Opportunities Of Using Chatgpt In Academic Writing: Perceptions Of The Philippines And Indonesian Students

[1]Rozanah Katrina Herda, [2]Arnel S. Travero, [1]Abdullah Kafabih, [1]Alfatih Widiyadi Koeswoyo, [1]Risma Novita Sari, [1]Farrij Imam Hakiki, [1]Nikmatul Wahidah

[1] Universitas Negeri Yogyakarta, Yogyakarta, Indonesia
[2] University of Science and Technology of Southern Philippines-Claveria, Philippines
Email: katrinaherda@uny.ac.id

Abstract

The widespread utilization of Artificial Intelligence (AI) has caused debate in education about whether it is allowed in academic writing. ChatGPT facilitates academic writing in the EFL context by generating ideas and refining language. It provides research support by suggesting sources and enhances clarity and coherence in papers on complex topics. This study aims to uncover students' perception of using ChatGPT as one of the most popular AI in the writing context. This quantitative research with a causal-comparative design analyzed the data involving two groups of students from Indonesia and the Philippines (N=334). The instrument used in this research was a closed-ended questionnaire. The research findings showed that students enjoyed the integration of ChatGPT in their academic writing because its contribution has raised their confidence, decreased stress, and raised writing quality which leads to satisfaction in their writing.

Keywords: Artificial Intelligence (AI), ChatGPT, Academic Writing, Students' Perception

Abstrak

Berkembangnya penggunaan Artificial Intelligence (AI) dalam ranah pendidikan menimbulkan perdebatan mengenai dibenarkannya penggunaan AI dalam proses penulisan karya ilmiah. Dalam konteks EFL, ChatGPT memfasilitasi penulisan akademik dengan pengembangan ide dan penyempurnaan bahasa. ChatGPT menyediakan dukungan penelitian dengan menyarankan sumber-sumber dan meningkatkan kejelasan dan koherensi dalam karya-karya pada topik-topik kompleks. Penelitian ini bertujuan untuk mengetahui persepsi para peserta didik terkait penggunaan ChatGPT dalam konteks menulis, salah satu model AI populer. Penelitian kuantitatif dengan desain kausal-komparatif menganalisis yang melibatkan dua kelompok peserta didik dari Indonesia dan Filipina (N=334). Instrumen yang digunakan pada penelitian ini adalah sebuah kuisioner yang sifatnya *closed-ended.* Hasil penelitian menunjukkan bahwa peserta didik senang dengan integrasi ChatGPT dalam penulisan akademik karena ChatGPT berkontribusi dalam peningkatan kepercayaan diri, penurunan stres, dan peningkatan kualitas penulisan yang mengarah kepada kepuasan dalam keterampilan menulis.

Kata Kunci: *Artificial Intelligence* (AI), ChatGPT, Menulis Akademik, Persepsi Peserta Didik

INTRODUCTION

Academic writing capability in students is one of the crucial skills that need to be possessed (Zhang & Zhang, 2021). Nevertheless, many students continue to struggle with the art of academic writing. Challenges that must be considered include a lack of comprehension of the proper writing structure, difficulty in organizing ideas, and limitations in using appropriate language. This impacts the quality of academic writing, which is not in accordance with the appropriate standards and has the potential to impede students' academic development. As a consequence of technological advancements, the writing behaviour of the 21st century has transitioned from traditional print-based writing to digital writing. Technology makes learning more convenient, so human-centred learning and using the 4Cs—critical thinking, creativity, communication, and collaboration—tend to be neglected. Furthermore, especially in the academic community, it is still unclear whether to view the rise of AI technologies like ChatGPT as an opponent or a partner (Aubigant & Diab, 2023). Thus far some educators are collecting proof to tolerate using ChatGPT in academic writing.

