

Exploring the Impact of Generative AI Literacy on Students' Academic Performance: An Ethical and Academic Fraud Perspective

Choiriyah Annas^{1*}, Jaka Nugraha²

^{1,2} Universitas Negeri Surabaya, Indonesia

*E-Mail: choiriyah.22156@mhs.unesa.ac.id

Information Article

History Article

Submission: 17-03-2026

Revision: 20-04-2026

Published: 21-04-2026

DOI Article:

10.62421/jibema.v3i4.217

ABSTRACT

This study aims to analyze the impact of generative AI literacy on student academic performance using an ethical and academic fraud perspective. This research is motivated by the increasing use of generative AI technology among students to complete academic assignments. Generative AI tools such as ChatGPT, Deepseek, Blackbox, and others have become popular tools among students, but their use raises ethical dilemmas and the potential for academic fraud that can impact academic integrity. This study used a quantitative approach with data collection through questionnaires distributed to students to identify the extent to which generative AI literacy impacts student academic performance, both positively and negatively. The data analysis technique used in this study was Structural Equation Modeling-Variance Based Structural Equation Modeling (VB-SEM) with a Generalized Structured Component Analysis (GSCA) approach. Furthermore, this study also examines the ethical implications of using this technology and its relationship to academic fraud such as plagiarism and academic dishonesty. The results are expected to provide insights for educational institutions in formulating policies regarding the use of Generative AI that balance technological innovation and academic integrity. This research can also serve as a reference for students in using technology responsibly to support quality academic achievement.

Key word: Generative AI, Academic Performance, Ethics, Academic Fraud, VB-SEM GSCA, Students

Acknowledgment

©2026 Published by JIBEMA. Selection and/or peer-review under responsibility of JIBEMA

PENDAHULUAN

The advancement of information technology in the digital era has brought significant changes to various aspects of life, including higher education. One of the major innovations is the emergence of Generative AI, such as ChatGPT, Blackbox, Gemini, and Copilot; these tools are presented in the form of chatbots and are now widely used in academic environments. Generative AI is utilized for information retrieval, automated text generation, and even the preparation of final academic projects (Chukwuere, 2024; Zafar;Shaheen;Rehan, 2024). These tools operate through algorithm-based systems and are capable of assisting in automated text processing, ranging from searching for information to supporting the process of preparing final academic assignments (Haenlein, M., & Kaplan, 2019).

Artificial Intelligence also encompasses the ability to interpret external data accurately, learn from experience, and apply such learning to accomplish tasks through flexible adaptation (Russell, S. J., Russell, S., & Norvig, 2020).

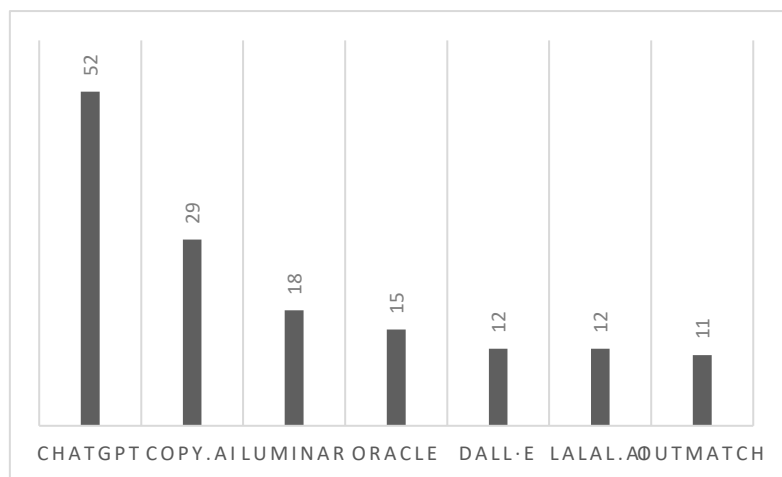
An academic culture that upholds honesty and independent learning must also continue to be strengthened. Other ethical challenges, such as plagiarism, algorithmic bias, and misinformation, are also matters of concern. Universities need to encourage students' understanding of the ethical use of AI, rather than merely relying on prohibitions or sanctions (Baker, T., Smith, L., & Anissa, 2019). In line with this, (UNESCO, 2023) has issued global guidelines emphasizing the importance of data protection, ethical validation, and the development of AI-related competencies within educational environments. These guidelines call upon institutions not only to view AI as a supportive tool, but also as a technology that must be approached critically and responsibly.

Although technologies such as Generative AI offer many conveniences in the field of education, such as assisting students in understanding course materials or completing assignments, their use has also raised concerns. In the United States, a survey by (Valdivieso, T., & González, 2025) indicates that 47% of students have used AI to complete academic assignments, while a survey conducted by Harvard EdTech (Hirabayashi, S., Jain, R., Jurković, N., & Wu, 2024), reports an even higher figure of 67%. Unfortunately, only 45% of these students reported that they truly understood how to use this technology responsibly. This situation indicates that the use of AI has not been fully accompanied by adequate ethical literacy and academic awareness. While technological tools such as AI can provide significant assistance, they may also be misused for academic dishonesty, such as copying assignments without understanding their content (Wood et al., 2023). There is also a tendency for students to use AI to generate assignments automatically without critically reviewing or verifying the accuracy of the content (Biswas, 2024).

Research conducted by (Octavia, A. C. B., & Nugraha, 2024) indicates that factors such as trust and convenience play an important role in students' acceptance of AI. However, the increasingly widespread use of AI must be accompanied by ethical awareness to prevent dependency that may lead to academic dishonesty. Therefore, AI literacy from an ethical perspective has become an important issue in the context of contemporary higher education. When students merely copy answers without understanding their content, they lose the opportunity to think critically and to develop a deeper understanding of the material. This situation contradicts the fundamental purpose of education, which concerns not only outcomes but also the process of character formation, including ethics and attitudes (Risnina, N. N., Permatasari, S. T. I., Nurulhusna, A. Z., Anjelita, F. M., Wulaningtyas, C., & Rakhmawati, 2023). Furthermore, the convenience offered by AI is also feared to encourage the emergence of academic laziness. When information can be accessed instantly through technologies such

as Generative AI, students tend to be less motivated to learn independently. Excessive dependence on dialog-based AI systems, such as ChatGPT, has been shown to reduce cognitive abilities, including critical thinking, problem-solving, and conceptual understanding. This occurs because students tend to prefer quick solutions rather than engaging in deeper cognitive processes (Wang, H., Dang, A., Wu, Z., & Mac, 2024). In addition, the limited control over the use of this technology creates opportunities for misuse solely for academic purposes (Saraswati, A. R., Karmina, V. A., Efendi, M. P., Candrakanti, Z., & Rakhmawati, 2023).

