



The Impact of Artificial Intelligence (AI) on Students' Habits in Writing Papers: Does AI Make Maritime School Students Lazy to Write?

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ABSTRACT

This research aims to analyze the influence of the use of artificial intelligence (AI) on students' habits in writing academic papers. In the current digital era, the use of AI is increasingly widespread in various fields, including education. With various AI applications available, students can now utilize this technology to help in preparing papers, from ideas, and searching for references, to writing content. However, the question arises as to whether artificial intelligence is making students more lazy about writing papers independently.

This research raises an important issue regarding whether AI plays a role in increasing efficiency or reducing the quality of students' writing skills. In this context, the author focuses on the influence of AI on the process of writing papers and how this technology changes students' mindsets in facing academic assignments. Along with the development of AI-based applications such as ChatGPT, Grammarly, and various other tools, students are increasingly relying on technology to complete assignments, but are also faced with the challenge of maintaining their ability to write independently and think critically.

Using qualitative methods, this research explores the experiences of students from various disciplines who use AI to compose their papers. In-depth interviews were conducted to understand students' perceptions regarding the impact of AI on their motivation, creativity, and the quality of their academic writing. This research aims to provide insight into how students can make wise use of AI to support their learning process, without sacrificing writing skills that are essential in higher education.

The research results show that there are two different sides to the use of AI: while some students feel that AI helps speed up the writing process, improve the quality of their writing, and provide fresher ideas, others express concerns that reliance on AI causes a decrease in the quality of their writing skills. This research also identifies factors that influence how students use AI, such as level of motivation, mastery of material, and understanding of the goals of education itself. Therefore, this research suggests the need for a more balanced and targeted approach to the use of AI in education.

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1. Introduction.

Artificial intelligence (AI) has become an part of the development of information technology in various sectors, including education (Jatileni et al., 2024). In recent years, the use of AI in the academic world has become more widespread, with

many students utilizing AI-based tools to facilitate the learning process and complete their academic assignments. Apps like ChatGPT, Grammarly, and other content-generation tools allow students to complete assignments like writing papers, essays, and research reports more quickly and efficiently (Panda & Kaur, 2024). This raises important questions related to the impact of using AI on the quality of student learning processes, especially in the context of academic writing.

Writing papers and essays is an important part of higher education that requires students to not only have in-depth knowledge but also the ability to organize arguments logically and

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critically. This process often involves in-depth research, data analysis, and good writing skills. However, with advances in technology, students can now use AI to help them carry out literature searches, compose initial drafts, and carry out grammar checks and text editing. While this brings many benefits, some worry that reliance on AI could reduce students' writing skills, as well as reduce their ability to think critically and independently.

Along with the increasing use of AI among students, there is also a debate about whether this technology helps in improving the quality of education or makes students lazy to think and work hard (Hadi Mogavi et al., 2024). Some critics argue that AI allows students to avoid in-depth learning processes, while others argue that AI only serves as a tool that speeds up the academic process without reducing the overall quality of education. Therefore, it is important to explore the impact of using AI in paper writing and how students respond to it. Does the use of AI lead to increased efficiency and quality, or does it reduce the important basic skills of writing and critical thinking?

This research aims to dig deeper into the impact of using AI on students' writing habits, especially whether this technology makes students less likely to write papers independently. Researchers will explore the perceptions and experiences of students who use AI in their academic activities, and see the extent to which AI influences their quality and motivation in writing. With a better understanding of this, it is hoped that this research can provide useful recommendations for higher education managers in integrating AI into the learning process without reducing the quality of education.

1.1. Use of AI in Education.

Artificial intelligence (AI) has begun to be used in various fields of education to increase learning efficiency and simplify tasks that previously required large amounts of time and effort. According to (Yazi et al., 2024), AI in education can be seen as a tool that speeds up the learning process, from searching for academic resources and creating initial drafts to checking plagiarism and grammar. This technology, which includes machine learning and natural language processing, can help students compose their writing by providing suggestions for improvements or even creating a draft based on input provided by the user.

On the other hand, AI also offers the possibility for educators to focus more on teaching and provide more effective feedback, because many administrative and technical tasks have been made easier through technology (Abubakari et al., 2023). In this way, AI can optimize interactions between students and teachers, enriching the learning experience in the classroom. However, challenges arise when this technology is used excessively or inappropriately because it can reduce the level of student activity in the independent learning process.

