

THE INFLUENCE OF ARTIFICIAL INTELLIGENCE IN STUDENT COURSEWORK EFFICIENCY

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Abstract

The emergence of artificial intelligence technology or commonly referred to as AI (Artificial Intelligence) in this digital era has become part of human life in various aspects, including the world of education. In making academic tasks, students such as making reports, working on papers, or preparing presentations can use AI tools such as Grammarly, Canva and ChatGPT to shorten time and high quality. This study aims to analyze the influence and impact of using AI in improving efficiency and effectiveness in completing daily academic tasks, which includes the benefits of challenges, as well as positive and negative impacts on learning skills by using the theory of Tom B Brown (2020) about active learning, reflective engagement, skill adaptation, and independence in learning. Through a descriptive and qualitative approach with data collected through interviews with 20 students. The results of this study show that the use of artificial intelligence tools can improve task quality by 70% for Canva, 65% for Grammarly, and 60% for ChatGPT. AI reduced task completion time by 40%. However, it should be noted that AI-based tools require human supervision to correct and avoid potential technical errors, academic ethical risks, and dependence on AI. This research suggests using AI wisely and responsibly, fully understanding the boundaries of academic ethics, not making AI a substitute for critical thinking but rather a tool, and providing guidelines for the use of AI tools in universities or other educational institutions so that students are not completely dependent on AI.

Keywords: Academic ethics, Artificial intelligence, Daily tasks, Efficiency, Students.

INTRODUCTION

Background

The development of artificial intelligence or AI has brought changes in various aspects of life, including education. Based on a UNESCO survey (2023) AI-based tools such as Grammarly, Canva, and ChatGPT are often used by 70% of students to complete academic tasks more quickly and effectively. These tools are now the mainstay of students.

However, these benefits of AI are inseparable from some of the problems that arise, such as dependence on AI that can reduce the ability to think critically, while AI-generated accuracy is not always accurate which can affect tasks. In addition, there is the challenge of the risk of violating academic ethics in its use, such as plagiarism. Based on these phenomena, this study sought to identify the relationship between students' level of AI usage and perceived benefits.

1. The level of AI use by students consists of:

- Frequency of AI Use: How often students use AI in their assignments, categorized as always, often, sometimes and never.
- AI Tools Used: Types of tools that are often used, such as Grammarly, Canva, and ChatGPT.

2. Represent students' perceived benefits from using AI, which include:

- Time Efficiency: Reduction in task time due to AI assistance.
- Quality of Results: An improvement in the quality of the task as judged by accuracy, creativity, or presentation.
- User Satisfaction: Students' level of comfort and satisfaction while using the AI-based tool.

Through this research, the relationship between AI usage and perceived benefits will be analyzed to provide more insight into the effectiveness of AI in supporting student activities. The results of this study are expected to provide recommendations on how to optimally and ethically use AI in education.

Problem Formulation

This research focuses on several key questions:

1. How does AI help students complete everyday tasks, such as report writing, presentation creation, or simple data analysis?
2. What are the benefits and efficiencies that students perceive from using AI in academic tasks?
3. What are the challenges and risks that students face when using AI, especially regarding ethics and skill development?

LITERATURE REVIEW

This literature review discusses various perspectives on the influence of artificial intelligence (AI) on student coursework efficiency. The application of AI in education is considered to bring numerous benefits, such as reducing task completion time, improving task quality, and facilitating self-directed learning. However, the use of AI also presents challenges, including dependency on technology, academic ethical violations, and limited development of critical thinking skills.

Brown (2020) states that AI technologies can support active learning by helping students engage reflectively with their tasks and adapt the required skills. In higher education, Lin (2023) highlights that tools like Grammarly and ChatGPT are highly beneficial for academic writing, although dependency risks must be managed wisely.

Similarly, Zawacki-Richter *et al.* (2019) emphasize that while AI introduces innovations in education, educators play a crucial role. They are responsible for ensuring that AI is used to support learning processes, rather than replace them. Another study by Ouyang, Zheng, & Jiao (2022) shows that tools like Canva significantly help students improve the quality of their visual presentations.

Nevertheless, challenges in AI usage cannot be overlooked. Perkins (2023) underlines the importance of ethical regulations in AI usage to uphold academic integrity. Furthermore, Yilmaz & Yilmaz (2023) find that while generative AI tools can enhance computational thinking skills, their use requires a balanced learning approach to avoid excessive reliance.

RESEARCH METHOD

Research Approach

This study uses a descriptive qualitative method to describe the role of AI in supporting students' daily academic tasks.

