



The Phenomenon of Artificial Intelligence in Assisting in Writing Maritime Student Papers

Darul Prayogo^{1,*}, Awel Suryadi¹, Mustholiq¹, Upik Suryandari¹, Prapti Utami¹, Juharis¹, Fitri Kensiwi¹, Sri Purwantini¹, Fajar Transelasi¹, Indah Nurhidayati¹, Adhi Pratistha Silen¹

ARTICLE INFO

Article history:

Received 24 Dec 2024;
in revised from 29 Dec 2024;
accepted 05 Mar 2025.

Keywords:

Artificial Intelligence, Student Papers,
Higher Education, Technology, Ethics.

ABSTRACT

Artificial Intelligence (AI) has become increasingly familiar in higher education, particularly as a supporting tool for students when working on academic papers. This study explores how AI is being used in completing academic assignments, focusing on its role in helping students search for literature, develop ideas, analyze data, and improve grammar. Using a qualitative approach, data were collected through in-depth interviews with 107 students from various universities in Indonesia. The findings suggest that while AI offers practical benefits, its use also brings forward a number of ethical and pedagogical considerations.

AI is becoming more familiar in higher education, especially that its implementation is usually for students on preparing their academic papers. The study focuses on the ways and beyond in which AI is being utilized to help students get through their academic assignments searching literature, developing ideas or suggestions, analyzing data and improving grammar. Data were obtained qualitatively through in-depth interviews with 107 students from different universities in Indonesia. The projects indicate that even though AI is promising in terms of its real-world advantages, there are numerous ethical and pedagogic concerns regarding using it.

The findings suggest that A.I. can improve both the efficiency and quality of students' writing. Applications like ChatGPT and Grammarly are commonly employed to [to help] organize thoughts more coherently, find pertinent citations or sources of information, and check for grammatical correctness. On the other hand, though, several concerns come up. Over reliance on AI can curtail the ability of students to think critically and analytically. It raises issues related to originality in academic work as well." These issues raise the need to discuss not only the technical merits of AI but also its overall implications for learning.

Based on these findings, this article recommends that institutions of higher education offer more specific guidance and training on the ethical use of AI in academic writing. When deployed responsibly, AI has great potential to prompt and guide student learning and skills development without sacrificing originality or creativity. This study is expected to broaden the knowledge of students, lecturers and policy makers on evolving trends regarding the role of AI in higher education particularly against an increasingly digitized academic backdrop.

1. Introduction.

This makes students often write papers as one of the important academic work (Yang, 2023). It requires one to search, process and present information in an orderly manner. Over the past decade, the application of AI technology for streamlining different phases in academic paper writing has been avail-

¹Politeknik Ilmu Pelayaran Semarang.

*Corresponding author: Darul Prayogo. E-mail Address: darul@pip-semarang.ac.id.

able extensively. Applications like ChatGPT, Grammarly, and Mendeley offer students practical solutions that help them retrieve information swiftly; they assist in organizing ideas and enhance the overall caliber of writing. Although the technology is very beneficial, the use of AI also has important issues related to academic integrity and critical thinking skills (Prayogo, Arifin, et al., 2025).

At the level of higher education the evolution of AI technology does not only embed in the way students perform their assignments but also how lecturers help and assess (Sajja et al., 2023). For instance, AI-based plagiarism detection tools have become the common approach in guaranteeing academic integrity. Conversely, platforms like Turnitin or Grammarly are used by students to check the quality of writing before handing them in their lecturers. This condition proves that the future of AI is not only a tool but actually as part and parcel of updated education ecosystem.

Also, the evolution toward AI technology has also brought with it discussions around how students will learn to think critically in a time when information is readily available. They all say that AI can lessen the learning as students who process to complete their homework with this tool without deeply understanding so. Alternatively, other scholars suggest that using AI appropriately may help learners (Miniankou & Puptsau, 2024). This technology can give real-time feedback, point to improvements and recommend relevant literature which could expedite the student learning process.

Other than that the whole use of AI reflects a role reversal in the educational landscape. On the other hand, where in the past students were required to master certain technical skills such as conducting literature searches by hand, now expertise is being redirected toward processing and critiquing information produced via AI. Therefore, digital literacy skills are playing an important role to both students and lecturers.

It is also relevant to ethical aspects of the use of AI that digital literacy assumes an important role in. These students possibly did not realize that using artificial intelligence to complete their academic tasks is ethically prohibited. Using AI to write an entire essay or article is one potential example of cheating. So educational institutions must guide on the responsible use of AI.