Additionally, ChatGPT is one of the most frequently implemented technological advancements. It is a potential instrument for supporting academic writing, as it is an artificial intelligence model that has been released by OpenAI and is capable of understanding and generating text with a high level of coherence and relevance (Bibi & Atta, 2024). ChatGPT is being used worldwide, including in the Philippines and Indonesia, where it is gaining acceptance as a teaching and learning tool. However, the widespread utilization of ChatGPT has caused debate in the education field (Yu, 2024). Some educators recognize it as an opportunity to help students because it offers a chance for personalized learning (Viorennita et al., 2023; Yu, 2024). Others are skeptical, concerned that it might encourage plagiarism and academic fraud, such as copying, cheating, and lying (Dempere et al., 2023; Sison et al., 2023).

Moreover, some worldwide schools limit or even prohibit ChatGPT use. This contrasts with the previous opinion that ChatGPT is considered a beneficial tool for students. Sison et al. (2023) suggested ChatGPT is highly effective for several applications in creative writing, such as brainstorming, generating ideas, and transforming text styles. Additionally, it can be utilized for grammar checking, summarizing, copywriting, and copyediting in non-creative writing. According to proponents, ChatGPT can be utilized for academic writing without violating academic ethics and integrity. It also improves writing abilities by offering instantaneous syntax, style, and organization feedback. It provides writing exercises, facilitates idea generation, and improves language skills to raise students' general writing proficiency.

Although ChatGPT is increasingly being recognized as a helpful tool for academic writing, there is a lack of empirical research that investigates student perceptions in various educational settings, especially in Southeast Asia. Current literature often analyzes the possible advantages and disadvantages of ChatGPT in a broad manner, without taking into account the specific educational practices and technological uptake in different regions. This study aims to fill this void by examining the perspectives of students in the Philippines and Indonesia, providing useful insights into the utilization and perception of ChatGPT in diverse educational settings. Gaining insight into these perspectives is essential for educators and policymakers, as it can guide the creation of more efficient approaches for incorporating AI tools into academic courses. Consequently, this can improve the caliber of scholarly writing and overall educational achievements.

In today's digital world, where information is always available and easy to find, the utilization of technology in the process of learning writing is of the utmost importance. Technology provides many tools that significantly improve practice, feedback, and engagement. Automated writing aids like ChatGPT offer immediate edits, suggestions to enhance clarity and style, and access to extensive resources. Moreover, incorporating technology ultimately enables students to cultivate expertise and self-assurance in writing across diverse fields and situations, as technology gives them new ways to find information, cooperate with others, and also write texts (Pennington, 2014). In line with the context, writing is a difficult skill in English language learning, which requires learners' ability

to take in information, understand it, and, at the very least, get it out (Herda et al., 2024; Sari, 2019). Many aspects must be considered when students write, especially in academic writing. To be credible, the writing must be supported by substantial evidence. In this case, being correct in academic writing entails more than simply obeying grammar rules or writing in a specific style. It entails meticulous fact-checking, rigorous methodologies, and truthfulness when presenting facts and findings.

Additionally, digital media is so widely used that errors can spread quickly and cause people to question their reading, resulting in much misinformation. As a result, students must ensure that their writing is totally factual and sourced correctly. Sophisticated computer tools can now detect plagiarism, analyze data, and organize references better than ever before, making academic work more thorough (Paltridge, 2020). Additionally, more students can now use academic materials because the internet age has made it simpler for them to access academic resources. The digital era has also altered how students generate, share, and learn knowledge. Students can now share their papers more easily, just like individuals do on social media (Paltridge, 2020). This implies that the demand for precise and unambiguous academic writing will increase as more students access chances and education.