Data Collection Technique

- Literature Study: Review relevant journals, articles, and reports on the use of AI in education.
- Interview: Involved 20 students from various majors who are actively using AI-based tools.
- Observation: Observe first-hand how students use AIs such as Grammarly, Canva and ChatGPT in their daily work.

Data Analysis Technique

Data were thematically analyzed to identify patterns of benefits, challenges, and impacts of AI use.

RESULTS AND DISCUSSION

The Role of AI in Students' Daily Tasks

AI is already a major tool in helping students complete everyday tasks, such as:

1. Report Writing

Grammarly helps students improve the quality of their writing with advanced features such as:

- a. Grammar and Spelling Checking, ensuring that the text is free of errors, making the writing easier to understand.
- b. Writing Style Advice, which helps students create more effective and contextually appropriate writing, such as the use of active or passive voice as needed.
- c. Plagiarism Checker, to ensure the originality of the writing by comparing it against online sources, which is very important in academic assignments to avoid plagiarism.

As a result, students can complete reports faster and with more confidence as the quality of results improves. This aligns with Tom B. Brown's (2020) concept of active learning, where students engage more deeply with the task at hand by leveraging AI to streamline certain processes like writing and brainstorming. Through such interactions with AI, students are not only completing tasks more efficiently but also gaining opportunities to enhance their understanding and skill application, in line with Brown's idea of reflective engagement.

2. Presentation Making

Canva provides an intuitive graphic design solution, even for students with no previous design experience, with key features including:

- a. Ready-to-use Templates: Students can choose from thousands of templates that can be customized for various needs, such as seminars, reports, or project proposals.
- b. Professional Visual Design: produce presentations with various attractive visual elements, such as diagrams, graphs and infographics.
- c. Online Collaboration: Allows students to work in groups, supporting teamwork or study groups.

With Canva, students can create attractive, high-quality presentations without spending a lot of time.

3. Idea Generation

ChatGPT acts as an assistant who provides ideas and a basic framework for academic assignments, such as papers, reports, or projects. Its main functions are:

- a. Brainstorming Ideas: Helps students who are stuck for ideas to find new angles or interesting concepts.
- b. Initial Draft Generation: The ChatGPT can prepare a basic draft which can then be adjusted, corrected and improved by the students.

- c. Simplification of Complex Concepts: This tool can also explain difficult concepts in simple language, students can understand the material better before writing it down.

This tool saves time in the drafting process, especially when students are faced with tight deadlines.

Benefits of Using AI

Time Efficiency: 70% of students reported time savings of up to 40% when using Grammarly to check spelling and grammar and ChatGPT to brainstorm ideas. Another 20% experienced time savings of 30%-40%, while 10% said they only saved around 10%-20%

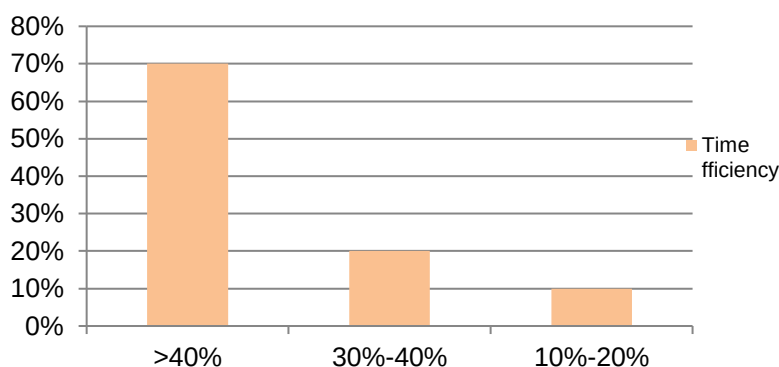
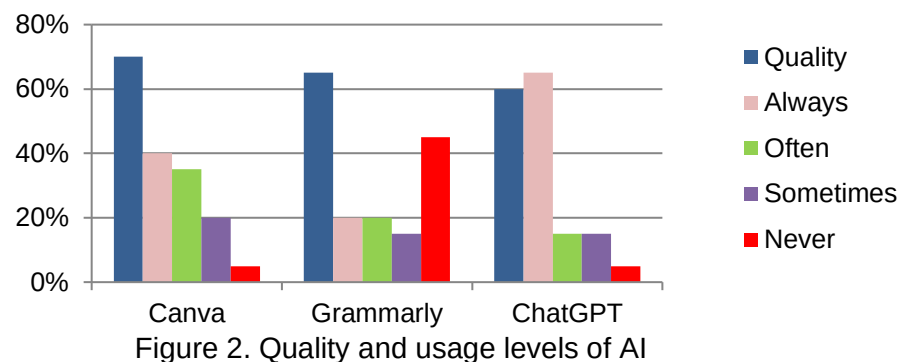


