

Ethical Ways of Using Artificial Intelligence in Academic Writing and Research

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Abstract

Artificial intelligence, commonly referred to as AI, refers to the ability of machines and computers to think like humans and carry out human activities. It is currently applied in different sectors, including education, where it helps in the development of personalized learning, automated grading and feedback, advanced tutorial system, and research and academic writing. However, there is a debate on the ethical use of AI in academic writing and research because of the abuse of the concept by some students and scholars. This study, therefore, proffered six ways AI can be used in research and academic writing. These include generating ideas and suggesting research design, structuring and organizing papers, synthesizing papers, editing and proofreading, data management, and information dissemination. The study concluded that, in academic writing, materials from AI should be regarded as suggestions and not the main contents of the work.

Keywords: artificial intelligence, academic writing, research, ethics

Introduction

Artificial intelligence (AI henceforth) is making a lot of changes across the globe. It has made a lot of things easier to achieve because it enables the automation of services in manufacturing, health deliver, customer service, and the delivery of goods and services. It is also transforming the education sector because it aids students and teachers in

academic activities. AI, according to Allam et al. (2023), refers to the design of machines to become autonomous and intelligent through the use of algorithm, which learns from human activities. It also refers to the ability of machines and computers to think and act like humans (Sloane, 2024). Here, computers are taught to have conversations with their users and, while doing that, help

them make predictions, solve problems, and automatically carry out certain manual tasks (Marres et al., 2024). This ability of AI to solve problems has caused many people to believe that its usage in education may be unethical.

One of the key benefits of AI in education is that it aids students in learning. It is used in education to facilitate personalized learning activities, students' assessments, and instant feedback on learners' activities (Muresn, 2023; Gocen & Ayedemir, 2020; Reiss, 2021). AI also provides room for inclusivity in education and helps students to quickly gain access to quality information (Reiss, 2021). Teachers also benefit from AI because it helps them to plan their lessons, access trends in knowledge and carry out any other teaching and learning activities.

Another use of AI in education is in academic writing and research. Students have been observed to consult AI to get information while writing their assignments, thesis, capstone, and other forms of academic writing. AI is also consulted by academics and researchers as their guide during their research process and the report of their research findings (Marres et al., 2024). But then, many individuals abuse this tool by

using it to generate their academic papers and research reports. These abuses are some of the instances of the unethical use of AI in research and academic writing.

The aim of this study is to disclose the ethical ways of using AI in academic writing and research. Its concern is focused on how academics, scholars, researchers, and students can maximize the use of the machine without damaging their integrity and intellectual ownership of their works. This way, the affected individuals can find a faster and easier way to tackle their challenging academic tasks with AI.

Conceptualizing Academic Writing

Academic writing, according to Galti and Mustapha (2023), is a type of writing used to show the intellectual and academic ability as well as knowledge of the writer. Akkya and Aydin (2018) describe it as an act of sharing the findings of original research with other scholars in accordance with the standard rules guiding the writing genre. They reveal that there are different types of academic writing, which include articles, papers, posters and projects, all of which involve using a composition to report a research process. Gabi (2022) defines this writing

genre as “formal understandable written expression of one’s evidence-based perspective ...on a given topic, question or subject” (p. 2). Wilson (2022) perceives it as an analytical writing, which has the primary purpose of searching for truth. According to him, academic writing has three pillars, which are thinking, process and conversation with others. This means that academic writing is systematic because it must follow certain steps or processes, it must express the writer’s thoughts and it must be able to communicate vividly.

Based on the descriptions writing, it is understood that it is the genre of writing that reports research process and findings. In other words, after a researcher must have performed an investigation, an experiment, or critically observed an event, he uses academic writing to communicate the findings of his research to other people, who might have an interest in the topic. But while doing so, he has to explain the process he followed to carry out the research and arrive at the result. As Khalife and Albadawy (2024) explain, this writing genre uses logical reasoning and data-driven argument to present and clarify research reports. In other

words, academic writing focuses only on reporting scholarly researches.

Ethical Use of AI in Research and Academic Writing

The use of AI in academic writing has brought a lot of concern into the academia because it is believed that it may cause scholars, researchers and educators to use it in an unethical way. Khalifa and Albadawy (2024) state that the reason for the concern is that academic writing is challenging and, as a result, scholars and educators may resort to the use of AI tools to make it easier for them to report their research findings and processes. If this is the case, they may use the tools unethically to create the content of their papers. Nevertheless, there are certain ways AI can be used ethically in academic writing. These methods are briefly discussed below.

1. Idea Generation and Research Design Suggestion

AI can assist researchers to brainstorm new topics, identify gaps in existing knowledge and literature, as well as generate hypothesis and research questions (Guruja & Preethi, 2024; Khalifa & Albadawy, 2024). In this case, AI can use existing data to identify gaps, suggest ideas, and predict hypothesis

for the writer. In addition, it can be used as the tool for suggesting the appropriate research design for the study as well as the theory that can be used to anchor the study. Scholars can also use it to identify the sampling technique, data collection method, and data analysis method that can be applied to the study. Nevertheless, AI's suggestions and predictions should not be taken verbatim without due verification.