Students who write precisely and simply about academic subjects can gain a better understanding of challenging research. Because they have more information and are being trained to synthesize it more critically, it can also help kids write better. In fact, students may find it simpler to write well these days if they use digital tools. These instruments, however, are only effective when utilized sensibly and responsibly. When students use digital tools recklessly, they may write less, consider using them for fun, or write informally for formal assignments, among other negative effects. (Schcolnik, 2018). An increasing number of students are relying excessively on digital tools, which can decrease their ability to focus on writing principles and their writing skills (Purcell et al., 2013). Consequently, teachers face the challenge of ensuring that their pupils do not become reliant on technology due to technological advancements. Depending on the input the user uses, the results of a writing instrument can vary for the same task (Yeadon et al., 2023). A good student makes sure that these tools improve, not worsen, writing in accordance with academic criteria.

Engaging in academic writing, such as composing a research paper, is a challenging endeavour that requires substantial time, energy, and expertise to carry out thorough research, structure thoughts coherently, and communicate findings precisely. Particularly students enrolled in English as a Foreign Language (EFL) classes who continue to struggle with writing in English. Nevertheless, within the swiftly evolving realm of technology, artificial intelligence (AI) has introduced numerous novel instruments to enhance learning and facilitate academic tasks, particularly in the domain of writing. The advancement of AI technology is continuously improving, resulting in enhanced accessibility, use, and effectiveness of tools such as ChatGPT (Zhou et al., 2022). This intelligent computer program can generate written content in a manner that closely resembles human writing, provided with a certain subject or prompt.

ChatGPT can assist with information retrieval by providing recommendations for search phrases and valuable databases and resources (Huang & Tan, 2023). This sophisticated computer program can produce written text that closely mimics human writing when given a certain subject or prompt. ChatGPT can enhance information retrieval by offering suggestions for search terms and important databases and resources. As schools try to use this technology in their lessons, it's important to consider how ChatGPT affects academic writing. It is worth discovering whether it helps students learn more or whether it can cause problems with honesty in education. Based on research conducted by Song and Song (2023), it was found that participants' academic writing performance and motivation to write improved due to the incorporation of language learning supported by AI. It can help improve the writing skills of people who are learning English as a foreign language by giving them feedback and advice on different aspects of their writing (Song & Song, 2023).

Therefore, ChatGPT can help students with trouble writing or using the right words. It can also help them be more creative and improve their writing. However, using ChatGPT in academic writing classes has some risks. It does not consider the context, think critically, and make moral decisions, and it might accidentally make unfair beliefs stronger (Fitria, 2023). One of the biggest worries is the possibility of cheating in school. Students using AI to write their essays and assignments raise concerns about whether the work is their own and whether they truly understand the subject. This problem worsens because it's hard to tell if AI-made content exists. This could lower the quality of education and make real student work less valuable. Also, using AI tools like ChatGPT too much might stop students from developing their critical thinking and ability to write independently. However, students might start relying on technology to do things they should be learning to do themselves. With this in mind, this study aimed to analyze the perspectives of Indonesian and Filipino students' perspectives regarding using ChatGPT for academic writing.

METHOD

In this quantitative study with numerical data, the researchers employed a causal-comparative design to establish the source or consequences of differences between or among groups of people (Fraenkel et al., 2022; Gay et al., 2012). The two groups included EFL college students from the Philippines and Indonesia. In this example, the researchers observed a causal-comparative study that investigated the reasons for two groups (independent variables) to draw comparisons between them. The causal-comparative study is designed as shown in Table 1.

Table 1. Causal-Comparative Design

Group	Participants	Variable
I	C_1 The Philippines Students	O
II	C_2 The Indonesian Students	Perceptions of ChatGPT

The study included 334 EFL college students, 227 from the Philippines and 107 from Indonesia. In this phase, the researchers utilized random sampling to select volunteers. It was a technique in which people from both countries' populations had an equal and independent probability of being chosen as participants. The researchers used simple random sampling by allowing individuals of the population which is undergraduate students majoring in English Education who are ChatGPT users and interested in the research topic to become respondents. Fraenkel et al. (2022) explained that simple random sampling is a method in which each individual in the population has an equitable and autonomous opportunity to be chosen.