A report from Turnitin cited by (GovTech, 2024) indicates that AI has been used in 11% of student papers since April 2023. A study conducted by the developer of the anti-plagiarism platform Turnitin, which reviewed more than 200 million student papers worldwide since April 2023, found that over 22 million of those papers used AI to generate at least 20 percent of the written content. Millions of students are using generative artificial intelligence to write papers as AI chatbots such as ChatGPT continue to gain popularity. Annie Chechitelli, Chief Product Officer at Turnitin, stated that the education sector is currently in a transformative phase in which technology is significantly altering learning systems. She emphasized the importance of maintaining academic integrity and noted that various stakeholders in education now require resources that support the quality of learning without compromising the principles of academic honesty. Technology, including AI detection features developed by Turnitin, is considered a supporting tool in achieving these objectives.



Gambar 1. Hasil Survei Populix tentang Penggunaan Aplikasi Generative AI di Indonesia, 2023

Sumber: Katadata (2023)

Along with these developments, it is important for students and educators to understand and prepare themselves to face such changes. One effort that can be undertaken is to improve literacy in AI technology, so that individuals are not only able to use it appropriately but also continue to uphold ethical standards and academic responsibility in both the learning process and professional practice. In

Indonesia, the adoption of this technology has also grown quite rapidly, particularly in the education and business sectors.

Based on the Populix survey results published by Annur (in Katadata Databoks, 2023), ChatGPT was recorded as the most widely used generative AI application in Indonesia, with a usage rate of 52%. The next positions were occupied by Copy.ai (29%), Luminar AI (18%), Oracle (15%), and DALL·E and LALAL.AI, each at 12%. Meanwhile, Outmatch ranked last, with a usage rate of 11%. The survey also showed that the frequency of AI use was relatively high, with 40% of respondents using AI more than once a month, 27% using it once a month, and 11% using it once every two months. The survey was conducted online among 530 respondents consisting of workers and entrepreneurs in Indonesia, from a total of 1,014 respondents, with an equal composition of men and women (50% each). Most respondents came from Java Island (76%), followed by Sumatra (14%) and other regions (10%), with the dominant age group being 17–25 years (51%), followed by those aged 26–35 years (33%). These data indicate that young people are the primary users of generative AI technology, although this is not necessarily accompanied by adequate ethical understanding.

The implementation of artificial intelligence-based technology in academic environments in Indonesia, including at Universitas Negeri Surabaya (UNESA), continues to increase. Many students use this technology to support the completion of academic tasks, such as searching for references, writing essays, and preparing reports. However, this increased use has not been fully accompanied by an understanding of the ethics and limitations of its application. Based on an informal survey of active students in the Office Administration Education Study Program (Pendidikan Administrasi Perkantoran/PAP) at UNESA, most students were not yet aware of Rector Regulation No. 11 of 2025 concerning the Ethics of AI Use in Academic Activities. This is because the policy is still relatively new, having been enacted in May 2025. This lack of understanding raises concerns about imprudent AI use, such as copying answers without editing or becoming overly dependent on chatbot-generated outputs without adequate understanding of the material. Several cases among students indicate that AI is often used without sufficient consideration of academic responsibility, which has the potential to reduce the quality of the learning process and give rise to unethical behavior in the preparation of assignments.

Based on the classification proposed by Mittelstadt (2016), this study addresses a knowledge gap, as studies examining the integrated relationship among generative AI literacy, ethical awareness, and the tendency toward academic misconduct among students in Indonesia remain limited. In addition, there is also a population gap, because most previous studies have focused on developed countries or specific regions, making their findings not necessarily relevant to the context of Universitas Negeri Surabaya. The novelty of this study lies in the presentation of new empirical findings that examine, in

an integrated manner, the relationship among generative AI literacy, ethical awareness, and the tendency toward academic misconduct among Indonesian students, particularly at UNESA. Previous studies have generally focused more on the benefits of generative AI in enhancing learning and critical thinking skills; however, relatively few have examined in depth the potential risk of academic misconduct that may arise when students' literacy and ethical awareness remain low.

Thus, it is important to examine the relationship among these variables in the context of higher education in Indonesia, particularly among students, in order to formulate more ethical strategies for the use of AI technology. This study is also expected to provide recommendations for educational institutions in designing more effective and ethical policies on AI use, as well as to assist students in using generative AI responsibly and in accordance with academic norms.

METODE PENELITIAN

This study employed an explanatory research design. According to Sugiyono (2018), explanatory research is a research method aimed at explaining the position or role of the variables under investigation, as well as analyzing the relationships and effects among those variables. This study used quantitative data presented in numerical form. The quantitative data collected included the number of active undergraduate students in the Office Administration Education Study Program at Universitas Negeri Surabaya (UNESA), as well as the results obtained from the research questionnaire. The data sources in this study consisted of two types: primary data and secondary data. Primary data were obtained through a questionnaire instrument. This questionnaire instrument used a five-point Likert scale, which served to measure respondents' perceptions, attitudes, and opinions regarding a particular social phenomenon. Secondary data were obtained from various references, such as books and previously published research journal articles.

This study was conducted at the Faculty of Economics and Business, specifically in the undergraduate Office Administration Education Study Program at Universitas Negeri Surabaya (UNESA). The population of this study consisted of all active undergraduate students in the Office Administration Education Study Program at UNESA who had used generative AI, such as ChatGPT, Gemini, or Copilot, in their academic activities. This study employed purposive sampling to determine the sample, namely a sampling technique based on specific considerations or criteria relevant to the focus of the study.