This post will go on to examine AI's potential for helping students write papers; its benefits, challenges, and pedagogical implications. Using a qualitative approach, this research investigates students' perceptions of AI use and the impact of such technology on the ways that students learn and produce academic work. Gaining insights from this phenomenon, the aim is accept that a full understanding of artificial intelligence and its possibilities when used in higher education can be obtained by all stakeholders to minimize risks that may arise.

The term phenomenon refers to any observable event or occurrence that can be studied in order to recognize patterns present within a society/environment (McDermott, 2023). The phenomenon of using AI to write student papers is another indication of technological developments in this regard, where individuals — students, in particular — have written homework. This trend is not only indicative of changes in technical prac-

tices but also entails cultural, social and ethical dimensions.

Artificial Intelligence (AI) is a subset of computer science that is concerned with the creation of systems or machines that are capable of completing tasks typically requiring human intelligence, such as decision-making, natural language processing and machine learning (Saini, 2024). AI is a tool in education that assists the process of teaching and learning, including academic writing. As such, this tech is meant to offer faster and more accurate solutions, enabling users to finish complex tasks faster.

a. **Supporting Students in Writing Papers.**

In practice artificial intelligence helps students through all stages of writing.

It can help find sources suggest outlines, fix grammar and syntax errors and some advanced models even give feedback on how to structure arguments.

For example tools, like ChatGPT, Grammarly and Mendeley show how artificial intelligence can be used in academic work.

By handling technical details artificial intelligence allows students to focus more on their writing topic.

Artificial intelligence makes it easier for students to write.

b. **AI in Academic Writing Practices.**

As an example Grammarly really helps with grammar, spelling and making sentences easier to read. This was found out by Vita Losi and others in 2024.

At the time Mendeley makes it easier to keep track of references, which is a key part of writing for school.

ChatGPT is a type of AI tool that can help with ideas, outlines and summarizing.

Students feel more in control when using these tools to write and get their ideas in order as Darmawansah and others found out in 2024.

They can use tools, like Grammarly, Mendeley and ChatGPT to improve both the pace and organization of their writing.

c. **Ethical Challenges in Using AI.**

Digital literacy is really important for students to use Artificial Intelligence in a way. Digital literacy means you understand how technology works you can look at information that Artificial Intelligence produces and decide if it is good or not. You know what is right and wrong when you use it. For students in college digital literacy is crucial. It is also important for teachers who help students with their projects and grade their work. Digital literacy is something that teachers need to have so they can teach students, about Artificial Intelligence and make sure they are using it correctly.

d. **The Role of Digital Literacy.**

The thing is, to use Artificial Intelligence students need to be good with computers and technology. This means they have to know how Artificial Intelligence tools work be able to figure out if the information from these tools is

good or not and use Artificial Intelligence in a way that's fair and right. Artificial Intelligence is a part of this. In college it is not the students who have to deal with Artificial Intelligence the teachers also have a lot of work to do. They have to help students with their school work and grade them all while everything, around them is changing because of Artificial Intelligence. Artificial Intelligence is changing things.

e. **Perspectives from Higher Education.**

Educational institutions at the higher levels must embed AI in their curriculum so that students are prepared with skills relevant to the world of work. To ensure that AI in education provides a real way to support learning rather than just be a tool for replacing manual work, it needs to be supported by the necessary guidelines and training (Sanyaolu & Atsaboghena, 2024).

Drawing on this body of literature, this article aims to make an academic contribution in terms of understanding the role of AI in student paper writing and offers considerations toward optimizing its benefits and reducing current challenges.

2. Methodology.

The research is a qualitative approach with an in-depth interview (Dworkin, 2024). The respondents were 107 students from a variety of study maritime programs in Semarang, Indonesia who ever used AI in writing paper. The data collected were thematically analyzed to recognize the main patterns and perceptions of AI use (Goyanes et al., 2024).

The following steps, adapted from Moriña (2021), provide a more rigorous qualitative analysis process:

1. Data collection: Semi-structured interviews were conducted to allow space for respondents to reflect on their experiences with the use of AI. We used open-ended interview questions to explore academic perceptions, challenges, and benefits of the use of AI.
2. Transcription and Codification: Interview data was transcribed verbatim, from which major themes of literature were established/identified. The codification was performed by hand to guarantee the validity and consistency of analysis results.
3. Thematic Analysis: The Identification of Relevant Themes After Codification Once we followed the codification process, though it proved to be effective in generating many relevant codes, and mutual relationships between them did not clearly appear.
4. Data Triangulation: Descriptions obtained from the interviewees were compared with data collected through observation and relevant literature to provide validity and reliability of the results.
5. Contextualization of Findings: The discussion around findings from the interviews is contextualised in relation to the broader literature to provide understanding of how the patterns observed in the data may manifest as trends globally for AI adoption in academia.