Therefore, to collect research data, the researchers utilized a closed-ended questionnaire with a five-point Likert Scale (5=strongly agree, 4=agree, 3=neutral, 2=disagree, and 1=strongly disagree) to acquire information from respondents. Questionnaire sheets became a written set of self-report questions for students to respond to as research participants (Fraenkel et al., 2022; Gay et al., 2012). The researchers modified 20 relevant questionnaires developed by Bibi and Atta (2024). Those questionnaire statements cover four indicators reliably and validly, as the Likert Scale questionnaires were to assess the participants' behaviour and perceptions (Taherdoost, 2016), particularly the learning needs that need to be revealed. To test the instrument validity, the researchers used content validity regarding the resource instrument. The instrument was tested using the Alfa Cronbach formula and the result shows that the instrument has a high reliability because $r_i = 0,9$ ($r_i > 0,7$). To save time, this study distributed questionnaire sheets to respondents online via Google Forms. The researchers shielded the respondents' identities.

Table 2. A Questionnaire Items Classification

Indicator	Question Items Classification
Basic Information of Perceptions	1, 2, 3, 4, 5
Experiences of using ChatGPT for Writing	6, 7, 8
Advantages of ChatGPT for Writing	9, 10, 11, 12, 13, 14
Beliefs and Suggestions	15, 16, 17, 18, 19, 20

As previously mentioned, the researchers utilized Microsoft Excel to analyze the data from the questionnaire to obtain each response's descriptive statistics and frequency. Table 3 presents the methodology for interpreting the results of the questionnaire. The five-point Likert scale represents a spectrum of behaviour, ranging from the most negative to the most positive response (Widoyoko, 2012). It measures the frequency of answers for each item. Therefore, the researchers analyzed the descriptive rating of each item by calculating the average scores based on Pimentel's (2010), five-point Likert Scale, as presented in Table 3.

Table 3. Adjectival Rating Interpretation

Interval	Adjectival Rating
1.00 – 1.79	Strongly Disagree
1.80 – 2.59	Disagree
2.60 – 3.39	Neutral
3.40 – 4.19	Agree
4.20 and above	Strongly Agree

FINDINGS AND DISCUSSION

In this section, the researchers present the findings and discussion in the relevant order. This study aims to reveal Indonesian and Filipino college students' perceptions regarding using ChatGpt for Academic Writing. Therefore, the researchers present the findings into some categories covering students' worries about the result provided by chatGPT, the potency of Chat GPT in improving writing skills, Students' experience, and satisfaction with using ChatGPT. Number 5 indicates strongly agree, number 4 indicates agree, number 3 for neutral, number 2 for disagree, and number 1 for strongly disagree.

Table 4. Students' Perceptions of the Use of ChatGPT for Academic Writing

No	Statement	Mean Score
5	You are sometimes worried about the authenticity of the results provided by ChatGPT.	4.79
11	AI writing aids have the potential to improve your writing skills greatly.	3.81
12	Using ChatGPT during writing tasks is a pleasant experience.	3.85
15	You feel satisfied with ChatGPT's support in enhancing my English writing ability.	3.42

The data in Table 4 show students' positive perceptions of the use of ChatGPT for academic writing. The mean scores of statements 11, 12, and 15 for criteria agree implied that the students have a good understanding and experience of using ChatGPT for their writing. Therefore, statement 5 showed a mean score of 4.79, indicating that they also have some worries about the authenticity of the results of ChatGPT.

Students can be concerned about utilizing ChatGPT in their academic writing for various reasons. First and foremost, there is a question of credibility and authenticity. There is a chance that the text produced by ChatGPT, which creates language based on patterns discovered from

enormous volumes of data, will not be accurate or nuanced enough to be used in academic work. There's also the worry about plagiarism. Even if ChatGPT creates original content, there's a chance that the material it creates can unintentionally spark plagiarism claims due to an undue resemblance to pre-existing sources. Furthermore, there is no control over the material that ChatGPT generates. Pupils might be concerned that they won't be able to comprehend or predict the AI's responses to their questions, which could result in unexpected or unsuitable content in their academic work.