The data collection technique in this study used a questionnaire instrument developed based on specific constructs and indicators. Each statement item was designed using a Likert scale format. The measurement of variables in this study involved five constructs: Awareness of AI Use, Perceived Benefits of AI, Ease of Use, Ethical Concerns, and Engagement in Academic Misconduct. The data

analysis technique used was Structural Equation Modeling–Generalized Structured Component Analysis (SEM-GSCA). SEM-GSCA is one method within Structural Equation Modeling (SEM) that is component-based or classified as variance-based SEM. This method was introduced by Hwang and Takane (2004).

HASIL DAN PEMBAHASAN

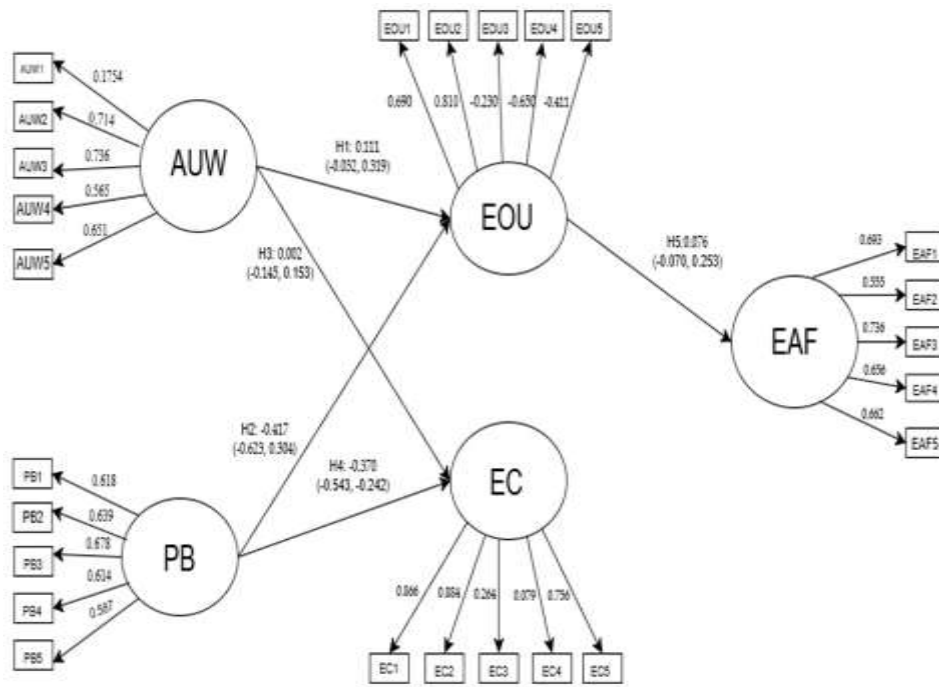
This study involved 206 respondents, all of whom were current undergraduates on the Office Administration programme at Surabaya State University (UNESA). The following table presents the statistical profile of the respondents in this study:

Table 1. Respondent Demographic Profile

Variable	Categories	Frequency	Percentage (%)
Gender	Men	49	23.8%
	Women	157	76.2%
Age	18 - 20 years old	62	30.1%
	21 - 23 years old	139	67.5%
	≥ 23 years old	5	2.4%
AI Experience	Ever	206	100%
	Never	0	0%
Frequency of AI Use	Every day	65	31.6%
	Sometimes	126	61.2%
	Once a week	15	7.3%
Most Commonly Used Types of AI	ChatGPT	148	71.8%
	Gemini	38	18.4%
	Blackbox AI	14	6.8%
	Others (Copilot, Perplexity, GROK)	6	2.9%

Source: Processed data (2025).

Based on Table 1, all respondents in this study, totaling 206 students, had used artificial Intelligence (AI) in their academic activities. The majority of respondents were female (76.2%) and were within the age range of 21–23 years (67.5%). All respondents had experience using AI, with the frequency of use predominantly falling into the category of several times per week (61.2%). The most frequently used type of AI was ChatGPT (71.8%), followed by Gemini (18.4%), Blackbox AI (6.8%), and other applications, such as Copilot, Perplexity, and GROK (2.9%).



Figur 1. Respondent Demographic Profile

Source: Processed data (2025).

Measurement Model Assesment

Structural Model Fit Measure

Table 2. Structural Model Fit Measures

FIT	AFIT	FITs	FITm	GFI	SRMR	OPE	OPEs	OPEm
0.423	0.416	0.055	0.515	0.934	0.080	0.586	0.958	0.492

Source: Processed data (2025).

The FIT value of 0.423 indicates that the research model was able to explain 42.3% of the variance. The AFIT value of 0.416 indicates that, after adjustment for model complexity, the research model was able to explain 41.6% of the variance. The FITs value of 0.055 indicates that 5.5% of the variance was explained in the structural model, whereas the FITm value of 0.515 indicates that 51.5% of the variance was explained in the measurement model. Hwang et al. (2021) stated that when the sample size exceeds 100, the GFI value should be greater than 0.93 and the SRMR value should be less than 0.08. Based on the table, the GFI value of 0.934 and the SRMR value of 0.080 indicate that the model met the criteria for good goodness of fit.

