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Portraying the Use of Artificial Intelligence Toward the Quality of the EFL Students' Writing Tasks

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Abstract

Artificial Intelligence (AI) is a new technology that can help people answer questions, provide directions, and perform various tasks based on their commands. The technology can be a helpful tool, but it is also harmful. In education, especially in higher education, students can easily find answers to quizzes, write papers, locate types of literature, and create presentations in just a second by using artificial intelligence. Hence, this study aimed to describe the use of artificial intelligence among university students and to analyze the quality of students' writing tasks from the perspectives of both students and lecturers. This study uses a quantitative descriptive method. The data is collected through questionnaires. There are two kinds of questionnaires. The first is for students; the questionnaires aim to gather information on the types of artificial intelligence university students use to complete their writing tasks. The second is for the lecturers; the questionnaires aim to gather their perceptions of the quality of tasks completed by students using AI. The questionnaires are shared through Google Forms. The population of this research consists of fourth-semester students in the Islamic Education study program. The sample consists of 40 students, selected using simple random sampling. However, only 38 students responded to the questionnaire. The results show that 52% of fourth-semester students use AI to complete their tasks. Most students (37%) used ChatGPT to complete their tasks. The students perceive that they use AI only to find ideas or inspiration, but they still read the references to complete the tasks. They realize that the use of AI can decrease their analytical competence. However, they perceive AI as helpful to them. The lecturers perceive that the use of AI can help students complete tasks. However, it can decrease the students' creativity, critical thinking, and analytical competence. Further, the use of AI can increase plagiarism, as most students copy and paste from AI websites. Therefore, the lecturers suggest that students read the references, even though they use AI to complete their tasks.

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Introduction

Technology is a human-designed system that aims to simplify and achieve a level of efficiency and effectiveness with a significant impact, using minimal energy. In this era of globalization, technological development is accelerating alongside scientific advances, making humans increasingly dependent on technology, which has become a fundamental need for everyone (Danuri, 2019). In this era, mastery of technology is a key factor in a country's progress. A country is considered advanced if it possesses a high level of technological expertise. The Ministry of Communication and Information states that internet users in Indonesia have reached 82 million people, which makes Indonesia the 8th-ranked country in the world in this achievement. Of this number, 80 percent are teenagers aged 15-19 years (Kominfo, 2024). The statement shows that the development of technology today is like two blades that need special attention from all elements.

The development of technology also has an impact on education, which is increasingly prevalent in its use among students, often referred to as Artificial Intelligence (AI). AI is a human-made intelligence that represents a breakthrough in the field of educational technology, facilitating learning. Artificial Intelligence is an innovative tool that can perform tasks faster than humans. (Tingiris, 2021). The presence of AI, with its new features, functions, and appearances, is increasingly having an impact on various aspects of human life, including education. The AI tools commonly used in the education sector include ChatGPT, Grammarly, and Google Scholar, among others. One of the impressive AIs today is ChatGPT, specifically Generative Pre-Trained Transformers, a type of artificial neural network architecture utilizing deep learning known as Transformers, which enables it to understand and generate text naturally and responsively (Tingiris, 2021). With this AI, the majority of students can easily complete assignments, such as writing papers, scientific papers, and research papers, and use various stimuli to obtain answers to different questions. According to statistical data, nearly 78 percent of Indonesian respondents believe that AI provides more benefits than disadvantages (Sunflower, 2023). The survey involved selected Indonesian respondents aged 21 to 74 years old, who were characterized as businesspeople, educated individuals, and students. Out of 100 survey respondents, Indonesia is at the top with 78. This means that the use of AI among students and lecturers is no longer a rare thing in scientific writing assignments. The use of AI provides convenience for students and lecturers, specifically by assisting in the research process, data analysis, and writing efficient and accurate scientific papers. In addition, AI also makes it easier for them to analyze data and check the use of grammar and writing format according to scientific writing standards. With this AI, students can be more creative in developing quality and effectiveness while minimizing the number of errors that may occur.