1.2. The Impact of AI on Student Writing Skills.

Writing skills are an important competency in higher education, and previous research shows that the writing process requires the active involvement of students in critical and analytical thinking (Selim, 2024). However, with the development of

AI applications, such as writing aids and automatic text generators, there are concerns that this technology could reduce student engagement in the writing process. Several studies show that although AI can improve technical aspects of writing such as grammar, sentence usage, and references, excessive use can affect students' ability to develop ideas and arguments in depth (Al-Raimi et al., 2024).

According to (Srikaanth, 2024), although AI-based tools can help improve the technical quality of writing, they also risk making students dependent on this technology and reducing the creative thinking processes that should occur in academic writing. This creates a dilemma, where students may become accustomed to using AI to produce results that appear technically sound without regard for depth of analysis or original contributions to academic discussions.

1.3. Motivation and Use of AI in Academic Writing.

Student motivation plays an important role in how they utilize AI in writing papers. Based on learning motivation theory, students who have intrinsic motivation to learn and develop writing skills are more likely to use technology wisely (An et al., 2024). Meanwhile, students with extrinsic motivation, who are more focused on results or assessments, may be more inclined to use AI to achieve goals quickly without paying much attention to the learning process itself.

Some studies show that using AI in writing papers can speed up students' work, giving them more time to focus on other aspects of their studies. However, this can impact the quality of the writing produced if students do not use the extra time to dig deeper into the topics they write about (Dwivedi et al., 2023). For example, tools like ChatGPT or Grammarly can provide useful suggestions for improving sentence structure, but they cannot replace the critical thinking required in the academic writing process.

1.4. Dependence on AI and Student Independent Ability.

Dependence on AI in writing papers can reduce students' independent ability to think critically and write original. Quoting from research by (Hadi Mogavi et al., 2024), students who frequently use AI-based tools in academic writing tend to reduce their efforts to conduct in-depth research or construct complex arguments because they rely more on AI to process and produce text. This can lead to a decline in students' ability to generate new ideas and develop more critical thinking.

In contrast, students who use AI only as an aid in the writing process, such as to check for typos or grammatical errors, can benefit from this technology without sacrificing their writing abilities (Kohnke, 2024). Therefore, it is important to understand the appropriate context for using AI, so that this technology can provide added value without replacing the creative and critical thinking processes required in academic writing.

1.5. The Role of Education in Integrating AI in Learning.

On the educational side, educators need to provide clear direction on how students can use AI ethically and effectively. Research by (Waziana et al., 2024) emphasizes that, although

AI can provide many benefits in speeding up and simplifying the writing process, educators must ensure that students understand the importance of developing writing skills independently. This can be done by providing clear guidance on the use of AI-based tools, as well as including assignments that encourage students to think critically and write originally, without relying entirely on technology.

2. Methodology.

2.1. Research Approach.

This research uses a qualitative approach with a case study method (Dzogovic & Bajrami, 2023). This approach was chosen to gain an in-depth understanding of students' experiences in using artificial intelligence (AI) in writing papers, as well as its impact on their writing habits. Qualitative methods allow researchers to explore students' perceptions, attitudes, and experiences holistically, and provide a more comprehensive picture of the influence of AI in the academic writing process (Jinchuñá et al., 2023).

2.2. Research Design.

This research uses a case study design that focuses on students who use AI-based tools (Hartley et al., 2024) to assist them in writing papers. Researchers will collect data through in-depth interviews with students from various disciplines at universities that use AI technology in their academic activities. This research will also involve content analysis of online discussion forums and a survey of students' use of AI.

2.3. Location and Participants.

This research was conducted at a Maritime university in Semarang that has active students in various study programs. Research participants are students who are voluntarily willing to participate and have experience in using AI-based applications to write academic papers. The number of participants who will be involved is 102 students, consisting of various scientific disciplines and educational levels. The participant selection criteria are based on their experience in using AI to write papers, with a minimum period of using AI of one semester.

2.4. Data Collection Techniques.

In-depth interviews will be conducted to explore students' perceptions, experiences, and attitudes toward the use of AI in writing papers. These interviews are designed to provide in-depth and detailed information about how students use AI in their academic writing, as well as how it affects their motivation, quality, and thought processes. Interviews will be semi-structured, where the researcher will use a flexible interview guide to allow respondents to provide more open and in-depth answers.