Indicator of Loading Assessment

Tabel 3. Penilaian Loading Indikator

<i>Loadings</i>	Estimate	SE	95%CI(L)	95%CI(U)
AUW				
AUW1	0.754	0.032	0.666	0.803
AUW2	0.707	0.045	0.607	0.778
AUW3	0.741	0.036	0.674	0.815
AUW4	0.572	0.085	0.319	0.682
AUW5	0.646	0.051	0.549	0.736
PB				
PB1	0.603	0.065	0.445	0.718
PB2	0.643	0.065	0.520	0.753
PB3	0.683	0.057	0.562	0.781
PB4	0.618	0.064	0.494	0.727
PB5	0.578	0.081	0.374	0.691
EOU				
EOU1	0.903	0.015	0.873	0.924
EOU2	0.907	0.012	0.878	0.926
EOU3	0.685	0.058	0.561	0.782
EOU4	0.721	0.051	0.611	0.808
EOU5	0.694	0.055	0.577	0.790
EC				
EC1	0.859	0.016	0.818	0.892
EC2	0.892	0.016	0.851	0.917
EC3	0.645	0.063	0.512	0.754
EC4	0.618	0.068	0.475	0.738
EC5	0.776	0.041	0.674	0.836
EAF				
EAF1	0.693	0.054	0.575	0.791

<i>Loadings</i>	Estimate	SE	95%CI(L)	95%CI(U)
EAF2	0.555	0.070	0.387	0.662
EAF3	0.736	0.035	0.661	0.793
EAF4	0.656	0.045	0.541	0.727
EAF5	0.662	0.051	0.519	0.742

Source: Data processed (2025)

The assessment of indicator loadings aims to determine the extent to which each indicator is able to reflect the construct being measured. A high factor loading value indicates that the indicator makes a strong contribution to explaining the latent variable it represents. In general, an indicator is considered valid if it has a loading value above 0.50, and it is more ideal if the value is above 0.70. In this study, all indicators showed loading values that met the criteria; therefore, it can be concluded that each indicator used was valid and capable of measuring the research constructs properly.

Construct Quality Measures

Table 4. Construct Quality Measures

	AUW	PB	EOU	EC	EAF
PVE	0.473	0.393	0.819	0.712	0.440
Alpha	0.717	0.623	0.779	0.796	0.679
rho	0.816	0.763	0.900	0.881	0.795
Dimensionality	1	2	1	1	1

Source: Data processed (2025)

Based on Table 4, the Ease of Use (EOU) and Ethical Concerns (EC) constructs demonstrated the best measurement quality, with high PVE values (0.819 and 0.712) and excellent reliability ($\alpha > 0.77$; $\rho > 0.88$), and both constructs were unidimensional. AI Usage Awareness (AUW) showed good reliability ($\alpha = 0.717$; $\rho = 0.816$), although its PVE value was slightly below the ideal threshold (0.473). Engagement in Academic Fraud (EAF) also demonstrated good composite reliability ($\rho = 0.795$), although its PVE value (0.440) and alpha (0.679) were relatively lower. Meanwhile, Perceived Benefits (PB) had the lowest PVE (0.393) and alpha (0.623) values; nevertheless, this construct remained reliable in terms of composite reliability ($\rho = 0.763$) and was multidimensional (two dimensions), which explains the variation in responses. Overall, although several constructs had PVE and alpha values below 0.50 and 0.70, all composite reliability values were above 0.70; therefore, the model still demonstrated acceptable validity and reliability for further analysis.

Component Validity Assesment

Tabel 5. Component Validity Test

Fornell-Larcker criterion values					
	AUW	PB	EOU	EC	EAF
AUW	0.687				
PB	0.546	0.626			
EOU	-0.116	-0.356	0.905		
EC	-0.200	-0.368	0.668	0.844	
EAF	0.242	0.246	0.075	-0.061	0.663
HTMT					
AUW <-> PB		0.814			
AUW <-> EOU		0.156			
AUW <-> EC		0.273			
AUW <-> EAF		0.358			
PB <-> EOU		0.453			
PB <-> EC		0.455			
PB <-> EAF		0.403			
EOU <-> EC		0.841			
EOU <-> EAF		0.090			
EC <-> EAF		0.104			

Source: Data processed (2025)

The Fornell–Larcker criterion indicates that all diagonal values, which represent the square roots of the AVE, are higher than the correlations among the constructs. This confirms that discriminant validity has been established and that the measurement model demonstrates adequate psychometric quality. Furthermore, all HTMT values are below the threshold of 0.90, with the highest value being 0.841; therefore, the criteria for discriminant validity are satisfied (Ali, S., Suchiang, T., Saikia, T. P., & Gulzar, 2024).

R squared

Table 6. R square

R squared values of components in structural model					
AUW	PB	EOU	EC	EAF	
0.000	0.000	0.135	0.136	0.006	

Source: Data processed (2025)

Based on the R-square values, the model's predictive ability for the endogenous variables was relatively low, with EOU at 0.135 (13.5%), EC at 0.136 (13.6%), and EAF at 0.006 (0.6%). This indicates that AI Usage Awareness (AUW) and Perceived Benefits (PB), as exogenous variables, were able to explain only a small proportion of the variance in EOU and EC, and a very small proportion of the variance in EAF, while the remaining variance was influenced by other factors outside the research model.

Structural Model Assessment

Path Coefficients

Tabel 7. Path Coefficients

	Estimate	SE	95%CI(L)	95%CI(U)	Decision
AUW→EOU	0.111	0.078	-0.032	0.319	Rejected
PB→EOU	-0.417	0.073	-0.623	-0.304	Accepted
AUW→EC	0.002	0.081	-0.145	0.153	Rejected
PB→EC	-0.370	0.069	-0.543	-0.242	Accepted
EOU→EAF	0.076	0.079	-0.070	0.253	Rejected

Source: Data processed (2025)

Based on the significance criterion, a path coefficient is considered significant when the 95% confidence interval does not include zero (Hwang et al., 2021). The results of this study indicate that only two relationships were significant, namely PB → EOU ($\beta = -0.417$; CI [-0.623; -0.304]) and PB → EC ($\beta = -0.370$; CI [-0.543; -0.242]). Both relationships showed a negative direction of effect, meaning that the higher the perceived benefits of AI, the lower the perceived ease of use and ethical concerns. Meanwhile, the relationships between AUW → EOU ($\beta = 0.111$), AUW → EC ($\beta = 0.002$), and EOU → EAF ($\beta = 0.076$) were not significant because their confidence intervals included zero; therefore, the related hypotheses were rejected.