Nevertheless, in fact, the quality of science writing produced by AI still does not contain accurate data or answers, for example, ChatGPT, which provides information based on data and information on the internet, but this shows that AI cannot fully imitate humans because AI lacks human judgment, intuition, and creativity. Therefore, we must re-examine and weigh the information we get from AI. In addition, the widespread use of AI among students also triggers plagiarism and hinders the development of their skills (Lukman et al., 2023). According to Akhyar et al, the use of AI can help students to complete their writing assignments. This research focuses solely on one type of AI, specifically Perplexity AI, and its application to writing tasks (Akhyar et al., 2023). Additionally, Salsabila et al. have investigated the positive impact of AI on students, focusing on the ease of access to learning materials and the understanding of foreign languages (Salsabilla et al., 2023). Patty and Que also examined the use of AI in writing scientific articles, but focused more on the reasons for its use, rather than the results of its use or the quality of the articles (Patty & Que, 2023).

Those studies highlight both the positive and negative impacts of using AI in academic settings. However, none of the three studies have examined the quality of results obtained by using AI in completing student assignments. Therefore, this study will focus on the use of AI in completing student coursework and analyzing the quality of the results of using AI based on the perceptions of lecturers and students. The purpose of this study is to investigate how students in the Islamic Education

Study Program utilize AI in completing writing assignments, such as papers, articles, and research papers, assigned by their lecturers. In addition, this article also examines how lecturers and students perceive Artificial Intelligence in completing the coursework.

Method

This study uses a quantitative descriptive method. The descriptive quantitative method is a type of quantitative research method that involves formulating a problem to explore a specific aspect of a population (Abdullah et al., 2023). Data from this research were collected through questionnaires. There are two questionnaires, one for students and one for lecturers. The questionnaires are spread through Google Forms. The questionnaire for students consists of 11 statements with 5-point rating scales. For statements that ask about frequency of use, the options are: 1) rarely, 2) very rarely, 3) enough or moderately, 4) often, and 5) quite often. For questionnaires that ask about perception, the options are: 1) strongly agree, 2) agree, 3) enough or moderately, 4) disagree, 5) strongly disagree.

The population of this study consisted of Islamic Religious Education students and lecturers, and the sample comprised 4th-semester Islamic Religious Education students and lecturers, totaling 40 participants. The questionnaire given to students inquires about how students use AI in completing coursework and lecturers' perceptions of the quality of student assignments that utilize AI. The Actual data about the use of AI, as perceived by students and lecturers, was then processed using the Microsoft Excel program.

Results and Discussion

This study was conducted to investigate the use of AI in assisting students with completing their writing assignments and the quality of their writing. This study presents two perspectives, namely, those of students and lecturers.

The use of AI towards the quality of students' writing tasks: lecturers' perception.

In this study, researchers administered questionnaires to five English lecturers in Islamic religious education via Google Forms. The following is data obtained from the questionnaire:

Table 1. Lecturer's perspective on the use of AI to complete writing task

No.	Indicators	Percentage
1	AI can provide convenience for students in completing coursework	44% (agree)
2	Students mostly copy and paste without paraphrasing when their course assignments are done by AI-assisted applications.	56% (agree)
3	The use of AI can improve the quality of student coursework	44% (enough)
4	The use of AI can reduce student creativity	44% (enough)
5	The use of AI can reduce students' analytical and critical thinking skills	56% (enough)
6	Lecturers can detect AI-assisted tasks, both in terms of grammar and sentence structure.	56% (effortless)
7	The use of AI can make students lazy to read reference books	56% (strongly agree)
8	Recommendations for students to utilize AI to complete assignments	56% (enough)
9	Advice to students: continue reading reference books even after coursework is completed with AI.	78% (strongly agree)

Based on the table above, the lecturers perceive that the students found convenience when they finished their coursework using AI (44%). The lecturers also agree that students are mostly copying and pasting without paraphrasing when completing their course assignments using AI-assisted applications (56%). Furthermore, the adverse effects of using AI for students include a decrease in creativity and analytical and critical thinking skills, as well as making students less inclined to consult references (56%). Overall, some lecturers recommend that students use AI to finish their coursework; however, they should read the references and paraphrase their work. This data indicates that lecturers believe a significant portion of students (44%) find it convenient to use AI for completing their coursework. However, there is a concern among the lecturers that a majority of students (56%) tend to copy and paste content directly from AI-assisted applications without proper paraphrasing.

