Academic Fraud: Fraud Hexagon Perspective and Artificial Intelligence

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ABSTRACT
The rapid adoption of artificial intelligence (AI) in higher education has transformed learning and assessment practices, while simultaneously raising concerns about academic integrity. The increasing ease of accessing AI-based tools may alter students' perceptions of academic misconduct and provide new rationalizations for unethical behavior. Against this backdrop, this study examines academic fraud among university students using the Fraud Hexagon Theory, with artificial intelligence incorporated as a moderating variable. Employing a quantitative research design, primary data were collected through a questionnaire administered to 189 accounting students in Surabaya who had taken ethics-related courses and were familiar with the use of AI tools. The data were analyzed using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS). The results indicate that pressure, rationalization, and collusion have a significant positive effect on academic fraud, whereas opportunity, capability, and arrogance do not show a significant influence. Furthermore, artificial intelligence is found to moderate only the relationship between rationalization and academic fraud, suggesting that AI strengthens students' cognitive justification for unethical behavior rather than structural or situational antecedents. These findings imply that the integration of AI into academic activities requires adequate supervision and ethical guidance to prevent misuse. This study contributes to the academic integrity literature by extending the application of the Fraud Hexagon Theory to the academic context and by highlighting the contextual role of artificial intelligence in shaping academic fraud behavior in higher education.

Keywords: Artificial Intelligence; Collusion; Fraud Hexagon; Pressure; Rationalization

INTRODUCTION

Academic integrity represents a fundamental foundation of higher education, as it ensures the credibility of academic qualifications and supports the ethical development of students. Universities are not only responsible for producing graduates with strong intellectual competencies but also for cultivating moral responsibility and professional values. However, academic fraud remains a persistent and widespread problem in higher education institutions, manifesting in various forms such as examination cheating, plagiarism, falsification of academic records, and unauthorized collaboration. These practices undermine public trust in academic institutions and weaken the legitimacy of educational outcomes (Firmansyah & Oktarina, 2023).

In contemporary academic environments, the risk of academic fraud has intensified alongside increasing competition and performance-oriented educational systems. Students are frequently confronted with substantial pressure to achieve high academic results, maintain grade point averages, and meet expectations from parents, peers, and institutions. When academic success is perceived as a critical determinant of future career opportunities, students may experience ethical dilemmas that encourage them to prioritize outcomes over integrity. Accordingly, prior studies emphasize that academic fraud is not merely the result of individual moral failure, but rather emerges from a complex interaction of psychological, situational, and social factors (Selviana & Irwansyah, 2023).

Technological advancement has further transformed the nature and dynamics of academic misconduct. Traditionally, academic fraud relied on conventional mechanisms such as direct copying, jockeying, or assistance from third parties. More recently, however, digital technologies—particularly artificial intelligence (AI)—have introduced new forms of academic misconduct that are more subtle, efficient, and difficult to detect. Generative AI tools such as ChatGPT enable users to generate answers, compose written responses, and complete academic tasks with minimal effort. While these technologies offer considerable benefits for learning enhancement and academic support, their misuse poses serious

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challenges to academic integrity by reducing perceived effort, weakening accountability, and blurring the boundary between legitimate assistance and unethical behavior.

The urgency of addressing AI-assisted academic fraud is underscored by recent empirical incidents. In Indonesia, for example, cases of AI misuse emerged during the 2024 Universitas Indonesia new student admission selection (SIMAK UI), where several applicants were reported to have used ChatGPT to answer online examination questions. As reported by Tempo, this incident illustrates how AI technology can directly compromise the fairness, credibility, and reliability of high-stakes academic assessments (Wakang, 2024). Such cases demonstrate that AI-related academic fraud is no longer a speculative concern but has become an immediate and practical challenge for higher education institutions, particularly in developing countries where regulatory frameworks and detection mechanisms may still be evolving.

To explain the underlying mechanisms of academic fraud, this study adopts the Fraud Hexagon Theory proposed by Vousinas (2019), which conceptualizes fraudulent behavior as the outcome of six interrelated elements: pressure, opportunity, rationalization, capability, arrogance, and collusion. Although originally developed within organizational and professional contexts, the fraud hexagon framework is highly relevant to academic settings. Students, similar to organizational actors, face performance pressures, regulatory weaknesses, cognitive justifications, technological capabilities, personality traits, and peer influence, all of which may facilitate fraudulent behavior. Thus, the fraud hexagon provides a more comprehensive explanatory framework for academic fraud compared to earlier models that focus on fewer antecedents.