The Effect of Perceived Benefits of AI on Ethical Concerns

The results of this study indicate that Perceived Benefits of AI has a significant negative effect on Ethical Concerns, with a path coefficient of -0.370 (CI L = -0.543, CI U = -0.242). Thus, the research hypothesis is accepted, although the direction of the relationship is negative. This finding shows that students' perceptions of the benefits of AI are closely related to their attitudes toward ethical issues in its use. The initial hypothesis of this study assumed a positive relationship between Perceived Benefits of AI and Ethical Concerns, based on the premise that awareness of the benefits of AI should be accompanied by increased ethical sensitivity. Bankins and Formosa (2023) stated that although AI

provides substantial benefits in the workplace, its use also raises ethical challenges related to transparency and moral responsibility that require serious attention. Patel (2024) emphasized that, in the implementation of data-driven AI, it is important to maintain a balance between the benefits of AI and ethical risks to ensure the responsible use of technology. Resnik and Hosseini (2024) also highlighted the importance of developing new ethical guidelines so that the use of AI in scientific research remains aligned with academic norms. In addition, Huang et al. (2023) showed that, along with the development of AI, discussions regarding responsibility in AI-based decision-making have increasingly intensified, thereby requiring stricter ethical regulation.

However, the results of this study instead indicate a relationship that contradicts the initial hypothesis. This finding is consistent with several studies showing that perceptions of the benefits of technology are not always directly proportional to users' ethical sensitivity. Understanding the benefits of AI does not automatically increase ethical awareness, particularly when the technology has become part of everyday routines. Gandasari et al. (2024) found that the intensive use of generative AI in completing academic assignments can reduce students' sensitivity to issues of plagiarism and originality because AI is perceived as a commonly used assistive tool. This condition creates a phenomenon referred to as technology normalization, in which the use of AI, initially regarded as ethically sensitive, gradually becomes a practice considered acceptable.

This finding is also supported by Huang et al. (2023) and Resnik and Hosseini (2024), who explain that although users are aware of the potential bias and inaccuracy of AI, such awareness is not always manifested as ethical concern in practice. Patel (2024) further argues that the dominance of perceived benefits of AI may obscure ethical dilemmas and reduce critical reflection on the long-term impacts of its use.

The Effect of Perceived Benefits of AI on Ease of Use

The results of this study indicate that Perceived Benefits of AI has a significant negative effect on Ease of Use, with a path coefficient of -0.417 (CI L = -0.623; CI U = -0.304). Thus, the research hypothesis is accepted, although the direction of the relationship is negative. This finding indicates that the higher the perceived benefits of AI, the lower the perceived ease of use.

The initial hypothesis of this study assumed a positive relationship between Perceived Benefits of AI and Ease of Use, based on the premise that when users perceive a technology as beneficial, they tend to evaluate the technology as easier to use. Chaieb et al. (2023) found that perceived benefits of AI influence the adoption of this technology, particularly in the medical sector, where users who perceive greater benefits tend to use AI applications more actively. Panagoulas et al. (2023) reported that perceived ease of use significantly influences the acceptance of AI-based applications in the health

sector, indicating that perceived benefits and ease of use mutually reinforce each other. Gerlich (2023) also emphasized that users' experience in accessing AI strongly determines the level of acceptance and utilization of the technology.

However, the results of this study indicate a relationship that contradicts the initial hypothesis. This finding can be explained through several theoretical perspectives. Pambudi (2023) explains that when users understand the benefits of technology in depth, they tend to have higher expectations of the technology's capabilities. These high expectations make users more critical in assessing ease of use, thereby making them more sensitive to existing technical barriers or limitations. Panagoulis et al. (2023) also found that, in the context of AI applications in the health sector, users who are highly aware of the benefits of the technology are, in fact, more aware of the system's complexity and require more time to understand it. This condition leads to a lower perception of ease of use, even though the perceived benefits remain high.

The Effect of AI Usage Awareness on Ethical Concerns

The results of this study indicate that AI Usage Awareness has no significant effect on Ethical Concerns, with a path coefficient of 0.002 (CI L = -0.145; CI U = 0.153); therefore, the research hypothesis is rejected. This finding shows that students' level of awareness in using AI is not yet strong enough to increase their sensitivity to ethical issues.

The initial hypothesis of this study assumed a positive relationship between AI Usage Awareness and Ethical Concerns, based on the premise that a good understanding of how AI works would increase ethical sensitivity. Atalla et al. (2024) showed that ethical awareness serves as a moderating variable in the relationship among AI perception, user attitudes, and workplace innovation. Maphosa (2024) highlighted the growing awareness of AI ethical issues and their social impacts, indicating that an understanding of AI should enhance ethical sensitivity. Pant et al. (2024) also revealed that AI practitioners face various challenges in ensuring that AI is used in accordance with ethical standards.

However, the results of this study are consistent with Guleria et al. (2023), who state that technical understanding of AI is not always accompanied by adequate ethical understanding. Awareness of AI use tends to be instrumental, referring to knowing how to use it, rather than reflective, referring to understanding its ethical implications. Raharjo and Rohmadi (2025) affirm that technically oriented AI awareness does not necessarily encourage deep ethical reflection. Students may understand that AI operates based on algorithms and data, but they do not always associate it with ethical issues such as data privacy, algorithmic bias, or academic plagiarism. Nasman (2024) further adds that ethical responsibility does not depend solely on individual awareness but also requires institutional regulation

and oversight. Without a clear ethical framework, increased awareness does not automatically lead to greater ethical concern.

The Effect of AI Usage Awareness on Ease of Use

The results of this study indicate that AI Usage Awareness has no significant effect on Ease of Use, with a path coefficient of 0.111 (CIL = -0.032; CIU = 0.319); therefore, the hypothesis is rejected. This finding shows that students' understanding of AI does not directly lead them to perceive the technology as easier to use.

The initial hypothesis assumed that a good understanding of AI would increase users' comfort and confidence in its use. Torun (2025) found that user awareness contributes to AI acceptance in higher education. Lee and Maeng (2023) showed that students with high AI awareness tend to have a better understanding of its benefits and ease of use. Shahzad et al. (2024) also demonstrated that user awareness plays a role in trust and the adoption of ChatGPT. Falebita and Kok (2024) further added that technological readiness and self-efficacy also influence the utilization of AI.