Another worry is an over-dependence on technology. Students' critical thinking and writing skills development may be hampered by an excessive reliance on ChatGPT for academic writing. In the end, ChatGPT can be a useful resource for coming up with ideas and inspiration, but students need to be careful to utilize it properly, in addition to doing their research and using critical analytical techniques. To academic integrity and guarantee originality, writing must be genuine (Pecorari, 2003). Authenticity establishes credibility and trust by showcasing the writer's distinct voice, views, and observations. In this case, plagiarism compromises this authenticity by passing off someone else's work as one's own, which is against ethical guidelines. It weakens the credibility of academic discourse and the relationship of trust between authors and readers. Intellectual growth and discovery are facilitated by originality, which encourages innovation and critical thinking (Nosich, 2021). Retaining authenticity and abstaining from plagiarism is crucial in academic and professional settings to protect intellectual property, honour honesty, and preserve the integrity of information sharing.

In line with that point of view, Artificial intelligence (AI) gives students rapid access to a wealth of knowledge and resources (Khabib, 2022; Shidiq, 2023), which is a tremendous help for their academic writing. It facilitates research by quickly analyzing data, finding pertinent sources, and developing concepts. AI-powered tools improve coherence and clarity by helping with content organization and structure. AI can also provide style and grammatical recommendations, which raises the writing standard overall. AI provides individualized support by adapting to each user's unique writing preferences and styles through machine-learning techniques (Popescu, 2008). AI also makes collaboration easier, enabling students to effectively get peer evaluation and feedback. Ultimately, artificial intelligence (AI) simplifies the writing process, enabling students to generate excellent academic work more efficiently.

Thus, students should be thankful for ChatGPT due to its versatile assistance in academic endeavours. ChatGPT offers immediate access to a wealth of information, aiding research and idea generation (Mitchell, 2019). It helps refine writing skills by suggesting improvements in grammar, style, and structure (Kim, 2019). The AI's adaptability to individual writing styles fosters personalized learning experiences. Moreover, ChatGPT provides a platform for exploration and experimentation, encouraging creativity and critical thinking. Its support streamlines the writing process, saving time and effort. Ultimately, students benefit from ChatGPT's contributions to their academic growth, making it a valuable tool worthy of appreciation and gratitude.

Regarding pleasant experiences, Indonesian and Filipino students found joy in learning writing skills using ChatGPT. Due to ChatGPT's capacity to inspire creativity, widen perspectives, and support brainstorming sessions, students enjoy utilizing it to explore ideas. ChatGPT is a never-ending source of inspiration, providing a range of viewpoints and thoughts on a wide range of subjects. Thanks to its extensive database, students can explore topics they may not have thought of, which encourages intellectual curiosity. Additionally, ChatGPT's quick responses promote a lively discussion that results in fresh ideas and innovative conceptualizations (Kim, 2019; Mitchell, 2019). In some academic settings, students may test theories, consider other points of view, and improve their thinking thanks to the AI's ability to produce text in response to input prompts. It acts as a safe space for the open exchange of ideas and the development of concepts.

Moreover, ChatGPT encourages original thought and creativity by generating creative scenarios or stories. Additionally, ChatGPT can fill in knowledge gaps by instantly responding to inquiries, allowing students to explore difficult ideas easily. Acting as a virtual assistant gives

students the freedom and agency to explore ideas independently and take charge of their educational experience. All things considered, students view ChatGPT as a useful tool for ideation since, in addition to helping with idea development, it stimulates students' interest and curiosity about learning about novel ideas and viewpoints (Mitchell, 2019). In line with that, Jin (2023) argued that students should enjoy their writing assignments because enjoyment increases motivation, engagement, and recall of the material.

