, and another student answered "If vocabulary skills are good or other skills are, an AI chatbot would not be necessary to use. Otherwise, there are not any disadvantages", indicating that there no shortcomings associated with using ChatGPT if English skills are sufficient. More intermediate students were grouped into the no inconvenience group than advanced students.

As for the increased dependency, four students in the intermediate class and six students in the advanced class stated that their dependency on ChatGPT increased. In both the intermediate and advanced classes, students expressed concerns about over-reliance on AI chatbots. In the intermediate class, two out of four students pointed out that they tend to rely excessively on AI and underlined the necessity of writing independently to strengthen their expertise. Another student observed that reliance on AI gradually increases. Likewise, six students in the advanced class brought up similar concerns regarding excessive reliance on AI, and the demand for controls when employing ChatGPT for English essay writing. One student additionally highlighting insufficient critical thinking about an essay independently because of this reliance.

In terms of the increased dependency item, advanced students were more representative than intermediate students. In particular, they evaluated. In the hindrance to skill development item, two intermediate students and one advanced student stated that using ChatGPT hindered their skill development. One student in the intermediate class responded, "It recommends the same sentences regardless of the user's level. It seems that I required step-by-step learning", indicating that step-by-step learning is necessary because ChatGPT recommends the same sentences regardless of the student's level. Another student stated, "It is tempting to copy the text written by AI" reflecting that the possibility for copying sentences generated by ChatGPT could hinder learning. In the advanced class, one student stated, "It is difficult to develop the ability to structure the essay myself", reflecting that relying on ChatGPT could retard the ability to develop the structure of the essay on one's own. In the hindrance to skill development section, the lack of step-by-step learning and the dependence on AI were more prominent in the intermediate class. Concern about developing the structure of the essay on one's own was mentioned as a major factor in the advanced class.

With regard to information errors and mistrust, three students in the intermediate class and two students in the advanced class made related statements. Three students in the intermediate class highlighted issues such as inaccurate responses due to unclear or ill-structured questions, frequent inaccuracies to fix, and the tendency to duplicate AI-produced text without careful consideration. In the advanced class, three students also pointed out uncertainties on the reliability of ChatGPT's result. One student mentioned the possibility of trusting false data as correct and wondered whether using ChatGPT truly enhanced their English skills, as it often led to duplication. Another student expressed worries regarding the reliability of ChatGPT's output, while a third noted periodic errors in its responses. In the information errors and Distrust category, both intermediate and advanced students were equally represented, with both expressing that the possibility of errors and lack of reliability in the information provided by ChatGPT could have a negative impact on learning.

In reference to inconvenience and difficulty in use, two students in the intermediate class and three students in the advanced class made statements that fell into this group. In the intermediate class, one student mentioned that the considerable data sometimes produced unintended and undesired material, while another noted that ChatGPT produces similar sentences without considering the user's English proficiency level, implying the requirement for a step-by-step learning approach. Six advanced students identified further difficulties. One student noted that ChatGPT offers updated versions of essays even when not required. Two students noted the difficulty of verifying inaccurate information, particularly when addressing unfamiliar subjects. Another student highlighted inconvenience with typing in English, noting the time demands of the process. One student noted the challenge of acquiring information in a timely manner effectively, and another emphasized the challenge of personal skills in structuring essays when interacting with ChatGPT. For the inconvenience and difficulty in use category, advanced students' responses were more diverse than intermediate students, mainly emphasizing concerns about technical inconveniences and learning hindrances during the process of using ChatGPT.