Moreover, lecturers observe several negative impacts of AI usage on students, such as a decline in creativity, analytical thinking, and critical thinking skills. They also note that reliance on AI makes students less inclined to read original references, which is highlighted by the fact that 56% of lecturers mentioned this issue.

Despite these concerns, some lecturers still recommend using AI for coursework. They emphasize, however, that students should engage with the source material and paraphrase their work to ensure academic integrity and develop their skills.

Therefore, the use of AI according to the perception of lecturers in completing assignments and student writing quality that the use of AI is recognized can improve the quality of student writing and is very helpful to students, but the use of AI can increase their plagiarism so lecturers suggest that the use of AI be accompanied by thinking and examining more deeply the knowledge they get from AI.

The use of AI towards the quality of students' writing tasks: students' perception.

In this study, researchers gave questionnaires to 40 Islamic Education students regarding the use of AI in completing writing assignments. However, only 38 students filled out the questionnaires. The data is displayed in the following table:

Table 2. Students' perspective on the use of AI to complete writing task

No.	Indicators	Percentage
1	Students use AI to complete writing task	53% (enough)
2	Students use AI because it can inspire course assignments	39% (enough)
3	Students often copy and paste from search results using AI	42% (disagree)
4	AI technology can improve coursework quality	42% (enough)
5	AI can curate students' analytical and critical thinking skills	45% (enough)
6	Students use AI primarily to generate ideas when they are stuck and need inspiration.	37% (agree)
7	AI is beneficial in completing term paper assignments and creating presentation slides in seconds.	32% (strongly disagree)
8	Students still read lecture materials and reference books despite using AI	50% (agree)
9	Doing tasks becomes easier with AI	34% (enough)
10	AI provides convenience but can reduce creativity in writing articles	45% (enough)

Based on the table above, it is evident that most students (53%) utilize AI to complete their coursework. The students use AI for several reasons: AI inspires them to finish the coursework (39%),

AI could improve the quality of the coursework (42%), and AI could help them to find an idea (37%). According to the students' perception, the quality of their coursework improves when it is augmented with AI. However, they also perceive that the use of AI could reduce their creativity and critical thinking (45%). In conclusion, the majority of students (53%) rely on AI to assist them in completing their coursework. The reasons for using AI include inspiration, quality improvement, and idea generation. From the students' perspective, the overall quality of their coursework improves when they use AI tools. However, 45% of the students have a concern that using AI may diminish their creativity and critical thinking abilities. This indicates a recognition among students that while AI can be beneficial, it may also have potential drawbacks in terms of skill development.

Most 4th-semester students in the PAI study program utilize AI to complete their writing assignments, which means that AI helps them generate ideas and enhance their creativity in writing. The percentage of AI tools they often use is Chat GPT, which is used by 37% of the sample, and Google Slides, which is used by 13% of the sample, because students receive more presentation assignments than writing assignments. The data show that the majority (52%) of 4th-semester students in the PAI (Pendidikan Agama Islam or Islamic Education) study program utilize AI to assist in completing their writing assignments. This suggests that AI plays a significant role in facilitating their ideas and creativity in writing.

Among the various AI tools available, ChatGPT is the most frequently used, with 37% of students choosing it. This suggests that ChatGPT is considered effective in assisting with writing assignments. Additionally, 13% of students use Google Slides, indicating that this tool is more often used for presentation assignments rather than writing, possibly because students receive more presentation assignments. Overall, this data highlights the significance of AI in the teaching and learning process, especially in helping students generate ideas and develop creativity across various types of academic assignments.

The data indicates that 52% of 4th-semester students in the Islamic Education study program use AI tools to complete their writing assignments. This suggests that more than half of these students find AI beneficial for academic writing tasks, indicating a significant adoption rate. AI is primarily used to aid in generating ideas and fostering creativity in writing. This implies that students are leveraging AI tools not just for surface-level tasks, such as grammar correction, but also as creative partners in generating content and structuring their assignments. The ability of AI to provide suggestions, generate content, and even simulate interactive brainstorming sessions can empower students to think more creatively and expand their ideas.

