AI IN 2024 UIN INFORMATION SYSTEMS EDUCATION: ACADEMIC IMPACTS AND ETHICAL CHALLENGES

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ABSTRACT

The penetration of Artificial Intelligence (AI) in academic environments has sparked a dual reality, balancing learning innovation against the disruption of integrity. This study investigates the practical impacts and ethical implications of AI adoption among the 2024 Information Systems cohort at the Faculty of Science and Technology, UIN Syarif Hidayatullah Jakarta. Utilizing a mixed-methods approach that integrates a macro-level Systematic Literature Review (SLR) with local quantitative surveys, the research uncovers a sharp contrast. Practically, 100% of respondents indicated that AI effectively breaks down complex concepts for better understanding , while also significantly accelerating the completion of academic tasks. However, the literature review highlights an alarming moral shift known as the AI-Human Unethicality Gap, where 61% of students in collectivist cultures tend to rationalize plagiarism when using AI tools. This situation is exacerbated by a regulatory void, with 74% of higher education institutions in developing countries lacking explicit AI guidelines. The study concludes that reactive bans are not a viable solution; instead, universities must proactively integrate a Digital Ethics Literacy curriculum and implement next-generation plagiarism detection systems based on Natural Language Processing (NLP) to uphold the dignity of scientific honesty.

Keywords: *Academic Integrity, AI-Human Unethicality Gap, Digital Ethics, Information Systems, Technological Literacy.*

A. Introduction

The advancement of modern technology has brought significant changes to various sectors of life, including education. One of the innovations that has made a major impact is artificial intelligence (AI), which has now become a crucial pillar in the era of the Industrial Revolution 5.0. Within the higher education ecosystem, AI offers opportunities to accelerate the transformation of the learning process through content personalization, administrative efficiency, and automated evaluation. The ability of AI to adaptively analyze students' learning styles and individual needs has proven capable of significantly enhancing learning effectiveness (Bibi et al. 2024).

Despite offering immense potential, the implementation of AI in education faces serious ethical and practical challenges. One of the primary emerging issues is the threat to academic integrity. There is a phenomenon known as the AI-Human Unethicality Gap, wherein students tend to consider committing plagiarism or copying AI-generated content to be more morally acceptable compared to plagiarizing human work (Khalida et al. 2025). A low perception of psychological ownership over AI-generated work causes students to feel more entitled to use such content without proper attribution, thereby blurring the line between learning assistance and academic dishonesty (Khalida et al. 2025).

Beyond integrity issues, aspects of privacy and data security have become critical concerns (Khan et al. n.d.). AI systems in education require access to sensitive personal information which, if not managed properly, runs the risk of causing data breaches and information misuse (Isdayani, Thamrin, and Milani 2024). There are also concerns that excessive use of AI may create technological dependency, which weakens critical thinking skills, originality, and independent problem-solving abilities (Tittahira and Usiono 2025).

Other ethical challenges include equity of access and algorithmic bias. In Indonesia, there is a significant digital divide between urban and rural areas, as well as differences in economic backgrounds that affect students' opportunities to access adequate AI technology (Isdayani et al. 2024). If not managed through inclusive policies, the use of AI risks widening the inequality in educational quality (Isdayani et al. 2024). Furthermore, AI algorithms trained on non-representative data can produce biased decisions that disadvantage certain groups.

Given the complexity of these issues, a redefinition of the concepts of authenticity and creativity in academic writing is necessary (Khalida et al. 2025). Higher education institutions have a responsibility to develop a digital literacy curriculum that is not only technical but also addresses moral aspects and academic responsibility (Coates 2025). This study aims to examine the impact and ethics of AI usage on the learning process of the 2024 cohort of

Information Systems students at UIN Jakarta. By analyzing the associated benefits, challenges, and ethical aspects, it is hoped that this research can provide a foundation for developing educational policies that are adaptive while continuing to uphold the principles of scientific honesty.

B. Methods

This research employs an approach that specifically integrates the Systematic Literature Review (SLR) method and a quantitative survey method. The combination of these two methods aims to provide a comprehensive and in-depth analysis of the practical impacts and ethical implications of artificial intelligence (AI) usage among students.