Table 18. Challenges of ChatGPT: Intermediate vs. Advanced Students

| N | ChatGPT Challenges: Intermediate Students | ChatGPT Challenges: Advanced Students |
|-------------------------------------|---|---|
| No Inconvenience | S1: None. | S1: None |
| | S2: None. | S2: If vocabulary skills are good or other skills are, an AI chatbot would not be necessary to use. Otherwise, there are not any disadvantages. |
| | S3: None. | |
| | S4: None. | |
| | S5: There doesn't seem to be any particular disadvantage. | |
| | S6: There is no bad point. | |
| Over-Reliance on AI | S7: There is a tendency to depend on it. | S3: I become too dependent on AI chatbots. |
| | S9: I seemed to depend too much on AI chatbot. It seems better to take my time and write slowly to improve my writing skills. | S4: I tend to rely on AI without thinking. |
| | S9: I seemed to depend too much on AI chatbot. It seems better to take my time and write slowly to improve my writing skills. | S5: I think I am relying on it. So next time I write an English essay using ChatGPT, it would be good to put some restrictions on translating it into English. |
| | S10: The dependence on AI increases. | S6: I find myself relying on the AI chatbot. |
| | | S7: I do not think I will be able to complete my English essay on my own because I'm relying too much on AI. |
| | | S8: Over-reliance |
| Information Errors and Distrust | S11: If I do not ask the question accurately, ChatGPT will create the essay on its own and write the wrong answer. | S9: Since AI chatbot is often wrong, there is a disadvantage that it can be accepted as right information, and if I write using AI chatbot, I will have to think again about whether it helped improve my English because I only see and copy AI's writing. |
| | S12: Information correction is common. | S10: I wondered if the information provided by ChatGPT was reliable. |
| | S13: It is tempting to copy the text written by AI. | S11: Rare inaccuracies |
| Hindrances to Skill Development | S14: It is difficult to learn because ChatGPT tells you everything. | S12: It is difficult to develop the ability to structure the essay myself. |
| | S15: I end up trusting the AI chatbot and not thinking for myself anymore. | |
| Inconvenience and Difficulty in Use | S16: The amount of data is too large. Sometimes, unwanted data comes out. | S13: When I ask about the issues in my essay, it provides a revised version as well, even when I don't need it. |
| | S17: It recommends the same sentences regardless of the user's level. It seems that I required step-by-step learning. | S14: It is hard to cross-check incorrect information when I ask questions I don't know. |
| | | S15: I am not good at typing English, so it is a bit inconvenient to talk to ChatGPT. In particular, it was |

regrettable that I spent a lot of time typing.
 S16: I have to spend more time getting the information I
 want from ChatGPT.
 S17: It is hard to cross-check incorrect information when
 I ask questions, I don't know

5. Conclusion

The conclusion has been divided into three parts: engagement differences and perceptual changes, key factors influencing perceptions of ChatGPT and implications for educational strategies in English writing instruction.

5.1 Engagement Differences and Perceptual Changes

The participants used ChatGPT as a tool to aid them to write cause-effect essays, comparison essays, descriptive essays, and problem-solution essays during one semester. Key questions included changes in the attitudes of these intermediate and advanced college students toward English writing and their perception of ChatGPT as a learning tool.

This research utilized pre- and post-surveys to explore student attitudes about ChatGPT's impact on English writing, focusing on interest, confidence, perceived importance, and difficulty or burden. The intermediate class reflected a larger increase in the average level of interest in English writing compared to the advanced class. Although not statistically significant, the average value of the pre- and post-survey showed that the increase in interest in English writing among intermediate class students trended upward as expected.

The awareness of the importance of English writing among intermediate class students was not statistically significant, but the average value of the pre- and post-survey showed a slightly higher increase than that of the advanced class. Mean value of the pre- and post-survey showed a higher confidence in English writing among intermediate class students than that of the advanced class. The paired sample *t*-test showed that the increase in both groups was statistically significant. The confidence of advanced class students in English writing also increased in the pre- and post-surveys, and the paired sample *t*-test result was statistically significant.

This outcome of the research aligned with those of Im (2023), which demonstrated that the use of ChatGPT boosted students' confidence. In reference to the question assessing feelings about reduction of writing burden, both the intermediate and advanced classes reported an increase, but the results were not statistically significant. Looking at the pre- and post-average values of the two groups, the writing burden increased for intermediate class students more than for advanced class students. This unexpected result may have been caused by an excessive number of writing tasks assigned over the semester. In addition, the prompts using only English could have complicated the writing expectations and results for the Korean students.

In order to use ChatGPT as a writing assistance tool in college writing classes of different levels, these results suggest that instructors need to establish a systematic and effective learning strategy based on learners' level for AI as their preference and needs appeared to vary in this study.