Based on the data from the questionnaires, both students and lecturers perceive that AI helps with coursework completion. This finding aligns with a previous study, which revealed that the use of AI is beneficial for students. AI could help students construct paragraphs, correct their structures, and even paraphrase them (Fauziah & Minarti, 2023). This suggests that AI can serve as a valuable tool for writing and language-related tasks, making it easier for students to produce well-structured and accurate written work. It emphasizes the direct, practical benefits of AI in enhancing students' writing skills. Additionally, Rodway and Schepman found that students were moderately comfortable with many AI educational technologies (Rodway & Schepman, 2023). While this is not an overwhelming endorsement, it still indicates a generally positive reception and willingness to engage with AI tools for educational purposes. This moderate comfort level may stem from students' familiarity with specific AI applications, as well as their recognition of the potential benefits these technologies offer.

The Findings of this research indicate that both students and lecturers believe AI tools are beneficial for academic purposes. This is based on the data collected through questionnaires, suggesting a shared view across both groups about the usefulness of AI in academic settings. This

finding aligns with a broader trend in education where technology, especially AI, is increasingly being used to support and enhance learning experiences. AI can provide personalized feedback, automate routine tasks, and offer new ways of engaging with educational content, making it a powerful tool in modern pedagogy. The perception that AI is beneficial suggests a growing acceptance and integration of AI tools in educational settings. This could encourage educators to incorporate more AI-based resources into their teaching strategies, helping students develop skills such as writing and critical thinking. In summary, the statement highlights a positive perception of AI's role in education, supported by specific studies that demonstrate its practical benefits in assisting students with coursework and a generally favorable attitude towards its use.

The differing perceptions are based on the quality of the coursework. Lecturers mostly perceive that the quality of students' coursework deteriorates when it is completed using AI, as most of them only copy and paste from AI websites without reading the references. However, the students perceive that the quality of their work is better when it is completed using AI. Moreover, students and lecturers perceive that the use of AI could hinder their ability to think critically. This statement highlights a disparity between students' and lecturers' perceptions regarding the impact of AI on the quality of coursework and critical thinking. Lecturers perceive that the quality of students' coursework deteriorates when AI is used. This is attributed to students copying and pasting content generated by AI without engaging with or understanding the underlying references. This concern suggests that lecturers perceive a reliance on AI as potentially fostering a superficial approach to learning, where students may bypass critical engagement with the material, resulting in lower-quality submissions that lack depth and originality. The core issue here is not the use of AI itself, but rather the way students are using it—passively reproducing AI-generated content rather than utilizing it as a tool to enhance their own understanding and articulation of the subject matter.

Meanwhile, students believe that the quality of their work improves with the aid of AI. AI tools like ChatGPT can help students generate well-structured and grammatically correct content, making their work appear more polished and cohesive. Students may feel more confident in their submissions when AI assists with complex writing or problem-solving tasks, potentially enhancing their perception of quality. AI can streamline the process of gathering information and organizing thoughts, which students may perceive as an improvement in the overall quality of their work. While students equate polished language and structural coherence with quality, lecturers are likely assessing deeper aspects such as original thought, critical engagement, and evidence of independent analysis. This gap underscores the need for more effective guidance on the responsible use of AI, emphasizing that AI should be a tool to augment, rather than replace, critical thinking and personal insight.

Both students and lecturers agree that the use of AI could diminish critical thinking skills. This concern arises because AI can provide quick, ready-made answers, potentially discouraging deeper inquiry and independent problem-solving. Students might recognize that relying on AI for easy answers can make them less inclined to grapple with complex problems or engage deeply with challenging content. This self-awareness is crucial, as it suggests students are aware of the potential pitfalls of over-reliance on technology. Lecturers likely see a pattern where students bypass the cognitive process of questioning, analyzing, and synthesizing information, instead opting for AI-generated responses. This could lead to a reduction in students' ability to evaluate information and develop nuanced, critical arguments.