The SLR method serves as an initial step to collect, evaluate, and synthesize information from various relevant literature sources. This approach enables a systematic identification and selection process to gain a deeper understanding of the positive impacts, negative impacts, and ethical issues surrounding AI usage. At this stage, the researchers identify appropriate search keywords and establish strict inclusion and exclusion criteria. These criteria are applied to ensure that only high-quality and relevant articles or empirical studies are analyzed, followed by data extraction and thematic analysis of the acquired literature. The findings from this SLR focus on dissecting the ethical dimensions, academic integrity risks, and the urgency of institutional policies at the higher education level.

To complement the findings from the literature review, this study also collects quantitative data through a survey specifically designed for students. The survey was distributed to the 2024 cohort of Information Systems students at the Faculty of Science and Technology (FST), UIN Syarif Hidayatullah Jakarta. The survey instrument includes questions aimed at measuring the relationships between the investigated variables, such as the level of time efficiency in task completion and the comprehension of learning materials. Respondents provided scaled numerical answers, allowing the researchers to conduct objective statistical analysis. With this quantitative data, the research can identify factual patterns and trends that emerge directly from student responses.

The final stage of this methodology is integrated data analysis. The quantitative data is processed using statistical analysis to explore local trends in AI usage among students. Meanwhile, data from the literature (SLR) is analyzed to discover macro-level ethical patterns and themes. By integrating the results of these two approaches, the research is expected to provide a holistic and comprehensive understanding of the investigated issues regarding AI utilization. This combined approach not only strengthens the validity and reliability of the research findings but also offers solid insights for better academic decision-making.

C. Results and Discussion

Artificial Intelligence (AI) is a branch of computer science that aims to develop systems and machines capable of performing tasks that typically require human intelligence (Zúñiga 2023). AI involves the use of algorithms and mathematical models to enable computers and other systems to learn from data, recognize patterns, and make intelligent decisions. Within the context of AI, there are several important concepts such as machine learning, neural networks, natural language processing, and many more. The development of AI has made a massive impact across various fields, including voice recognition, facial recognition, autonomous vehicles, medicine, and many others.

Artificial Intelligence (AI) is defined as the capability of a system to mimic human intelligence, typically implemented through computers and used to execute tasks requiring intelligence, such as control, planning, and pattern recognition. Generative AI, such as ChatGPT, has demonstrated a transformational role in education, providing tools that can enhance the learning process, despite raising concerns regarding academic integrity among educators.

The history of AI shows that although it has existed since the early 20th century, the development of modern technology, particularly in the context of higher education, indicates an increased interest in and application of AI, including bibliometric analyses highlighting publication trends related to AI and students. Given the low level of digital literacy in Indonesia, it is crucial to provide

education on the proper use of AI, especially among the youth who are the primary target of this study. AI has now become an essential branch of computer science, focusing on the development of systems that can adapt and learn from experience, and is applied in various fields such as robotics, gaming, and expert systems.

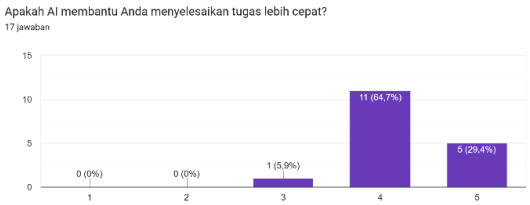
Artificial Intelligence (AI) has become an integral part of the educational realm, particularly among university students. Based on the survey results of students from the Faculty of Science and Technology (FST), the majority of respondents exhibited a fairly high level of familiarity with this technology. AI technologies, such as ChatGPT and Gemini, are frequently utilized by students to support various academic needs, including completing assignments, finding references, and understanding complex concepts. Furthermore, the presence of AI provides easy access to vast amounts of information (Baidoo-anu and Ansah 2023). This technology enables students to obtain relevant data and learning resources in mere seconds. This development not only supports academic learning but also assists students in exploring their interests beyond the formal curriculum.

The impact of AI on learning is also evident in how students interact with technology. Many students are now beginning to understand the potential of AI in enhancing work efficiency and personalizing learning materials. This aligns with the survey findings, where most respondents felt that AI has brought positive changes to their learning experience. However, the use of AI is not without the need for adaptation. Some students still encounter technical obstacles or lack an understanding of how to fully leverage AI. Therefore, further education is required to improve technological literacy among students. Journal studies support these findings, wherein AI is considered capable of improving learning efficiency and personalization. For instance, the journal "Artificial Intelligence and Scientific Communication" indicates that AI assists students in scientific writing by providing structure and references (Mcguire n.d.). This reflects the role of AI as a primary supporting tool in higher education.