5.2 Key Factors Influencing Perceptions of ChatGPT

A survey consisting of two short answers and six multiple-choice questions assessing attitude toward ChatGPT was distributed to students at the end of the term. Students' thoughts on ChatGPT as a writing tool were mixed.

The findings of the multiple-choice questions in the post-survey of students' perceptions about ChatGPT as a writing tool reflected that the intermediate and advanced classes had similarities and distinct views on its efficacy and utility. The majority of intermediate students responded that ChatGPT was very helpful in generating and organizing ideas for English writing, while advanced students responded somewhat less enthusiastically, but still found it helpful. The intermediate students felt that ChatGPT contributed greatly to improving their English vocabulary, and the advanced students were the same but less pronounced.

Intermediate students were more likely to respond that ChatGPT helped them develop sentence structure as did the advanced students, although some advanced students felt that the effect was minimal. Intermediate students gave a positive evaluation of ChatGPT's ability to assist with grammar, saying that it was very useful for correcting English grammar, but advanced students held mixed opinions about grammar correction. In terms of frequency of using ChatGPT as a classroom tool, data showed that the intermediate and advanced classes held different views on utilization of ChatGPT as a learning device for their writing. Ten out of 17 students in the intermediate level indicated once or twice per semester as their most frequent response. However, nine of the 17 advanced students reported the desire to use ChatGPT three or more times per semester. The findings revealed that advanced students were more willing to use AI chatbots as a learning tool than intermediate students.

Additionally, based on the responses to the two open-ended questions, both groups acknowledged the tool's positive impact on their comprehensive writing abilities. However, perspectives on the impact varied between the two groups. Some intermediate students highlighted ChatGPT's role in aiding system adaptation and boosting learning motivation, while a few advanced students did not specifically mention these aspects. Furthermore, many intermediate students emphasized improvements in grammar and contextual accuracy, whereas several students framed these enhancements within a broader context of overall language use and expression. Furthermore, various students particularly noted ChatGPT's effectiveness in structuring thoughts and articulating complex ideas, whereas multiple intermediate students focused more on fundamental improvement in writing and vocabulary acquisition.

Both the intermediate and advanced students expressed a variety of opinions regarding the disadvantages in using ChatGPT as a writing tool. Concerns for ChatGPT producing inaccurate or deceptive results, as well as the risk of a greater reliance on ChatGPT, were identified by intermediate and advanced students. While there were concerns stated regarding ChatGPT's negative impact on creativity and learning, only a minority of students in both groups reported no major issues using technology. Differing opinions that existed between the groups with intermediate students drawing attention to problems that advanced students had not brought up. For example, intermediate students identified data overload and repetitive content as issues. In contrast to this, two advanced students compared to six intermediate students reported no negative effects using ChatGPT possibly reflecting that advanced students saw no educational value or skill advancement through use of ChatGPT.

Furthermore, time consumption and difficulties with typing and interacting were identified by the advanced students as special problems; these issues were not mentioned by intermediate students. Based on this study, when using ChatGPT as a learning tool for English writing, it is necessary to consider the students' level and have an English learning strategy according to students with different English skills.

5.3 Implications for Educational Strategies in English Writing Instruction

In the age of AI integration, the challenge of extracting knowledge and the process of applying it to daily life, work, or learning is essential. Previous studies on AI-based English writing have focused on learners' satisfaction with ChatGPT and human feedback (Park and Kim 2024), the possibility of utilizing AI chatbots from the

instructor's perspectives of applying them to classes (Cha and Im 2023), the continued need for process-centered writing even in the AI era (Park 2023), and the difference in focus between teachers and ChatGPT on grammar-centered and content-centered feedback (Jeon and Lee 2024). The aforementioned studies have in common the use of ChatGPT as an English writing tool, but this study differs from previous ones in that it specifically analyzes the differences in perception according to learners' English proficiency when using ChatGPT and the changes in students' perception of English writing at the beginning and end of the semester by providing English prompts that can be used in various fields to develop English essays, and the elements that ChatGPT has as a learning tool.