However, the results of this study indicate no significant effect, which is consistent with Putri and Very (2025) and Agustian et al. (2025), who state that increased awareness of AI-related risks, such as dependency and privacy issues, may instead reduce users' comfort. Salim et al. (2025) explain that perceived ease of use is influenced more by direct experience than by conceptual understanding. Students with high awareness but limited experience using AI tend to have a lower perception of ease of use than those who use AI frequently.

The Effect of Ease of Use on Engagement in Academic Fraud

The results of this study indicate that Ease of Use has no significant effect on Engagement in Academic Fraud, with a path coefficient of 0.076 (CI L = -0.070; CI U = 0.253); therefore, the hypothesis is rejected. This finding shows that the ease of using AI does not directly encourage students to engage in academic fraud.

The initial hypothesis assumed that the ease of using technology could increase the potential for misuse. Silva et al. (2022) stated that ease of access to technology may increase the risk of academic fraud. Ofem et al. (2024) also found that perceived ease of use of AI influences the tendency to use it for unethical practices. Mustofa et al. (2025) developed a TAM model by incorporating subjective norms, ethics, and trust in students' use of AI.

However, the results of this study are consistent with Burrohman and Aulia (2025) and Fransiska and Utami (2019), who state that academic fraud is influenced more by factors such as personal

integrity, academic pressure, and moral justification than by the ease of technology use. Amalia and Sembiring (2024) emphasize that character values and ethical awareness serve as the main deterrents to academic fraud. Students with strong integrity are not easily tempted to engage in fraudulent behavior, even when the technology is very easy to use. Mustofa et al. (2025) also found that subjective norms, ethics, and trust have a more dominant influence than perceived ease of use.

CONCLUSION

Based on the research findings, Perceived Benefits of AI was found to have a significant and negative effect on Ethical Concerns and Ease of Use. This indicates that the greater the benefits of AI perceived by students, the lower their level of ethical concern and the more critical they are in assessing its ease of use. Meanwhile, AI Usage Awareness had no significant effect on either Ethical Concerns or Ease of Use, indicating that students' awareness or understanding of AI has not been able to enhance their ethical sensitivity or their perception of ease of use. In addition, Ease of Use also had no significant effect on Engagement in Academic Fraud, meaning that the ease of using AI does not directly encourage academic fraud.

Among all variables in this research model, only Perceived Benefits showed a significant effect. Therefore, educational institutions are advised not only to emphasize the use of AI in terms of its benefits but also to strengthen ethics education and regulations governing AI use in academic activities. Students need to be provided with a more comprehensive understanding of the ethical implications of AI use, while institutions need to provide clear guidelines and adequate oversight. Future research is recommended to examine other factors, such as academic integrity, social norms, and academic pressure, which may potentially influence AI use behavior.

REFERENCES

- Agustian, R. D., Khasanah, E. F., Sari, S. Y., Ammaryafi, M. F., & Susilowati, N. (2025). *Pengaruh Perceived Usefulness , Perceived Ease of Use dan Digital Literacy terhadap Penggunaan Artificial Intelligence oleh Mahasiswa di Era Pendidikan 4.0*. 1–11.
- Alfaridzi, A. M. ., Amara, E. T. ., Sari, N. M. A. ., Safitri, N. ., & Suhali, M. F. (2026). Determinasi Terhadap Harga Saham Studi Emperis Perusahaan Sub Sektor Otomotif yang Terdaftar di Bursa Efek Indonesia. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 176–181. <https://doi.org/10.62421/jibema.v3i3.204>
- Ali, S., Suchiang, T., Saikia, T. P., & Gulzar, D. (2024). Perceived Benefits And Concerns Of AI Integration. *Higher Education : Insights From India*, 30(5), 656–668. <https://doi.org/https://doi.org/10.53555/kuvey.v30i5.5122>
- Amalia, Sembiring, S. (2024). *Hubungan Tingkat Penalaran Moral dengan Kecurangan Akademik pada Mahasiswa Universitas Andalas*. 8, 112–130.

- Atalla, A. D. G., El-Ashry, A. M., & Mohamed Sobhi Mohamed, S. (2024). The moderating role of ethical awareness in the relationship between nurses' artificial intelligence perceptions, attitudes, and innovative work behavior: a cross-sectional study. *BMC Nursing*, 23(1), 1–11. <https://doi.org/https://doi.org/10.1186/s12912-024-02143-0>
- Azwar, S. (2007). *Sikap manusia: Teori dan pengukurannya*.
- Baker, T., Smith, L., & Anissa, N. (2019). *Educ-AI-tion rebooted? Exploring the future of artificial intelligence in schools and colleges*. Nesta. https://media.nesta.org.uk/documents/Future_of_AI_and_education_v5_WEB.pdf
- Bankins, S., & Formosa, P. (2023). The Ethical Implications of Artificial Intelligence (AI) For Meaningful Work. *Journal of Business Ethics*, 185(4), 725–740.
- Biswas, M. (2024). *No Teaching Journalism & Mass Communication AI in Journalism and Communication Teaching : Use , Challenges and Opportunities*.
- Budiman, N. A. B. (2018). Perilaku Kecurangan Akademik Mahasiswa: Dimensi Fraud Diamond dan Gone Theory. *Akuntabilitas: Jurnal Ilmu Akuntansi*, 11(1), 75–90.
- Burrohman, Aulia, N. (2025). ACADEMIC FRAUD AND ARTIFICIAL INTELLIGENCE : A FRAUD DIAMOND THEORY PERSPECTIVE WITH JIMEA. *Jurnal Ilmiah MEA (Manajemen , Ekonomi , Dan Akuntansi*, 9(2), 1689–1711.
- Chaieb, S., Garrouch, K., & Al-Ali, N. S. (2023). Perceptions of the use and benefits of artificial intelligence applications: survey study. *Journal of Medical Artificial Intelligence*, 63.
- Chan, C. K. Y., & Colloton, T. (2024). *Generative AI in Higher Education: The ChatGPT Effect*. In *Generative AI in Higher Education: The ChatGPT Effect*. <https://doi.org/https://doi.org/10.4324/9781003459026>
- Chukwuere. (2024). No The use of ChatGPT in higher education: The advantages and disadvantages. In *Aleph* (Vol. 87, Issue 1). <https://repositorio.ufsc.br/xmlui/bitstream/handle/123456789/167638/341506.pdf?sequence=1&isAllowed=y%0Ahttps://repositorio.ufsm.br/bitstream/handle/1/8314/LOEBLEIN%2C LUCINEIA CARLA.pdf?sequence=1&isAllowed=y%0Ahttps://antigo.mdr.gov.br/saneamento/proees>
- Fari, D. ., Hidayat, S. ., Chelsea, T. ., Widjayanti, R. ., Hanifati, L. ., Lestari, S. T. ., & Sabiya, N. . (2026). Determinasi Terhadap Nilai Perusahaan. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 197–204. <https://doi.org/10.62421/jibema.v3i3.205>
- Falebita, O. S., & Kok, P. J. (2024). Artificial Intelligence Tools Usage: A Structural Equation Modeling of Undergraduates' Technological Readiness, Self-Efficacy and Attitudes. *Journal for STEM Education Research*.
- Floridi, L., & Cowls, J. (2022). No A unified framework of five principles for AI in society. Machine Learning and the City. *Architecture and Urban Design*, 535–545.
- Fransiska, I. S., & Utami, H. (2019). *Perilaku Kecurangan Akademik Mahasiswa : Perspektif Fraud Diamond Theory*. 6(2), 316.
- Gandasari, F., Koeswinda, A. S., Putri, A. K., & Putri, D. A. (2024). *Etika Pemanfaatan Teknologi Artificial Intelligence dalam Penyusunan Tugas Mahasiswa*. 6(5), 5572–5578.
- Gerlich, M. (2023). No Perceptions and Acceptance of Artificial Intelligence: A Multi-Dimensional Study. *Social Sciences*, 12(9).