The Impact of AI on Students

The use of AI has a significant impact on the teaching and learning processes at the university student level. Based on the results of the questionnaire distributed to the 2024 student cohort, these impacts can be classified into positive and negative impacts.

Positive Impact



Grafik 1.1 Respondents' Impact on AI Effectiveness

Positive Impacts a. Efficiency and Speed: The effectiveness of Artificial Intelligence (AI) assists students in completing assignments faster, as mentioned by the majority of survey respondents. This technology allows them to save time in searching for information, enabling them to focus more on understanding the material. Based on the survey data, the majority of respondents felt significantly helped in saving time for information retrieval (with 64.7% of respondents choosing scale 4, and 29.4% choosing scale 5). This finding aligns with the broader application of AI in improving operational efficiency, as noted in studies on knowledge management (Alief and Nurmiati 2022). This technology allows them to no longer spend time on basic technical matters, so they can focus more on comprehending the core material.

Grafik 1.2 Respondents' Impact on Learning Understanding

With the presence of artificial intelligence, respondents acknowledged a better understanding where artificial intelligence provides detailed explanations on various topics, helping students understand the learning material more effectively. As many as 100% of respondents stated "Yes" that AI helps them understand the learning material better. AI applications provide interactive simulations and visual explanations that break down difficult concepts into easier to understand.

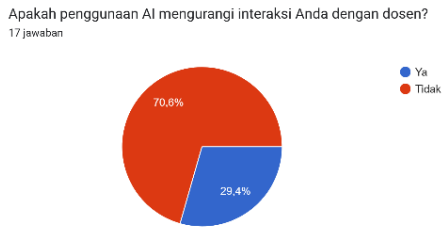
Grafik 1.3 Respondents' Impact on Task Creativity

Artificial intelligence (AI) technology encourages student creativity in finding solutions and ideas for college assignments. The majority of respondents (47.1% on a scale of 4 and 23.5% on a scale of 5) use AI as a brainstorming tool to help students

generate innovative ideas that support their projects, rather than simply as a tool for copying answers.

According to the journal "The Impact of Using Artificial Intelligence for Higher Education," AI enables personalized learning, such as recommending materials based on individual needs. This helps students learn at their own pace and style (Naila et al. 2023).

Negative Impact



Grafik 1.4 Percentage Impact of AI Use on Student and Lecturer Interactions

Despite the many benefits gained, the use of AI also brings negative impacts that are directly felt by students.

1. Reducing Interaction with Lecturers

A total of 29.4% of respondents confirmed that the use of AI reduces the need for direct interaction with lecturers, while 70.6% felt it had no impact. While a minority, this reduction in interaction remains a significant concern as it can impact the quality of in-depth academic discussions, which cannot be replaced by machines.

2. Technical Obstacles

Some students reported technical challenges in using AI applications, such as limited technological infrastructure, unstable internet access, or a lack of understanding of effective prompting.

Challenges to Face: Ethics and Academic Integrity

While the quantitative data above demonstrates remarkable efficiency, the negative impacts reported by students are actually early symptoms of a more systemic problem. Based on the results of a field survey combined with a Systematic Literature Review (SLR) of recent academic studies, three crucial challenges must be addressed. These technical challenges are inseparable from the moral dilemma and crisis of academic ethics in the era of digital disruption.

A. The Challenge of Technology Dependence and the Crisis of Originality

Survey results indicate that excessive use of AI can lead students

to become overly dependent on the technology. Some respondents found it easier to complete tasks directly with AI without conducting in-depth, independent analysis. Rather than using the technology as a supplemental tool for brainstorming, students often rely on it to generate final answers. Consequently, this heavy reliance threatens to diminish students' critical thinking skills, analytical capabilities, and academic independence in the long term, reducing their capacity to solve complex problems without digital intervention.

From an ethical perspective, this growing dependency has triggered a profound crisis of originality, which is theoretically framed as the AI-Human Unethicality Gap (Longoni, Tully, and Shariff n.d.), cited in (Khalida et al. 2025). This phenomenon elucidates a psychological shift wherein students perceive the act of delegating cognitive effort and plagiarizing content from AI models (such as ChatGPT) as far more morally acceptable than plagiarizing human-authored work. Because AI lacks human sentience, students develop a diminished sense of psychological ownership over the generated text, leading them to feel justified in claiming the machine's output as their own without proper attribution.