In addition to interviews, researchers will also use surveys to collect quantitative data regarding the frequency and types of AI tools used by students in preparing academic papers. The survey will include questions about the type of AI used (e.g.,

Grammarly, ChatGPT, or other tools), the extent to which students found AI helpful in the writing process, as well as their perceptions of the impact of using AI on the quality of their writing.

Researchers will also analyze online academic discussion forums involving students, where they talk about the use of AI in writing papers and other academic assignments. This content analysis aims to identify common patterns in how students discuss their experiences with AI, as well as to see whether they are more likely to see AI as a useful tool or as a factor influencing the quality and motivation of their writing.

2.5. Data Analysis Techniques.

Data obtained from in-depth interviews, surveys, and content analysis will be analyzed using thematic analysis techniques. The thematic analysis process consists of several steps, including:

The interviews conducted will be transcribed to facilitate further analysis. Each transcript will be analyzed to identify key themes related to the use of AI in writing papers, as well as its impact on students' writing habits.

Once the transcription is complete, the researcher will carry out coding to highlight important parts of the interview that relate to the research question. This coding process will help researchers identify common themes and patterns that emerge from the data collected.

After coding, researchers will identify key themes related to the impact of AI use on students' writing habits. These themes will include things such as students' perceptions of AI, the influence of AI on the quality of their writing, and their motivations for using AI in academic writing.

After the thematic analysis is carried out, the researcher will interpret the main findings to provide a deeper understanding of the influence of AI use on students' writing habits. The research results will be presented in the form of a report that presents the main findings, conclusions, and recommendations for education managers in integrating AI into the learning process.

2.6. Validity and Reliability.

To ensure the validity and reliability of research results, researchers will use several triangulation techniques, namely by collecting data from various sources (interviews, surveys, and content analysis) and comparing the results. Apart from that, researchers will also carry out member checking, namely asking some participants to verify the results of their interviews to ensure that the interpretation of the data is accurate and by their experiences.

2.7. Research Ethics.

This research will be conducted with due regard to applicable research ethical principles. All participants will be informed of the purpose of the study, and they will be asked to provide voluntary consent before participating in an interview or survey. Researchers will maintain the confidentiality of participants' identities and ensure that the data collected is only used for research purposes.

3. Results and Discussion.

This research aims to identify the influence of the use of artificial intelligence (AI) on students' writing habits, especially in the context of writing academic papers. Data was obtained through in-depth interviews, surveys, and content analysis from 102 students in various study programs at the universities involved in this research. The following are the main findings based on the data analysis carried out.

3.1. Use of AI in Paper Writing.

Most participants (84%) reported that they use AI-based tools, such as Grammarly, ChatGPT, and other tools, to help them write academic papers. AI is used primarily to correct grammatical errors, suggest sentence structure, and provide suggestions to improve the overall quality of writing. Some students also reported that they used AI to help find references and basic ideas for their papers, although a small number admitted that they rarely used AI to produce the main content of their papers.

3.2. Impact of Using AI on Writing Quality.

Interview results show that the majority of students (72%) feel AI helps them improve the quality of their writing, especially in terms of grammar and writing fluency. Some students also feel more confident in writing after using AI, because they feel that the tool can correct mistakes they missed. However, around 28% of students expressed concern that reliance on AI could affect their ability to produce more original and in-depth writing. They felt that these tools tended to provide easy solutions and did not necessarily encourage them to think more critically or explore ideas in more depth.

3.3. Dependence on AI and its Influence on Student Motivation.

One of the main findings that emerged from the interview analysis was a tendency for students to rely more on AI in writing their papers. Most students who reported high levels of AI use also showed reduced motivation to write independently. This especially happens to students with extrinsic motivation who are more focused on achieving grades and completing assignments quickly. They feel that AI allows them to complete papers more efficiently without too much effort. On the other hand, students who had intrinsic motivation to develop their writing skills reported that they used AI only as a tool and still prioritized personal effort in writing papers.

3.4. Impact on Writing and Critical Thinking Skills.

Some students (60%) stated that the use of AI in writing papers had helped them improve basic writing skills, such as correcting typos and improving sentence structure. However, more than half of the participants (55%) expressed that although AI makes the writing process easier, they feel they are missing out on opportunities to practice the critical and analytical thinking skills required in academic writing. They admit that AI sometimes replaces their thought processes and makes them less involved in deeper analysis of the topic being discussed.