Despite the growing literature on academic misconduct, several important research gaps remain. First, empirical studies applying the fraud hexagon framework to academic contexts are still limited, particularly in developing countries such as Indonesia. Second, prior research reports inconsistent findings regarding the effects of fraud antecedents on academic fraud, indicating the need for further empirical validation using comprehensive theoretical models. Third, and most critically, existing studies largely overlook the role of artificial intelligence as a contextual factor that may alter the relationship between fraud antecedents and academic fraud. Most prior studies treat academic fraud as a static behavior, without considering how emerging technologies reshape students' rationalization processes and ethical decision-making.

Accordingly, the novelty of this study lies in its integration of artificial intelligence as a moderating variable within the fraud hexagon framework to explain academic fraud. By examining whether AI strengthens or weakens the influence of fraud antecedents, this study offers a more dynamic and context-sensitive understanding of academic fraud in the digital era. This approach extends existing fraud theory by incorporating technological dimensions that have been largely neglected in prior academic integrity research.

Therefore, this study aims to examine academic fraud among university students using the fraud hexagon framework while incorporating artificial intelligence as a moderating variable. The urgency of this research stems from the rapid and widespread adoption of AI tools in higher education, which, if left unregulated, may normalize unethical academic practices. The findings of this study are expected to contribute theoretically by extending the application of fraud hexagon theory to the academic domain and enriching fraud literature with technological context, and practically by providing insights for higher education institutions in developing policies, internal controls, and ethical guidelines to strengthen academic integrity in the era of artificial intelligence.

LITERATURE REVIEW

Academic Fraud

Academic fraud refers to dishonest conduct undertaken by students in academic activities, including examination cheating, plagiarism, falsification of academic records, and unauthorized collaboration. Such practices violate academic integrity and undermine the credibility of higher education institutions. In performance-oriented academic environments, students may experience ethical tension when academic success is perceived as the primary indicator of achievement, encouraging misconduct as a means of attaining desired outcomes (Firmansyah & Oktarina, 2023). Consequently, academic fraud

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should be understood not only as an individual moral failure but also as behavior shaped by systemic, psychological, and social factors.

Fraud Hexagon Theory

This study is grounded in the Fraud Hexagon Theory proposed by Vousinas (2019), which serves as the grand theoretical framework for explaining fraudulent behavior. The fraud hexagon theory extends earlier fraud models—such as the Fraud Triangle and Fraud Diamond—by incorporating a broader and more comprehensive set of behavioral antecedents. According to this theory, fraud arises from the interaction of six interrelated elements: pressure, opportunity, rationalization, capability, arrogance, and collusion.

Unlike earlier models that emphasize individual motivation and opportunity, the fraud hexagon framework integrates psychological, structural, behavioral, and social dimensions of fraud. Pressure captures motivational forces; opportunity reflects weaknesses in control systems; rationalization explains cognitive justifications; capability refers to the skills and confidence required to commit fraud; arrogance represents a sense of superiority and immunity to rules; and collusion highlights the collective and social nature of fraudulent behavior. This holistic perspective makes the fraud hexagon theory particularly suitable for explaining academic fraud, which often occurs in environments characterized by performance pressure, peer interaction, technological access, and evolving ethical norms.

In academic contexts, students function similarly to organizational actors. They face performance demands, operate within regulatory systems, develop cognitive justifications for misconduct, possess varying levels of technological competence, exhibit personality traits that influence ethical behavior, and interact intensively with peers. Therefore, the fraud hexagon theory provides a robust conceptual foundation for understanding academic fraud beyond purely individual or situational explanations.

Pressure and Academic Fraud

Pressure refers to internal or external demands that motivate individuals to achieve specific outcomes. In academic contexts, pressure commonly arises from the pursuit of high grades, competitive learning environments, parental expectations, and institutional performance standards. When students perceive academic achievement as essential to their self-worth or future opportunities, they may experience psychological strain that increases their willingness to engage in unethical behavior. Prior empirical studies consistently report that academic pressure is positively associated with academic fraud, as students seek alternative means to cope with excessive demands (Pratama et al., 2023; Selviana & Irwansyah, 2023). Based on these arguments, pressure is expected to increase the likelihood of academic fraud.

H_1: Pressure has a positive effect on academic fraud.

Opportunity and Academic Fraud

Opportunity arises when weaknesses in academic control systems allow fraudulent behavior to occur with relatively low risk of detection. In higher education institutions, opportunity may emerge from inadequate exam supervision, ineffective plagiarism detection mechanisms, or weak enforcement of academic regulations. Several studies demonstrate that such conditions facilitate academic fraud by reducing students' perceived risk and moral restraint (Achmada et al., 2020; Oktarina & Ramadhan, 2023). Nevertheless, some research suggests that strong ethical awareness may mitigate the influence of opportunity, indicating that its effect may vary across contexts (Theotama et al., 2023). Despite these mixed findings, opportunity remains a fundamental component of fraud theory.