Furthermore, the literature reveals that this ethical acceptance is not universal but is significantly influenced by underlying socio-cultural contexts. A comprehensive cross-cultural survey found that 61% of students in collectivistic countries considered the use of generative AI as a legitimate learning assistant, compared to only 37% of students in individualistic countries cited in (Khalida et al. 2025). This stark contrast highlights that in societies where communal achievement and shared resources are highly valued, the boundaries of intellectual property become more fluid, making students more permissive toward AI-assisted academic shortcuts.

The normalization of such practices poses a severe threat to the fundamental pedagogical objectives of higher education. When students continually bypass the rigorous process of drafting, synthesizing, and evaluating information, education

shifts from a formative cognitive journey into a mere product-oriented transaction. This transactional mindset fundamentally devalues the essence of higher learning, as the ultimate goal of university education is not merely to produce grammatically correct text, but to cultivate a disciplined, analytical, and truly original human mind.

This multifaceted ethical issue is further complicated by the fact that such intellectual delegation is extremely difficult to detect using traditional academic integrity systems. Conventional plagiarism checkers, which rely on exact text-matching algorithms, consistently fail to identify the unique, non-indexed text generated by AI. To address this critical gap, the literature emphasizes that institutions must rapidly integrate advanced Natural Language Processing (NLP) into their detection systems. Studies have shown that adopting NLP-based detection mechanisms can increase the accuracy of AI-generated text identification from 72% to 89% (Mishra 2023), proving that technological countermeasures must evolve synchronously with generative AI to uphold academic honesty.

B. Misinformation Risks and Data Privacy Vulnerabilities

The second major challenge encountered in the integration of AI within educational settings is the pervasive risk of inaccurate information. In recent surveys, students have frequently reported receiving erroneous, out-of-context, or entirely fabricated information from AI platforms. Because generative models predict text based on probability rather than verified factual understanding, they are highly prone to generating informational "hallucinations." If students lack the critical literacy required to cross-verify these AI-generated outputs with trusted academic sources, this misinformation can severely disrupt the learning process and lead to the assimilation of fundamentally flawed concepts.

From an ethical standpoint, the proliferation of this misinformation is deeply rooted in the systemic problem of algorithmic bias. AI algorithms are predominantly trained using massive repositories of historical data that are often unrepresentative, skewed, or

inherently prejudiced. Consequently, the results they produce are vulnerable to perpetuating discrimination against certain marginalized groups or reinforcing existing societal stereotypes (Isdayani et al. 2024). This lack of neutrality in AI systems transforms a seemingly objective technological tool into a medium that can inadvertently compromise the fairness and academic integrity of educational environments.

Furthermore, the operational mechanics of AI trigger an equally severe ethical crisis in the realm of data privacy. Advanced AI systems inherently require continuous inputs of "big data" to refine their algorithms and offer personalized learning experiences. During this interaction, students often lack the necessary awareness regarding digital security, frequently entering confidential academic information, preliminary research drafts, or sensitive personal details into public AI prompts (Tittahira and Usiono 2025). This careless practice renders students highly vulnerable to privacy breaches, unauthorized data harvesting, and the potential misuse of their intellectual property.

Addressing these interconnected risks of algorithmic bias and data vulnerability necessitates robust institutional intervention. The severe implications of privacy breaches require educational service providers and university administrations to uphold strict transparency regarding how user data is collected, stored, and utilized by AI algorithms. Furthermore, institutions must establish explicit ethical guidelines and ensure absolute compliance with statutory data protection regulations, such as the Personal Data Protection (PDP) Law. By legally and ethically safeguarding digital rights, universities can mitigate the inherent risks of AI adoption while fostering a secure, responsible, and equitable technological ecosystem for their students.

C. Technical and Ethical Barriers to Access Justice (Digital Divide)

The third significant challenge reported by students revolves around technical difficulties and the operational usability of AI platforms. In the survey, numerous respondents

indicated that they struggled to fully comprehend certain advanced features or lacked the necessary digital literacy to formulate effective prompts. This lack of technical proficiency prevents students from maximizing the educational potential of generative AI, often transforming what should be an intuitive learning assistant into a source of frustration. Consequently, the barrier to entry is not solely hardware-based but also cognitive and skill-based, highlighting the urgent need for comprehensive technical training.