Figure 1. Time efficiency of using AI

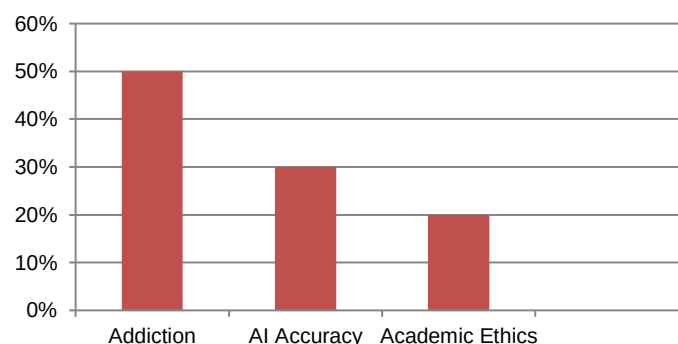
• Assignment Quality:

- Canva: Canva can help 60% of students produce visually appealing paper presentations, and is said to make quality up to 70% better. As for usage, there are 40% of people who always use it, 35% often, 20% sometimes, and 5% who never use it.
- Grammarly: 75% of respondents used Grammarly to improve writing quality, and the quality is said to be up to 65%. Usage also varies, with 20% always using it, 20% often, 15% sometimes, and 45% never.
- ChatGPT: ChatGPT is used by 80% of people for brainstorming ideas, and the quality is said to be up to 60%. with 65% always using it, 15% using it often, 15% using it sometimes, and the rest never using it.
- Self-paced Learning: Students learn faster with guidance from the AI that helps simplify material concepts, especially in newly learned topics or tools. This aligns with Tom B. Brown's (2020) theory on active learning and reflective engagement, where students become more autonomous in their learning processes by using AI tools to assist in simplifying complex topics, allowing them to adapt their skills to new contexts.



Challenges and Risks

- **Reliance on AI:** Students tend to use AI without understanding the basic concepts, which can hinder long-term learning. As many as 50% of respondents often have difficulty completing tasks without AI assistance, which can hinder students' skill development. This is consistent with Tom B. Brown's (2020) theory of independence in learning, where students are encouraged to develop critical thinking and problem-solving skills. Overreliance on AI tools can reduce opportunities for these essential learning processes.
- **AI errors:** Not all AI results are accurate, so manual verification is still required. 30% of students reported this error to be common with the ChatGPT tool, which sometimes produces generic answers that do not match the keywords given.
- **Academic Ethics:** 20% of respondents found it difficult to understand the ethical boundaries of using AI to automatically compile assignments that may violate the principle of academic honesty or plagiarism.



CONCLUSION

This research shows that AI provides great benefits in helping students to perform daily academic tasks more efficiently and effectively by up to 40% and the quality of tasks. It can also help students to shorten time and understand learning faster.

However, students must control the use of AI wisely and responsibly. Guidance from lecturers or educational institutions is needed to ensure the use of AI supports the learning process, not just completing tasks quickly. The development of independent skills remains important so that students

are not fully dependent on AI-based technology. This aligns with Tom B. Brown's (2020) framework on active learning, where students should engage critically with their tasks, and independence in learning, ensuring that AI is a tool for support rather than a replacement for cognitive engagement and problem-solving skills.

Suggestion:

1. Students need to understand the limitations of AI and keep verifying the results produced by the tool. While AI can be incredibly helpful, it's not perfect and can sometimes make mistakes or give incomplete answers, so it's important to verify its output
2. Universities need to provide and deliver training on the ethical and effective use of AI. It's crucial that students learn how to use AI in ways that are both effective and aligned with ethical standards, so they can make the most of it in their studies and future careers
3. Students should use AI as a supportive tool, not as a substitute for critical thinking. AI can be a great help, but it shouldn't take the place of the deeper thinking and problem-solving skills that are key to academic success. This supports Tom B. Brown's (2020) view that AI should be used in a reflective and engaged manner, ensuring it contributes to, rather than diminishes, the development of independent thinking skills.
4. Further research to explore the long-term impact of using AI in education. It's important to understand how AI is changing the way we learn and teach, and to explore its potential effects on students and educational systems in the years to come.

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