In this way, we gain a full picture of how the students are using AI technology in their academic writing and what challenges they face while doing so.

3. Results.

The technology surrounding information systems, most notably in the form of artificial intelligence (AI), has significantly affected numerous fields, including that of education. One of the most significant applications of artificial intelligence in higher education is its assistance to students with paper assignments. From researching, and writing the paper, to editing or checking for plagiarism — AI can help in all stages of writing a paper.

- **What are the benefits of AI for completing paper assignments.**

There are plenty of AIs on this site that can assist students with their study logistics. According to the current research and findings, there are some main advantages that students gain by using this technology.

- **Resource and Literature Search.**

AI can also assist students to queries like finding sources and literature relevant to the topic of their paper. The AI-based search engine, this method saves time on the part of students in finding references more conveniently than a traditional manual search engine. Using current digital research platforms such as Google Scholar, Microsoft academic or even AI-based expert-generated research data goes a long way to retrieving students results that are free of errors.

- **Content Writing and Organizing.**

But AI can also help students writing papers. AI-powered writing tools like Grammarly And QuillBot can suggest better words or phrases to use in your text. This can be especially useful for students with limited language skills to produce writing of a higher quality in their papers.

- **Editing and Plagiarism Checking.**

Plagiarism is one of the major issues in academic world and students credibility may be ruined due to it. AI is highly efficient in recognizing or identifying any kind of plagiarism allowing students to write work without falling into the trap of any form of dishonesty. AI-powered platforms such as Turnitin And Copyscape scan text for similarities and provide comprehensive reports on potential plagiarism.

- **Challenges and Potential Weaknesses.**

Despite the advantages of AI, artificial intelligence in education also has challenges and drawbacks. Some of them are:

- **Dependence on Technology.**

Over dependency on technology is one of the major challenges of using AI. Overdependence on AI-based tools

may lead to students underperforming in basic skills such as manual research, writing without the aid of technology and critical thinking. Therefore, students should keep enhancing these amount of skills to use technology.

- **Mistakes in Using AI.**

As advanced as AI is, tools based on it aren't perfect yet. Because AI can occasionally suggest out-of-context or incorrect content, the suggestions cannot be relied on to improve the document. Hence students have to keep verifying AI's results and see whether they are serving their academic objectives or not.

- **No Ethical Issues and Plagiarism Found.**

Another danger is misusing AI to write non-original papers and plagiarized content, which will adversely affect academic integrity as well. Certain students use AI writing tools to write papers without engaging their minds or mind, causing ethical challenges and academic misconduct.

- **Artificial Intelligence in the Paper Writing Process.**

Literature Search: Most students say AI helps them find literature relevant to their sources faster. According to them, they often have chats with tools like ChatGPT to generate their initial summaries from the literature they read.

Idea Development: Respondents use AI to provide suggestions for how to develop the argument, or central idea of their paper.

Data analysis: For students who carry out data analysis, there are AI tools like Google Auto that help in processing quantitative and qualitative data.

Grammar Checking: Grammarly is gaining traction as a grammar checking tool to make ones writing free of grammatical errors and coherent, thus giving it clarity and professionalism.

- **Benefits of Using AI.**

Time savings: 85% of survey respondents said that AI speeds up the writing process.

Better quality: Students admitted that AI offered some valuable input about how to build an argument and improve the organization of their writing.

- **Challenges and Risks.**

Originality of Work: Some students are concerned that the use of AI could lead to more formulaic or less original writing.

Dependency on Technology: A few respondents were of the opinion that they had become increasingly dependent on AI, so their analytical skills could deteriorate.

Data confidentiality : How much over the accepted level of AI use should be permitted without hurting academic standards.

4. Discussion

Most students think that Artificial Intelligence is a thing it helps them save time. This is what the study on student views about Artificial Intelligence shows the study by Al-Dokhny and others in 2024. Artificial Intelligence is used in ways in different subjects. For example engineering students use Artificial Intelligence to help them understand data while social science students use it to find the right books and articles to read. Students who study languages and literature like using tools like Grammarly because it helps them write better by pointing out mistakes and suggesting corrections.

The study also shows that students in levels of education use Artificial Intelligence in different ways as found by Zhang and Xu in 2025. Undergraduate students use Artificial Intelligence often to help them with technical tasks while graduate students use it more to help them think about ideas and concepts.