Beyond personal usability issues, severe infrastructure limitations pose a formidable physical barrier to equitable AI adoption. Students frequently reported encountering critical logistical hurdles, most notably unstable internet access and inadequate device capabilities, particularly in less urbanized or rural areas. Because advanced AI applications operate as heavy, cloud-based services requiring high bandwidth and continuous connectivity, these infrastructural deficits severely restrict access for marginalized student populations. This stark reality limits their ability to engage with modern educational tools at the same pace as their peers in highly connected environments.

Within the broader discourse of technological ethics, these technical and infrastructural constraints directly manifest as profound issues of social justice and the "digital divide." The empirical data suggests that the optimal benefits of AI such as accelerated research, personalized tutoring, and efficient task management are becoming increasingly exclusive. These advantages are primarily enjoyed by students from middle to upper class socioeconomic backgrounds who possess the requisite stable infrastructure and private devices. As a result, students with limited access are perpetually left behind in a highly competitive academic landscape, unable to leverage the same technological privileges as their peers.

This growing disparity reveals a critical ethical paradox: the presence of AI, which ideally should serve as a revolutionary tool for educational emancipation and democratization, instead indirectly widens the chasm of educational inequality between social

classes. If higher education institutions fail to proactively intervene by providing equitable academic facilities, subsidized digital access, and inclusive infrastructure, this technology will merely reinforce existing systemic inequities. Ultimately, ensuring equitable AI access is a fundamental moral imperative for universities to prevent the exacerbation of educational disparities (Tittahira and Usiono 2025).

Regulatory Gaps and the Urgency of Institutional Guidelines

The various challenges mentioned above, starting from dependency (originality crisis), misinformation (bias and privacy), to technical constraints (digital divide), all stem from a chronic institutional problem (the lack of comprehensive policies). A literature analysis revealed the critical fact that 74% of universities in developing countries still lack explicit guidelines regarding the use of AI in academic settings (Rane et al. 2024).

This legal gap creates a space for dissonance. Institutions can no longer simply take reactive measures such as prohibitions, as AI has become inevitable. Instead, study programs such as Information Systems must proactively formulate adaptive policies.

As a solution and follow-up to these challenges, higher education must immediately integrate a "Digital Ethics Literacy" module into the curriculum. Institutions need to establish policies limiting the use of AI for specific tasks, such as prohibiting direct editing without prior manual drafting, to ensure students' critical thinking skills are maintained. With clear attribution regulations, strong ethical awareness, and equitable infrastructure, AI can be transformed from a plagiarism threat into a disruptive innovation that upholds the values of scientific honesty.

D. Conclusion

The use of Artificial Intelligence (AI) in the learning process for students of the Information Systems Study Program at UIN Syarif Hidayatullah Jakarta presents a dual, intersecting reality: innovation in efficiency on the one hand, and disruption in academic ethics on the other. Quantitatively, AI has been

proven to have a very significant positive impact as a learning catalyst. Students reported a surge in efficiency in completing assignments and an absolute increase in material understanding (100%), making AI a highly reliable academic support tool.

However, the findings of the Systematic Literature Review (SLR) confirm that this reliance on technical efficiency can trigger an integrity crisis if not constrained by strict academic ethics. The main challenge faced is not merely technical obstacles, but rather a moral shift reflected in the phenomenon of the AI-Human Unethicality Gap, where the tendency of students to be more permissive towards AI-based plagiarism indicates a disregard for basic ethical rules, such as the obligation to attribution and originality of work. Furthermore, the threat of algorithmic bias, data privacy vulnerabilities, and the widening digital divide demand the enforcement of ethical rules that protect digital rights and equitable student access.

This situation is exacerbated by the finding that the majority of higher education institutions in developing countries (74%) still face a regulatory gap. This lack of institutionally binding ethical rules leaves students without a moral compass when it comes to utilizing AI. Therefore, reactively banning AI is not a viable solution. Instead, educational institutions must proactively integrate "Digital Ethics Literacy" into their curricula to help students understand the boundaries between delegation of tasks and academic dishonesty.

Universities are urged to immediately formulate institutional guidelines that explicitly codify ethical rules for the use of AI. These ethical rules should include mandatory transparency in AI use, compliance with privacy regulations (such as the Personal Data Protection Act), and the adoption of a next-generation plagiarism detection system based on Natural Language Processing (NLP). By educating students to position AI purely as a co-pilot or collaborative partner, not a substitute for human intelligence, and by enforcing adaptive ethical rules, the transformation of higher education can continue without sacrificing the dignity of scientific honesty.

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