In particular, learners experienced the process of writing independently without the help of any digital tools in the first writing stage and then improving their writing by accepting overall feedback using AI tools in the second writing stage. Therefore, this study contributed to exploring effective ways to utilize ChatGPT in actual educational settings by suggesting the possibility of integrated application of step-by-step writing activities that were overlooked in previous studies, along with differences in the way AI tools are utilized according to learners' English proficiency. The writing procedure that linked handwritten drafts and AI-based editing activities showed how AI tools and learners' autonomous thinking can interact. These insights play a significant role in the effective implementation of ChatGPT in forthcoming English writing curricula.

The findings of this research imply that instructors might develop instructional materials that promote AI chatbots' writing skills while alleviating their weaknesses in English. For instance, instructors can offer practice writing prompts to meet the needs of their students, who belong to different English proficiency throughout the course, or precise, step-by-step prompt writing guidelines if students have trouble with writing prompts. These prompts offer a learning opportunity in themselves as students are required to interact with ChatGPT in a natural way. However, this should not be an obstacle to students using ChatGPT. Therefore, if the instructor wants to use ChatGPT using English prompts, it is imperative to ensure that students receive instruction in developing prompts using minimal English skills as a prerequisite before undertaking actual writing tasks.

Keeping in mind the potential limitations of AI and ethical considerations (Kim 2024), instructors should closely examine the positive and negative impacts that the use of chatbots can have for learners. For example, instructors need to consider the inaccuracies or reversals of AI tools (Hong and Han 2023), which have been raised as problems not only in this study but also in others, to ensure that ChatGPT results are trustworthy when students use them as a learning aid. If not, students may use incorrect information to learn. In addition, instructors need to establish learning strategies to prevent students from becoming overly dependent on ChatGPT when using ChatGPT as a learning tool.

To sum up, when using ChatGPT as a learning tool in university English writing classes a customized learning strategy is essential given the varied level of student interest, language competence and familiarity with AI Chatbots. To be specific, an educational approach that reflects the learning needs and interests of each student needs to clearly delineate the advantages and disadvantages of ChatGPT. In addition, it is necessary to develop a learning strategy how to utilize AI chatbots at each stage of brainstorming, organizing, first draft, and final draft in English writing. Furthermore, when integrating AI tools such as ChatGPT into the learning process, educators should strive to maximize the positive impact of AI tools by providing systematic and effective guidance tailored to the level and needs of the learners. Furthermore, education on the ethical issues and potential disadvantages of learning using AI tools needs to be provided to ensure proper cultivation of students' critical thinking skills regarding use of AI tools.

Within this research the researcher conducted a qualitative analysis of the attitudes of intermediate and advanced students toward English learning and ChatGPT as a writing instruction tool, targeting 17 intermediate and 17 advanced students. More longitudinal studies with larger sample sizes encompassing writers with more varied

backgrounds and assessing broader levels of both English and ChatGPT competency is suggested for future research. Likewise, it would be valuable to compare other AI platforms and the ever-expanding writing extension apps developed for them to determine which English writing instruction approach works best for learners studying English as a second language.