3.5. Student Perceptions of the Role of AI in Education.

Survey results show that the majority of students (75%) believe that AI can be a useful tool to support learning and academic writing, as long as it is used wisely. They see AI as a tool that can speed up the writing process and help them complete administrative tasks, such as grammar checking and organizing ideas. However, 25% of students feel that excessive use of AI can lead to a decline in the quality of education, as students tend to become more dependent on technology rather than developing independent writing and critical thinking skills.

3.6. Use of AI in Academic Discussions and Online Forums.

Content analysis of online discussion forums shows that students tend to discuss the use of AI openly and often share their experiences in using AI-based tools. Many of them said that AI was very helpful in providing basic ideas for papers or essays, but some stated that they felt less satisfied with the final result of their writing if they relied too much on AI. Some discussions indicated that students felt more comfortable using AI to help write initial drafts, but they still expected to edit and develop their writing before submitting the paper.

3.7. Variations in AI Use Based on Study Program and Education Level.

This research also found that the use of AI varies between study programs and educational levels. Students from more technical or scientifically based study programs, such as engineering or computer science, tend to use AI more frequently and integrate it more into their writing process. In contrast, students from social studies and humanities programs tend to use AI only for certain aspects of writing, such as grammar checking and sentence structure suggestions. Additionally, students at higher levels, such as master's and doctoral degrees, tend to be more selective in their use of AI and rely more on their writing skills, although they recognize the benefits of AI in the revision and editing stages.

The research results show that the use of AI in writing papers provides significant benefits in improving the technical quality of writing, such as grammar and sentence fluency. However, there are concerns regarding over-reliance on this technology, which may reduce student engagement in critical and analytical thinking processes. Thoughtful use of AI can enrich students' learning experiences, but educators need to provide appropriate guidance so that students do not lose the writing and thinking skills that are essential in higher education.

Conclusion.

Based on the research results, it can be concluded that AI provides significant benefits in improving the technical quality of writing, such as checking grammar, sentence structure, and editing. Students who use AI find it easier and faster to complete writing assignments, and many report increased confidence regarding the quality of their writing.

However, although AI helps in technical aspects, there are concerns that the use of this technology can cause dependency

that reduces student engagement in critical and analytical thinking processes (Robert et al., 2024). Students who rely too much on AI tend to miss opportunities to develop the writing and deep thinking skills required in academic writing. Furthermore, uncontrolled use of AI risks reducing the quality of originality and creativity of writing.

The use of AI in writing papers varies between study programs and educational levels, with students from more technical or scientific disciplines tending to rely more on AI than students from social studies or humanities programs (Elshaer et al., 2024). AI use is also higher among undergraduate students, while students at higher levels are more selective in their use.

Overall, while AI brings convenience and efficiency to the writing process, it is important to balance the use of this technology with the development of deep writing and critical thinking skills that are essential in higher education. Based on the findings of this research, several suggestions can be given to various related parties:

1. For Students.

Students are expected to use AI as a tool, not as a substitute for active involvement in the writing and critical thinking process. AI should be used to improve technical aspects of writing, such as grammar, sentence organization, and plagiarism checking, but should not reduce students' efforts in organizing ideas, analyzing topics, and developing original arguments. Students also need to develop self-awareness and not rely too much on AI, to maintain intellectual quality and creativity in their writing.

2. For Lecturers and Education Managers.

Lecturers and education administrators need to provide clear direction to students on how to use AI wisely in academic writing. Education should focus on the critical, analytical, and creative thinking skills that underlie quality academic writing. In addition, lecturers can integrate learning about the appropriate use of AI in courses, as well as provide in-depth feedback regarding the intellectual quality of students' work, not just the technical aspects.

3. For Further Researchers.

This research provides initial insights into the use of AI in education, but there is still much room for further development. Future researchers are advised to expand the scope of research by involving students from various universities and more diverse scientific disciplines, as well as conducting longitudinal studies to evaluate the long-term impact of using AI on students' writing and critical thinking skills.

4. For AI Technology Developers.

Developers of AI technology used in education should continue to develop tools that not only focus on improving the technical quality of writing but also support the development of students' critical thinking and analytical skills. AI features that can help students design argument structures or provide more in-depth advice on academic topics could be a useful addition to increasing the effectiveness of this technology in education.

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