Students are more likely to participate fully and put effort into the assignment when they like writing. Lee and Park (2023) stated that engaging in creative writing exercises can help students express themselves freely and imaginatively, which will direct them to satisfaction. Thanks to this independence, they may personalize and take ownership of their writing, which makes them feel proud of and accomplished with their work. Fun writing activities with the help of ChatGpt can also help students remember what they have learned. Students are more likely to remember the knowledge and abilities they learn when they connect writing to happy feelings and fulfilling experiences. In this case, students are more likely to devote time and energy to their writing when they select subjects they are passionate about, producing writing of a higher calibre. Because creative topic selection may require students to look beyond the box to produce novel ideas or approaches, it also fosters critical thinking and problem-solving abilities.

Additionally, imaginative subjects can pique interest and promote investigation, resulting in more in-depth education and a wider range of knowledge. In the end, students who embrace originality when choosing writing themes improve their writing skills and sense of autonomy and ownership over their education, resulting in a more satisfying and meaningful academic experience. ChatGPT's ability to generate original content gives a sense of enjoyment to the engagement. Students can participate in fun activities that enhance their creativity and critical thinking skills, such as writing innovative stories, brainstorming ideas, and playing word games. ChatGPT's conversational character, reactivity, adaptability, and originality make it a fascinating tool for increasing student enjoyment and participation in learning. The AI's ability to produce innovative ideas and engage in meaningful conversations makes learning more enjoyable.

However, by entering unique thoughts and correctly citing any knowledge gleaned from the AI, students can avoid plagiarism when using ChatGPT. They ought to give ChatGPT precise instructions so that it can produce content in line with their viewpoint and understanding. Students should also assess ChatGPT's output thoroughly to ensure it reflects their voices and works well with their writing. Students can maintain academic integrity and avoid plagiarism by using ChatGPT as a tool for idea development and inspiration rather than as a source of pre-written text. ChatGPT's flexibility and adaptability make it an invaluable tool for students looking for direction, criticism, and motivation in their academic endeavors. This helps to improve learning outcomes and productivity.

CONCLUSION

Technology is highly beneficial for all audiences, including teachers and students. For teachers and students, it can enhance access to information, facilitate communication, and simplify the learning process. It expands educational opportunities, promotes collaboration, and empowers individuals to adapt to an increasingly digital world, ultimately enriching both teaching and learning experiences. This study aims to reveal Indonesian and Filipino college students' perceptions regarding using ChatGpt for Academic Writing. The study's findings involving students from Indonesia and the Philippines implied that their autonomy in using ChatGPT empowers them to tailor their interactions with the AI according to their needs and preferences. With autonomy, students can decide when and how to utilize ChatGPT, whether it's for brainstorming ideas, seeking clarification on concepts, or refining their writing. Besides that, students feel safe with ChatGPT's findings because it provides reliable, relevant, and accurate information. Its vast database ensures comprehensive responses, while its AI capabilities enable nuanced understanding, fostering trust in the validity and credibility of the information provided. Students feel happy integrating ChatGPT into

academic writing because its assistance boosts confidence, reduces stress, and enhances the overall quality of writing, leading to a sense of accomplishment and satisfaction in their work. Briefly, ChatGPT gives students good opportunities for fruitful learning experiences in writing class. Nevertheless, this study is subject to several limitations in its methodology. Therefore, for future research, the researchers strongly advise those with similar interests to do studies that not only uncover impressions but also explore the larger concept and methodology. Additionally, practitioners and teachers may integrate ChatGPT for teaching writing since ChatGPT enables students to explore their academic activities independently, encouraging self-directed learning and confidence in their talents.