- GovTech. (2024). *No Study: AI Used in 11% of Student Papers Since April 2023*. Government Technology.
- Guleria, A., Krishan, K., Sharma, V., & Kanchan, T. (2023). *ChatGPT: ethical concerns and challenges in academics and research*. <https://doi.org/https://doi.org/10.3855/jidc.18738>
- Haenlein, M., & Kaplan, A. (2019). A brief history of artificial intelligence: On the past, present, and future of artificial intelligence. *California Management Review*, 61(4), 5–14.
- Hirabayashi, S., Jain, R., Jurković, N., & Wu, G. (2024). *Harvard Undergraduate Survey on Generative AI*. <http://arxiv.org/abs/2406.00833>
- Huang, C., Zhang, Z., Mao, B., & Yao, X. (2023). *No An Overview of Artificial Intelligence Ethics*. *IEEE Transactions on Artificial Intelligence*. 4(4), 799–819.
- Hwang, H., Cho, G., Jin, M. J., Ryoo, J. H., Choi, Y., & Lee, S. H. (2021). No A knowledge-based multivariate statistical method for examining gene-brain-behavioral/ cognitive relationships: Imaging genetics generalized structured component analysis. *PLoS ONE*, 16(3), 1–28.
- Ikmal, M. F., Sakinah, N., Nuril Jannah, F., Nury Mawaddah, N., & Hidayati, A. N. . (2026). Fintech Syariah Dalam Ekonomi Islam : Inovasi, Regulasi dan Impelementasi. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 182–196. <https://doi.org/10.62421/jibema.v3i3.189>
- Kemendikbud. (2024). *PANDUAN PENGGUNAAN GENERATIVE ARTIFICIAL INTELLIGENCE (GenAI)*.
- Kuh, G. D., Kinzie, J., & Buckley, J. A. (2006). *What Matters to Student Success : A Review of the Literature*. *Commissioned Report for the National Symposium on Postsecondary Student Success Spearheading a Dialog on Student Success*. 18, 156. <http://cpe.ky.gov/NR/rdonlyres/AFA304F0-C125-40C2-96E5-7A8C98915797/0/WhatMatterstoStudentSuccessAReviewoftheLiterature.pdf>
- Lee, J. E., & Maeng, U. (2023). No Perceptions of High School Students on AI Chatbots Use in English Learning: Benefits, Concerns, and Ethical Consideration. *Journal of Pan-Pacific Association of Applied Linguistics*, 27(2), 53–72.
- Maphosa, V. (2024). No The Rise of Artificial Intelligence and Emerging Ethical and Social Concerns. *December*, 1–20.
- Mustofa, R. H., Kuncoro, T. G., Atmono, D., Hermawan, H. D., & S. (2025). Extending the technology acceptance model: The role of subjective norms, ethics, and trust in AI tool adoption among students. *Computers and Education: Artificial Intelligence*, 8.
- Mutiara, R. ., Alfuadi, M. K. ., Putri, F. M. ., Mardini, Manalu, N. P. ., Samosir, F. A. ., & Salsabilla, S. . (2026). Faktor-Faktor Yang Mempengaruhi Performa Karyawan Pada PT. Global Bintang Timur Express di Wilayah Tebet Jakarta. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 205–217. <https://doi.org/10.62421/jibema.v3i3.206>
- Nasman, P. A. dan D. P. (2024). Filsafat, Politik dan Etika Hukum. *Jurnal Hukum Lex Generalis*, 5(10).
- Octavia, A. C. B., & Nugraha, J. (2024).). Influence of Enjoyment and Trust on the Use of Artificial Intelligence-based Voice Assistant in Vocational Students Using Technology Acceptance Model (TAM). *Journal of Office Administration : Education and Practice*, 4(1), 10–23.