When it comes to the risks of using Artificial Intelligence some students have problems when they have to do work without using Artificial Intelligence as reported by Parker and others in 2024. This shows that students need to learn how to use technology and also how to do things on their own so they have digital literacy skills and are also knowledgeable, in manual and intellectual skills.

Based on these findings, there are several recommendations that can be made to optimize and facilitate the use of AI in student paper assignments:

Educational Purpose of AI: The goal here is for students to be able to use AI as an assistant in finding resources, modifying and checking the content for plagiarism but always return back at the end to their own research and writing capabilities.

Educating Students in Ethical AI use: Educational institutions need to educate their students on using AI responsibly and also its effects on educational quality and academic integrity (Prayogo, Mashartanto, et al., 2025).

Academic Institutions: Lecturers and educational institutions should enable students to develop relevant competencies for both the academic and professional world by integrating digital skills and technology (eg AI) into their curriculum.

Conclusions.

With the rise of artificial intelligence (AI), students have found a new tools in writing college papers. For instance, students can use AI to search for sources and literature faster than ever before, polish their grammar and writing construction, or check for more accurate plagiarism. Artificial Intelligence, in higher education serves convenience and enhances the quality of academics. Yet, as tempting and facilitating AI is, it does carry issues ranging from technology dependence to inaccurate tool use and misuse that could harm academic integrity. This means we need to be intentional about how we are utilizing AI, whilst not forgoing the needs of students' fundamental skills in research and writing, and critical thinking.

On the other hand, there are numerous advantages to utilizing AI to assist students with writing papers, including time savvy and enhanced written expression. But there is a need,

primarily, to address the authenticity of the work and the ethics of use. Provided with clear guidelines, students may be able to use AI as a tool that aids in development of their academic abilities without compromising the weight of authenticity and creativity.

Recommended students of the author are expected to use AI-based tools as a supportive device to accompany him/her in writing papers with the task just partly finished and not replace his/her feet, ideas and hands. AI should streamline work, not excuse basic academic skills.

Training: How to Use AI Ethically, Educational Institutions must train the learners to use AI ethically and every learner should understand how he/she is learning AI, where they are supposed to give credit when using someone else's knowledge. Students need to know that while AI can lend a hand, they still have to get involved in both the learning and writing processes (Prayogo, 2024a).

Promote Digital Skills Development; The Higher Education Institutions and their respective Lecturers have to imbibe and integrate Digital skills in their subjects so that the students can use advanced technologies like AI efficiently and wisely as well as have relevant abilities to contribute in professional life (Prayogo, 2024b).

Critical Checking of AI Results, Students must constantly verify the results shown by AI, regarding source accuracy or quality of writing and also with plagiarism detection to ensure their homework is up to academic standards (Prayogo, Wahyuni, et al., 2025).

Discussion of ethical AI use by students is essential, settings which higher education institutions have to cater for. Learn with guidance to use AI as a tool not an outsource for thinking. Meanwhile, those who develop AI technology have to focus on strengthening the functions that detect plagiarism and offer education-imbued suggestions.

References.

Al-Dokhny, A., Alismaiel, O., Youssif, S., Nasr, N., Drwish, A., & Samir, A. (2024). Can Multimodal Large Language Models Enhance Performance Benefits Among Higher Education Students? An Investigation Based on the Task–Technology Fit Theory and the Artificial Intelligence Device Use Acceptance Model. *Sustainability (Switzerland)*, 16(23). <https://doi.org/10.3390/su162310780>.

Darmawansah, D., Rachman, D., Febiyani, F., & Hwang, G. J. (2024). ChatGPT-supported collaborative argumentation: Integrating collaboration script and argument mapping to enhance EFL students' argumentation skills. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12986-4>.

Dworkin, S. L. (2024). Sample Size in Qualitative Research Using In-Depth Interviews: A View from The Associate Editor 12 Years Later. In *Archives of Sexual Behavior*. Springer. <https://doi.org/10.1007/s10508-024-02992-5>.

Goyanes, M., Lopezosa, Carlos, Jordá, & Beatriz. (2024). Thematic Analysis of Interview Data with ChatGPT: Designing and Testing a Reliable Research Protocol for Qualitative Research.

Ismiatun, I., & Sukartini, E. (2024). Library Digital Transformation: Legal and Ethical Analysis of Librarians' Use of AI to Improve Scientific Literacy. *Knowledge Garden*, 2(2), 23–41. <https://doi.org/10.21776/ub.knowledgegarden.2024.2.2.26>.