REFERENCES

Aubignat, M., & Diab, E. (2023). Artificial intelligence and ChatGPT between worst enemy and best friend: The two faces of a revolution and its impact on science and medical schools. *Revue Neurologique, 179*(6), 520–522. https://doi.org/10.1016/j.neurol.2023.03.004

Bibi, Z., & Atta, A. (2024). The Role of ChatGPT as AI English Writing Assistant: A Study of Student's Perceptions, Experiences, and Satisfaction. *Annals of Human and Social Sciences, 5(*1), 433–443. https://doi.org/10.35484/ahss.2024(5-I)39

Dempere, J., Modugu, K., Hesham, A., & Ramasamy, L. K. (2023). The impact of ChatGPT on higher education. *Frontiers in Education,* 8, 1–13. https://doi.org/10.3389/feduc.2023.1206936

Duarte, F. (2024). *Number of ChatGPT Users (May 2024)*. Exploding Topics. https://explodingtopics.com/blog/chatgpt-users

Fitria, T. N. (2023). Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essay. Elt Forum: *Journal of English Language Teaching/Elt Forum, 12*(1), 44–58. https://doi.org/10.15294/elt.v12i1.64069

Fraenkel, J. R., Wallen, N. E. & Yun, H. H. (2022). *How to Design and Evaluate Research in Education* (11th Ed.). McGraw-Hill.

Gay, L. R., Mills, G. E., & Airaisan, P. W. (2012). *Educational Research: Competencies for Analysis and Applications* (10th Ed.). Pearson.

Herda, R. K., Principe, R. A., Travero, A. S., Harahap, M. F. P., Viantika, S., & Hamidi, M. A. (2024). Voicing Philippines and Indonesian Students' Needs of Automated Written Corrective Feedback in EFL Writing Classrooms. *JELITA: Journal of Education, Language Innovation, and Applied Linguistics*, *3*(1), 1-12. https://doi.org/10.37058/jelita.v3i1.8920

Huang, J., & Tan, M. (2023). The role of ChatGPT in scientific communication: writing better scientific review articles. *PubMed,* 13(4), 1148–1154. https://pubmed.ncbi.nlm.nih.gov/37168339

Jin, Y. (2023). The development and validation of the English writing enjoyment scale. *Perceptual and Motor Skills*, *130*(1), 555-575. https://doi.org/10.1177/00315125221137649

Khabib, S. (2022). Introducing artificial intelligence (AI)-based digital writing assistants for teachers in writing scientific articles. *Teaching English as a Foreign Language Journal*, *1*(2), 114-124.

https://doi.org/10.12928/tefl.v1i2.249

Kim, N. Y. (2019). A study on the use of artificial intelligence chatbots for improving English grammar skills. *Journal of Digital Convergence*, *17*(8). https://doi.org/10.14400/JDC.2019.17.8.037

Lee, S., & Park, G. (2023). Exploring the impact of ChatGPT literacy on user satisfaction: The mediating role of user motivations. *Cyberpsychology, Behavior, and Social Networking*, *26*(12), 913-918. https://doi.org/10.1089/cyber.2023.0312

Mitchell, M. (2019). *Artificial intelligence: A Guide for Thinking Humans*. Penguin UK.

Nosich, G. (2021). *Critical Writing: A Guide to Writing A Paper Using the Concepts and Processes of Critical Thinking*. Rowman & Littlefield.

Paltridge, B. (2020). Writing for academic journals in the digital era. *RELC Journal, 51*(1), 147–157. https://doi.org/10.1177/0033688219890359Pecorari, D. (2003). Good and original: Plagiarism and patchwriting in academic second-language writing. *Journal of Second Language Writing*, 12(4), 317-345. https://doi.org/10.1016/j.jslw.2003.08.004

Pennington, M. C. (2014). Trends in writing and technology. *Writing & Pedagogy, 5*(2), 155–179. https://doi.org/10.1558/wap.v5i2.155

Pimentel, J. L. (2010). A note on the usage of Likert Scaling for research data analysis. *USM R&D Journal*, *18*(2), 109-112. https://www.researchgate.net/profile/Jonald-Pimentel/publication/331231816_A_note_on_the_usage_of_Likert_Scaling_for_research_data_analysis/links/5f82ff6592851c14bcbe847d/A-note-on-the-usage-of-Likert-Scaling-for-research-data-analysis.pdf

Popescu, E. (2008, August). An artificial intelligence course used to investigate students' learning style. In *International Conference on Web-Based Learning* (pp. 122-131). Springer Berlin Heidelberg.