This finding differs from the study conducted by Parsakia, who suggests that the use of AI could have a positive impact on students' psychology, including self-efficacy, self-esteem, problem-solving, and critical thinking (Parsakia, 2023). This suggests that, under specific conditions, AI can serve as a supportive tool that enhances students' confidence and cognitive skills. The discrepancy with the current findings may be due to differences in context or method of AI use. For instance, if AI is used as a tutor or guide, providing feedback and prompting reflection, it might enhance critical thinking rather than detract from it. Furthermore, Darwin et al. revealed that AI can be an asset in the development

of critical thinking skills, but it must be accompanied by careful management (Darwin et al., 2024). This implies that AI's impact on critical thinking is contingent upon how it is integrated into the learning process. Effective management would include using AI as a supplement to encourage exploration and questioning, rather than as a shortcut for completing assignments. For example, students could use AI to test their ideas or receive feedback on their arguments, while still being responsible for the creative and critical aspects of their work.

These findings underscore the need for educators to provide clear guidelines on how to use AI effectively and ethically. Instead of discouraging AI use, they could teach students to engage critically with AI outputs, verify information, and utilize AI to enhance their understanding and problem-solving abilities. The curriculum could be designed to incorporate AI tools as part of the learning process, teaching students how to use these tools to augment their learning without undermining their critical thinking skills. Assessments may need to evolve to emphasize not just the final product, but also the process, requiring students to demonstrate their critical engagement with both AI and the subject matter. The differing perceptions reflect a broader issue in integrating AI into education. While students see immediate, surface-level benefits, lecturers are concerned with the more profound, long-term impacts on skills such as critical thinking. The key challenge is to bridge this gap by educating students on how to use AI as a tool to enhance their analytical and critical capabilities, rather than as a crutch that diminishes them.

The responses to the students' questionnaire indicate that 37% of the sample specifically reported using ChatGPT. This high usage rate suggests several possibilities: 1) Effectiveness. ChatGPT's natural language processing capabilities are likely perceived as very effective for generating coherent text, refining ideas, and even answering complex questions related to their fields of study. 2) Accessibility and Usability: ChatGPT is relatively easy to access and use, which may contribute to its popularity among students who need quick, on-demand assistance with writing. 3) Adaptability: ChatGPT can adapt to different writing styles and needs, making it a versatile tool for various assignments, whether for generating initial drafts, creating outlines, or refining paragraphs. Utilizing Chat GPT to create academic work, including essays and theses, presents significant challenges to academic integrity. There is a concern that students may rely on AI to generate content that is not their own, potentially compromising the integrity of the educational experience. These dilemmas highlight the complex relationship between the benefits of AI in education and the ethical responsibilities of institutions to protect students and maintain academic integrity (Huallpa et al., 2023).

Furthermore, Yu emphasises the considerable risks of academic dishonesty and cheating that could arise from students using ChatGPT for their assignments. This concern has prompted pushback from universities and scholars who prioritise the preservation of academic integrity (Yu, 2023). In this statement, Yu acknowledges that while there are valid worries about the misuse of ChatGPT, particularly regarding academic dishonesty, there are also significant benefits to its use in education. ChatGPT can help streamline the learning process by providing quick access to information, generating explanations, and offering personalised feedback. This can save students time and enhance their understanding of complex topics. The tool can enhance communication between students and educators by providing a platform for dialogue, answering questions, and clarifying concepts. This can lead to a more interactive and engaging learning environment. ChatGPT can assist educators in creating various types of educational materials, such as lesson plans, quizzes, and study guides. This can help teachers save time and focus more on direct student engagement. For language learners, ChatGPT offers practice opportunities, conversational simulations, and instant feedback, which can be invaluable for enhancing language skills.

Overall, Yu suggests that if ChatGPT is used thoughtfully and responsibly, it has the potential to enhance the educational experience and contribute positively to the learning ecosystem. This implies

that with proper guidelines and oversight, the benefits of the technology can outweigh the risks. Yu stresses that to leverage the positive features of ChatGPT, several challenges must be addressed, including ensuring data quality, safeguarding privacy, and addressing ethical concerns. AI and human educators need to collaborate to optimize the benefits while minimizing any adverse effects. Rudolph et.al revealed that Chat GPT performed the best in English and Chinese Language study programs compared to other chatbots (Rudolph et al., 2023). This finding suggests that the use of ChatGPT can have a positive impact on students in higher education. However, they recommend a sufficient teaching strategy and guidance for the students in using the chatbot.