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Examples in: English

Applicable Languages: English

Applicable Level: Tertiary

Appendix

Examples of ChatGPT Prompts that Guide English Writing

| Categories | Expressions to Use When Writing in English with ChatGPT | ChatGPT 사용시 적용할 수 있는 영어표현 |
|--|--|--|
| Idea Development across Various Fields | Can you explain this topic in more detail? | 주제에 관하여 더 자세히 설명해 줄 수 있니? |
| | Can you summarize the main points related to this topic? | 주제와 관련된 주요 요점을 요약해 줄 수 있니? |
| | Can you explain important people or events related to my topic? | 내 주제와 관련된 중요한 인물이나 사건에 관하여 설명해 줄 수 있니? |
| | What are some other related topics I could expand into? | 내가 더 확장할 수 있는 관련 주제에 어떤 것들이 있을까? |
| | How can I explore this topic more deeply? | 내가 이 주제를 더 깊이 탐구할 수 있는 방법이 있을까? |
| | Can you tell me some interesting facts or statistics about this topic? | 주제에 관하여 흥미로운 사실이나 통계를 알려줄 수 있니? |
| | Can you describe the social and cultural context related to my topic? | 내 주제와 관련된 사회적, 문화적 맥락을 설명해 줄 수 있니? |
| Linguistic Elements and Vocabulary | Translate the following words into English. | 이 단어들을 영어로 번역해 줘. |
| | Recommend different words with the same meaning for my thesis statement. | 내 논지 문장과 같은 의미를 가진 다른 단어를 추천해 줘. |
| | I would like some suggestions for enriching the vocabulary in my essay. | 나는 에세이의 어휘를 풍부하게 할 수 있는 제안을 원해. |
| | How can I make this sentence sound more natural? | 이문장을 더 자연스럽게 만들려면 어떻게 해야 하니? |
| | Rewrite a simple sentence into a more academic structure. | 간단한 문장을 더 학술적인 구조로 다시 작성해줘. |
| Grammar and Error Correction | Correct any spelling errors in the following sentences. | 다음 문장의 철자 오류를 수정해줘. |
| | Correct any punctuation errors in the following sentences. | 다음 문장의 구두점 오류를 수정해줘. |
| | I am a college student. Is my essay well organized? | 나는 대학생이야. 내 에세이 잘 구성되어 있니? |
| Essay Structure and Organization | What do you think about my essay? | 내 에세이에 대해 너는 어떻게 생각하니? |
| | Do you see any problems with this paragraph I wrote? | 내가 쓴 단락에 문제가 있는지 확인해 줄래? |
| | Do you have any ideas for a more captivating thesis statement? | 더 매력적인 논지 문장에 대한 아이디어를 가지고 있니? |
| | How can I improve the flow of this essay? | 내가 에세이 흐름을 개선할 수 있는 방법이 있을까? |
| | Do you have any tips for improving the structure of | 내가 에세이 구조를 개선하는 데 팁을 |

| | | |
|---------------------------------|--|---|
| | my essay? | 제공해 줄 수 있지 |
| | How can I engage the reader's interest? | 내가 어떻게 독자의 흥미를 끌 수 있을까? |
| | Do you have any suggestions for a more interesting hook? | 너는 더 흥미로운 hook에 대해 제안해줘? |
| | What style of writing is most appropriate for this topic? | 주제에 관하여 가장 적합한 글쓰기 스타일은 무엇이라고 생각하니? |
| Thesis and Argument Development | Develop this thesis statement to include a controlling idea. | 통제 아이디어를 포함해서 논지 문장을 발전시켜줘. |
| | What evidence could make my argument more persuasive? | 어떤 증거가 내 주장을 더 설득력 있게 만들 수 있다고 생각하니? |
| | Do you have any ideas for a more captivating thesis statement? | 논지를 더욱 매력적으로 만들 수 있는 문장에 대한 아이디어를 제공해 줄 수 있지? |
| | Can you suggest any improvements to my opinion on this topic? | 이 주제에 대한 내 의견에 어떤 개선 사항을 제안해줄 수 있지? |
| | How could I further develop the ideas I have presented? | 내가 제시한 아이디어를 어떻게 더 발전시킬 수 있는지 조언해 줄 수 있지? |
| | Is the example I used appropriate? What other examples could I use? | 내가 사용한 예시가 적절하다고 생각하니? 내가 사용할 수 있는 다른 예시에는 무엇이 있을까? |
| Essay Titles and Final Touches | Can you suggest a good title for my essay? | 내 에세이에 어울리는 좋은 제목을 제안해줄 수 있지? |
| | Do you have any ideas for a more interesting introduction? | 너는 에세이 서론을 작성하는데 더 흥미로운 아이디어가 있지? |
| | What would be a more effective way to conclude this essay? | 이 에세이를 결론짓는 더 효과적인 방법은 무엇일까? |
| | Is this conclusion strong enough? How can it be improved? | 이 결론 충분히 강하니? 결론을 어떻게 개선할 수 있을까? |
| | Is the quote I used appropriate for this topic? Can you check it for me? | 내가 사용한 인용구가 이 주제에 적합하니? 그것을 확인해 줄 수 있지? |