Purcell, K., Buchanan, J., & Friedrich, L. (2013). The impact of digital tools on student writing and how writing is taught in schools. *Washington, DC: Pew Research Center*, 16. https://search.issuelab.org/resource/the-impact-of-digital-tools-on-student-writing-and-how-writing-is-taught-in-schools.html

Sari, R. (2019). SOCIAL MEDIA AS AN AUTONOMOUS LEARNING FACILITY TO ENHANCE WRITING SKILL IN DIGITAL ERA. *English Language and Literature International Conference,* 3, 296–301. https://prosiding.unimus.ac.id/index.php/ELLIC/article/download/4729/4257

Sharma, S., & Yadav, R. (2022). Chat GPT–A technological remedy or challenge for education system. *Global Journal of Enterprise Information System*, *14*(4), 46-51.

Shidiq, M. (2023, May). The use of artificial intelligence-based chat-gpt and its challenges for the world of education; from the viewpoint of the development of creative writing skills. In *Proceeding of international conference on education, society and humanity* (Vol. 1, No. 1, pp. 353-357).

Schcolnik, M. (2018). Digital Tools in Academic Writing? *Journal of Academic Writing, 8*(1), 121-130. https://doi.org/10.18552/joaw.v8i1.360

Sison, A. J. G., Daza, M. T., Gozalo-Brizuela, R., & Garrido-Merchán, E. C. (2023). ChatGPT: More Than a "Weapon of Mass Deception" Ethical Challenges and Responses from the Human-Centered Artificial Intelligence (HCAI) Perspective. *International Journal of Human–Computer Interaction*, 1–20. https://doi.org/10.1080/10447318.2023.2225931

Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology*, 14. https://doi.org/10.3389/fpsyg.2023.1260843

Taherdoost, H. (2016). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. *How to test the validation of a questionnaire/survey in a research (August 10, 2016)*. http://dx.doi.org/10.2139/ssrn.3205040

Viorennita, A., Dewi, L., & Riyana, C. (2023). The Role of ChatGPT AI in Student Learning Experience. *IJOMR: Indonesian Journal of Multidisciplinary Research, 3*(2), 445–452. https://doi.org/https://doi.org/10.17509/ijomr.v3i2.60882

Widoyoko, E. S. (2012). *Teknik Penyusunan Instrumen Penelitian*. Pustaka Pelajar.

Yeadon, W., Inyang, O., Mizouri, A., Peach, A., & Testrow, C. P. (2023). The death of the short-form physics essay in the coming AI revolution. *Physics Education, 58*(3), 035027. https://doi.org/10.1088/1361-6552/acc5cf

Yu, H. (2023). Reflection on whether Chat GPT should be banned by academia from the perspective of education and teaching. *Frontiers in Psychology, 14*, 1–12. https://doi.org/10.3389/fpsyg.2023.1181712

Yu, H. (2024). The application and challenges of ChatGPT in educational transformation: New demands for teachers' roles. *Heliyon, 10*(2), 1–15. https://doi.org/10.1016/j.heliyon.2024.e24289

Zhang, L., & Zhang, L. J. (2021). Fostering Stance-Taking as a Sustainable Goal in Developing EFL Students' Academic Writing Skills: Exploring the Effects of Explicit Instruction on Academic Writing Skills and Stance Deployment. *Sustainability, 13*(8), 4270. https://doi.org/10.3390/su13084270

Zhou, C., Qiu, C., & Acuna, D. E. (2022). Paraphrase identification with deep learning: A review of datasets and methods. arXiv preprint arXiv:2212.06933. https://doi.org/10.48550/arxiv.2212.06933