Additionally, 13% of the students use Google Slides, primarily for presenting assignments. This is an interesting point because it highlights how AI tools are not only being used for writing but also for other academic tasks, such as preparing presentations. The lower usage percentage compared to ChatGPT suggests that students might be using Google Slides less frequently as an AI tool (it is not strictly AI-based), but rather for its functionality in organizing and presenting content visually. The data suggests that the nature of assignments affects the choice of AI tools. Since students reportedly receive more presentation assignments than writing assignments, tools like Google Slides become more relevant. This indicates a practical approach by students in selecting tools that best suit the task at hand. Students could create interactive slides by using this AI tool. The students believe that their presentation is more effective when it utilizes interactive slides created in Google Slides. A previous study has proven that the use of Google Slides has a positive and significant impact on students' competencies (Sacramento, 2023).

Overall, the data emphasizes the significant role of AI in the teaching and learning process. This role is not just about completing tasks, but also about enhancing the learning experience by supporting creativity and idea generation. For students in the PAI program, this could mean using AI to explore different perspectives, clarify complex religious or philosophical concepts, or coherently organize their thoughts. The data suggests a need for educators to recognize and integrate AI's potential into their teaching methods. If students are already using these tools independently, incorporating structured guidance on effective AI use could enhance learning outcomes. For example, educators could offer workshops on best practices for utilizing AI in academic writing and presentations, ensuring that students employ these tools in an ethical and effective manner. As AI tools evolve, their role in education is likely to expand. Understanding current usage patterns, like those highlighted in this data, can help educators and institutions adapt and develop curricula that integrate AI literacy, ensuring students are prepared for an increasingly AI-integrated world. In summary, these data indicate considerable adoption of AI tools, such as ChatGPT, among 4th-semester PAI students, highlighting their importance in academic writing and idea generation. The students' choice of tools reflects the nature of their assignments, and the overall trend underscores the growing role of AI in education, particularly in enhancing creativity and academic performance.

Conclusion

The use and utilization of AI have proven to be an alternative for students in the world of writing, in addition to providing ideas, AI can also improve the quality of their writing. The existence of AI helps many students in the 4th semester of the PAI study program. 52% of them utilize AI to enhance their papers and present their presentations more effectively. According to data from the questionnaires, lecturers perceive AI as very useful for students; however, most students only copy and paste from AI tools and rarely read the references when completing assignments. The most favorite AI tools are ChatGPT and Google Slides. Students like to use ChatGPT because it acts like a human; students can

order and ask anything to the chatbot, and it will provide the best answer for each question. The chatbot can give information to the user in seconds. Meanwhile, the Google Slides is chosen because most of the students' tasks involve a presentation. Therefore, Google Slides can help them to create interactive slides for their presentation. They believe their presentation is more effective when they use slides created in Google Slides. Overall, both lecturers and students perceive that the use of AI is beneficial in completing the coursework. However, there is a difference in the perception of the quality of the coursework. The lecturers perceive that the use of AI could decrease the quality of coursework, creativity, and critical thinking skills. On the other hand, students perceive that their coursework is improving when they use AI. In conclusion, lecturers perceive that while AI can enhance the quality of student writing and be highly beneficial in completing assignments, it also raises the risk of increased plagiarism. Therefore, they recommend that students use AI thoughtfully and critically, ensuring they thoroughly understand and evaluate the information provided by AI tools. This study is confined to examining the perceptions of students and lecturers regarding AI utilization. Future research is strongly recommended to investigate the correlation between AI tool usage and the substantive quality, originality, and learning efficacy embedded in students' submitted work.

Authorship Contribution Statement

The first author contributed as the main conceptual designer of the study, conducted the preliminary observations, carried out an extensive literature review, analyzed the research data, and was responsible for drafting and organizing the scientific article. The second author contributed to the data collection process and performed the processing, analysis of questionnaire-based data to support the research findings, and final editing.

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