McDermott, R. (2023). On the scientific study of small samples: Challenges confronting quantitative and qualitative methodologies. *Leadership Quarterly*, 34(3). <https://doi.org/10.1016/j.leaqua.2023.101675>.

Miniankou, R., & Puptsau, A. (2024). Artificial Intelligence as a Tool for Human-Machine Partnership in the Educational Process. *Lecture Notes in Networks and Systems*, 913 LNNS, 514–527. https://doi.org/10.1007/978-3-031-53598-7_46.

Moriña, A. (2021). When people matter: The ethics of qualitative research in the health and social sciences. *Health and Social Care in the Community*, 29(5), 1559–1565. <https://doi.org/10.1111/hsc.13221>.

Parker, L., Carter, C., Karakas, A., Loper, A. J., & Sokkar, A. (2024). Graduate instructors navigating the AI frontier: The role of ChatGPT in higher education. *Computers and Education Open*, 6, 100166. <https://doi.org/10.1016/j.caeo.2024.100166>.

Prayogo, D. (2024a). Management Onboard training on student job readiness. *Journal of Maritime Research*, 21(2), 1–6. www.jmr.unican.es.

Prayogo, D. (2024b). The Use of Hybrid Learning in Improving Academic Achievement. *Journal of Maritime Research*, 21(1), 101–105. www.jmr.unican.es

Prayogo, D., Arifin, M. Z., Runadi, T., Presetiawan, A., Rahmana, H. W., & Pratama, R. A. (2025). Analysis of the Influence of Skills Training on Ships Leadership with an Understanding of the International Safety Management (ISM) Code as a Mediation Variable. *TEM Journal*, 14(2), 1334–1343. <https://doi.org/10.18421/TEM142-34>.

Prayogo, D., Mashartanto, A. A., Prastya, R. L., Prasetya, T. B., Anggrahini, W. P., Togatorop, A. L., & Pujiyanto, E. (2025). Leadership Management at the Semarang City Maritime School: Challenges and Strategies. *Journal of Maritime Research*, 22(3), 59–65. www.jmr.unican.es.

Prayogo, D., Wahyuni, O., Anggrahini, W. P., Aryani, D., & Putri, I. A. (2025). Management in Vocational Schools in the Shipping Sector: Analysis of the Role of Leaders as Leaders in Improving the Quality of Education and Training. *Journal of Education and Training Studies*, 14(2), 19. <https://doi.org/10.1114/jets.v14i2.8060>.

Sain, Z. H., Serban, R., Abdullah, N. B., & Thelma, C. C. (2024). Benefits and Drawbacks of Leveraging ChatGPT to Enhance Writing Skills in Secondary Education. *At-Tadzkir: Islamic Education Journal*, 4(1), 40–52. <https://doi.org/10.59373/attadzkir.v4i1.79>.

Saini, N. (2024). Research Paper on Artificial Intelligence and Its Applications. *Open Journal Logical Techniques in Computer Science*. <https://doi.org/10.70705/ppp.ltcs.2024.v02.i02.pp62-65>.

Sajja, R., Sermet, Y., Cikmaz, M., Cwiertny, D., & Demir, I. (2023). Artificial Intelligence-Enabled Intelligent Assistant for Personalized and Adaptive Learning in Higher Education. <https://doi.org/10.3390/info15100596>.

Sanyaolu, E., & Atsaboghena, R. (2024). Role of Artificial Intelligence in Human Resource Management: Overview of its benefits and challenges. <https://doi.org/10.13140/RG.2.2.2229-7.29283>.

Teng, M. F. (2024). A Systematic Review of ChatGPT for English as a Foreign Language Writing: Opportunities, Challenges, and Recommendations. *International Journal of TESOL Studies*, 6(3), 36–57. <https://doi.org/10.58304/ijts.20240304>.

Vita Losi, R., Putra, E., Ali, N., & Silvana Dewi, A. (2024). Using Artificial Intelligence (AI) to Improve Efl Students' Writ-

ing Skill. *International Journal of English and Applied Linguistics*. <https://chat.openai.com>.

Yang, M. (2023). Supervisory feedback, reflection, and academic discourse socialization: Insights from an L2 doctoral student's paper writing experience. *Journal of English for Academic Purposes*, 62. <https://doi.org/10.1016/j.jeap.2023.101215>.

Zhang, L., & Xu, J. (2025). The paradox of self-efficacy and technological dependence: Unraveling generative AI's impact on university students' task completion. *Internet and Higher Education*, 65. <https://doi.org/10.1016/j.iheduc.2024.100978>.