- Ofem, U. J., Owan, V. J., Iyam, M. A., Udeh, M. I., Anake, P. M., & Ovat, S. V. (2024). Students' perceptions, attitudes and utilisation of ChatGPT for academic dishonesty: Multigroup analyses via PLS–SEM. *Education and Information Technologies*, 159–187.
- Pambudi. (2023). *Pengaruh Perceived Ease of Use , Perceived Usefulness , dan Perceived Enjoyment terhadap Minat untuk terus Menggunakan Aplikasi Investasi di Indonesia*. 20, 482–501.
- Panagoulis, D. P., Virvou, M., & Tsihrintzis, G. A. (2023). An empirical study concerning the impact of perceived usefulness and ease of use on the adoption of AI-empowered medical applications. *Proceedings - 2023 IEEE 23rd International Conference on Bioinformatics and Bioengineering*. <https://doi.org/https://doi.org/10.1109/BIBE60311.2023.00062>
- Pant, A., Hoda, R., Spiegler, S. V., Tantithamthavorn, C., & Turhan, B. (2024). Ethics in the Age of AI: An Analysis of AI Practitioners' Awareness and Challenges. *ACM Transactions on Software Engineering and Methodology*, 33(3).
- Patel, K. (2024). Ethical Reflections on Data-Centric AI: Balancing Benefits and Risks. *International Journal of Artificial Intelligence Research and Development*, 2(1), 1–17.
- Putri, E., & Very, J. (2025). *YUME : Journal of Management Extending the Technology Acceptance Model (TAM) in E- Commerce : The Impact of AI Awareness , Usability , and Trust on Shopee Adoption*. 8(2), 1–10.
- Raharjo,Rohmadi, S. H. (2025). *Artificial Intelligence in Indonesian Education : A Critical Review of Ethical Considerations , Implementation Challenges , and Educational Management Perspectives*. 10(1), 50–68.
- Resnik, D. B., & Hosseini, M. (2024). The ethics of using artificial intelligence in scientific research: new guidance needed for a new tool. *AI and Ethics*. <https://doi.org/https://doi.org/10.1007/s43681-024-00493-8>
- Rios Campos, C., Cánova, E. S. M., Zaquinaula, I. R. A., Zaquinaula, H. E. A., Vargas, D. J. C., Peña, W. S., Idrogo, C. E. T., & Arteaga, R. M. Y. (2023). Artificial Intelligence and Education. *South Florida Journal of Development*, 4(2), 641–651.
- Risnina, N. N., Permatasari, S. T. I., Nurulhusna, A. Z., Anjelita, F. M., Wulaningtyas, C., & Rakhmawati, N. A. (2023). Pengaruh ChatGPT Terhadap Proses Pembelajaran Mahasiswa di Institut Teknologi Sepuluh Nopember. *Jurnal Pendidikan, Bahasa Dan Budaya*, 2(4), 119–132.
- Russell, S. J., Russell, S., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach*. Pearson.
- Salim, J. S., Agustina, T., & Khairany, S. J. (2025). *Persepsi Mahasiswa Atas Kegunaan dan Kemudahan Teknologi Terhadap Adopsi Teknologi Kecerdasan Buatan dalam Akuntansi*. 5(2), 434–441.
- Saraswati, A. R., Karmina, V. A., Efendi, M. P., Candrakanti, Z., & Rakhmawati, N. A. (2023). Analisis Pengaruh ChatGPT Terhadap Tingkat Kemalasan Berpikir Mahasiswa ITS Dalam Proses Pengerjaan Tugas. *Jurnal Pendidikan, Bahasa Dan Budaya*, 2(4), 40–48.
- Shahzad, M. F., Xu, S., & Javed, I. (2024). ChatGPT awareness, acceptance, and adoption in higher education: the role of trust as a cornerstone. *International Journal of Educational Technology in Higher Education*, 21(1).

- Silva, J. M. D. D. E., Baridwan, Z., & Ximenes, P. (2022). Factors influencing academic cheating of accounting education in timor leste: theory of fraud triangle approach and theory of reasoned action. *International Journal of Multicultural and Multireligious Understanding*, 9(10), 444–455.
- Sirait, N. C., Gustiningrum, V. ., Ananda, A. ., Widra, N. A. ., Cahyani, S. G. ., Putri, G. A. ., & Nurhadi, A. . (2026). Determinasi Mengenai Harga Saham. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 218–229. <https://doi.org/10.62421/jibema.v3i3.182>
- Slameto. (2015). *Belajar dan Faktor-faktor yang Mempengaruhi*. Rineka Cipta.
- Syahdina, A., Chan, M. ., Lesmana, R. F., Sinaga, Y. S., Oktavia, E., & Aryadafa, F. (2026). Determinasi Terhadap Kinerja Perusahaan. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, 3(3), 165–175. <https://doi.org/10.62421/jibema.v3i3.180>
- Torun, F. (2025). *The Perspectives of Academicians and Students Regarding the Use of Generative Artificial Intelligence in Higher Education The Perspectives of Academicians and Students Regarding the Use of Generative Artificial Intelligence in Higher Education To cite thi*. <https://doi.org/https://doi.org/10.46328/ijte.883>
- UNESCO. (2023). *Guidance for Generative AI in Education and Research*.
- Valdivieso, T., & González, O. (2025). Generative AI Tools in Salvadoran Higher Education: Balancing Equity, Ethics, and Knowledge Management in the Global South. *Education Sciences*, 15(2), 1–31.
- Wang, H., Dang, A., Wu, Z., & Mac, S. (2024). Generative AI in higher education: Seeing ChatGPT through universities' policies, resources, and guidelines. *Computers and Education: Artificial Intelligence*, 7, 1–13.
- Wood, D. A., Achhpilia, M. P., Adams, M. T., Aghazadeh, S., Akinyele, K., Akpan, M., Allee, K. D., Allen, A. M., Almer, E. D., Ames, D., Arity, V., Barr-Pulliam, D., Basoglu, K. A., Belnap, A., Bentley, J. W., Berg, T., Berglund, N. R., Berry, E., Bhandari, A., ... Zoet, E. (2023). The ChatGPT Artificial Intelligence Chatbot: How Well Does It Answer Accounting Assessment Questions? *Issues in Accounting Education*, 38(4), 81–108. <https://doi.org/10.2308/ISSUES-2023-013>
- Zafar,Shaheen,Rehan. (2024). *Use of ChatGPT and Generative AI in Higher Education : Opportunities , Obstacles and Impact on Student Performance*. 5(1), 1–12.