2. Structuring, Organizing and Improving Contents

AI can be used to create outlines for an academic paper. Here, the machine can help the scholar to structure their papers, using the accepted pattern for academic writing (Storey, 2023; Khalifa & Albadawy, 2024). Scholars can also use it to organize the contents of their papers in a logical manner to ensure coherence. This can help with improving the content of the academic work.

3. Paper Synthesis and Literature Support

Scholars can use AI to extract information from an existing literature. This is most crucial when the scholar needs an overview of literature, especially when the literature is voluminous and if the scholar is facing time constraint with conducting the research

(Khalifa & Albadawy, 2024). AI can also help scholars synthesize research findings with arguments and theories, thereby making it easier for them to discover as well as express the crucial knowledge within the research area. However, the accuracy of the information provided as well as its depth should be verified before it is used and applied to the study.

4. Enhancement of Data Management and Analysis

AI can also be used to manage and analyse a large set of data. In addition, scholars use it to visualize their research findings. Here, AI is believed to be the best option for ensuring more accurate, efficient, and timely handling of data (Aljuaid, 2024; Khalifa & Albadawy, 2024).

5. Paper Editing and Review

Some AI tools, such as Grammarly and ProWritingAid, can be used to proofread, edit and obtain objective reviews about their papers (Guruja & Preethi, 2024). AI can also provide tools for plagiarism checks to ensure the originality of the academic work. Some scholars also use the tool to rephrase sentences in their papers to ensure they align with academic writing language. However, the use of AI in conducting these activities

may not always yield accurate result (Khalifa & Albadaawy, 2024).

6. Information Dissemination

AI can be used to disseminate information to the target audience (Khalifa & Albadaawy, 2024; Aljuaid, 2024). In academic writing, it can help scholars to type their papers as well as help the readers to read and assimilate the content of the paper. In some cases, AI provides a read aloud option for individuals to listen to the papers instead of reading them.

Conclusion

AI is an interactive computer tool that has come to stay. Its use in academic writing can help researchers and scholars to conduct their research and report its findings. They can use AI to identify gaps in knowledge, discover how to structure their report, generate ideas for the research and edit their works when they are through with writing the report. In other words, AI can act as a guide and a tool that can assist scholars, researchers and educators to write their academic papers and projects. This means that to use it ethically in academic writing and research, the information it provided should be verified and used as suggestions and not the main content of the work.

References

1. Akkaya, A., & Aydin, G. (2018). Academics' views on the characteristics of academic writing. *Educational Policy Analysis and Strategic Research*, 13(2), 128–160.
<https://doi.org/10.29329/epasr.2018.143.7>
2. Aljuaid, H. (2024). The impact of artificial intelligence tools on academic writing instruction in higher education: A systematic review Special Issue on ChatGPT. *Arab World English Journal*, 1(1), 26–55.
<https://doi.org/10.24093/awej/ChatGPT.2>
3. Allam, H., Dempere, J., Akre, V., & Flores, P. (2023). Artificial intelligence in education (AIED): Implications and challenges. *Proceedings of the HCT International General Education Conference (HCT-IGEC 2023)*, Atlantis Highlights in Social Sciences, Education and Humanities, 13, 126–140.
4. Gabi, C. (2022). *Academic writing*. Altralogue Publishing.
5. Galti, M., & Mustapha, M. (2023). An introduction to academic writing. *Print'tuff Inno*.

6. Gocen, A., & Aydemir, F. (2020). Artificial intelligence in education and schools. *Research on Education and Media*, 12(1), 13–21. <https://doi.org/10.2478/rem-2020-0003>
7. Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. *Computer Methods and Programs in Biomedicine Update*, 5, 1–12. <https://doi.org/10.1016/j.cmpbup.2024.100145>
8. Marres, N., Castelle, M., Gobbo, B., Poletti, C., & Tripp, J. (2024). AI as super-controversy: Eliciting AI and society controversies with an extended expert community in the UK. *Big Data and Society*, 11(2), April–June, 1–18. <https://doi.org/10.1177/20539517241255103>
9. Mureşan, M. (2023). Impact of artificial intelligence on education. *Research Association for Interdisciplinary Studies Conference Proceedings, 2023*, 81–85.
10. Reiss, M. J. (2021). The use of AI in education: Practicalities and ethical considerations. *London Review of Education*, 19(1), 1–14. <https://doi.org/10.14324/LRE.19.1.05>
11. Sloane, M. (2024). Controversies, contradiction, and “participation”. In A. I. Big Data (Ed.) & *Society*, January–March (pp. 1–5).
12. Storey, V. A. (2023). AI technology and academic writing: Knowing and mastering the “craft skills”. *International Journal of Adult Education and Technology*, 14(1), 1–15. <https://doi.org/10.4018/IJAET.325795>
13. Wilson, A. R. (2022). *Academic writing*
14. Kumar, S. (2023). Artificial Intelligence Learning and Creativity. *Eduphoria*, 01(01), 13–14. <https://doi.org/10.59231/eduphoria/230402>
15. Kumar, S., & Simran. (2024). Equity in K-12 STEAM education. *Eduphoria*, 02(03), 49–55. <https://doi.org/10.59231/eduphoria/230412>

Received on Feb 16, 2025

Accepted on April 20, 2025

Published on July 01, 2025

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