H_2: Opportunity has a positive effect on academic fraud.

Rationalization and Academic Fraud

Rationalization refers to the cognitive process through which individuals justify unethical behavior as acceptable or harmless. In academic environments, students may rationalize fraudulent actions by perceiving them as commonplace, necessary for survival, or as practices that do not directly harm others. Rationalization weakens moral self-regulation by reducing feelings of guilt and ethical conflict. Previous empirical evidence consistently identifies rationalization as a strong predictor of academic fraud (Apsari

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& Suhartini, 2021; Djaelani et al., 2022). Accordingly, rationalization is expected to increase students' propensity to engage in academic fraud.
H_3: Rationalization has a positive effect on academic fraud.

Capability and Academic Fraud
Capability refers to an individual's skills, confidence, and ability to execute fraudulent actions effectively. In academic settings, capability includes technological proficiency, strategic thinking, and the ability to conceal dishonest behavior. Students with higher capability may perceive themselves as more capable of avoiding detection, thereby increasing their willingness to commit fraud. While several studies find a positive relationship between capability and academic fraud (Pratama et al., 2023), others argue that capability alone may not directly lead to misconduct without the presence of reinforcing factors such as pressure or rationalization (Nailah & Murtanto, 2023). Nevertheless, within the fraud hexagon framework, capability remains a critical antecedent of fraudulent behavior.
H_4: Capability has a positive effect on academic fraud.
Arrogance and Academic Fraud
Arrogance reflects an individual's sense of superiority and belief that rules or sanctions do not apply to them. In academic contexts, arrogant students may underestimate the consequences of misconduct or believe that their intelligence and academic standing justify unethical actions. Empirical findings regarding the role of arrogance remain inconclusive, with some studies reporting significant effects and others finding no association (Firmansyah & Oktarina, 2023; Theotama et al., 2023). Despite these inconsistencies, the fraud hexagon theory suggests that arrogance may erode ethical boundaries and increase the likelihood of fraudulent behavior. Therefore, arrogance is hypothesized to influence academic fraud.
H_5: Arrogance has a positive effect on academic fraud.
Collusion and Academic Fraud
Collusion involves cooperation between two or more individuals to commit fraud for mutual benefit. In academic environments, collusion often manifests through collective cheating, answer sharing, or group plagiarism. Such practices normalize unethical behavior and diffuse individual responsibility, making academic fraud more socially acceptable within peer groups. Empirical studies consistently indicate that collusion has a significant positive effect on academic fraud (Nailah & Murtanto, 2023; Oktarina & Ramadhan, 2023).
H_6: Collusion has a positive effect on academic fraud.
Artificial Intelligence as a Moderating Variable
Artificial intelligence, particularly generative AI tools such as ChatGPT, has become increasingly integrated into academic activities. While AI can enhance learning efficiency, its misuse may facilitate academic fraud by simplifying dishonest practices and reinforcing rationalization processes. AI may also alter students' perceptions of effort, risk, and ethical responsibility. Prior studies report inconsistent findings regarding the moderating role of AI, suggesting that its influence depends on usage patterns, ethical awareness, and institutional regulation (Lestari & Mutmainah, 2024; Pratama et al., 2023). Given its growing presence in academic settings, artificial intelligence is expected to moderate the relationship between fraud hexagon components and academic fraud. Accordingly, the following hypotheses are proposed:
H_7: Artificial intelligence moderates the relationship between pressure and academic fraud.
H_8: Artificial intelligence moderates the relationship between opportunity and academic fraud.
H_9: Artificial intelligence moderates the relationship between rationalization and academic fraud.
H_{10}: Artificial intelligence moderates the relationship between capability and academic fraud.
H_{11}: Artificial intelligence moderates the relationship between arrogance and academic fraud.
H_{12}: Artificial intelligence moderates the relationship between collusion and academic fraud.

METHOD
This study employs a quantitative research design to examine the determinants of academic fraud using the Fraud Hexagon Theory and to assess the moderating role of artificial intelligence. Primary data were

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collected through a structured questionnaire distributed to undergraduate accounting students in Surabaya. The respondents were selected using purposive sampling, with the criteria that they had completed ethics-related courses and were familiar with the use of artificial intelligence tools in academic activities.

A total of 189 valid responses were obtained and analyzed. The use of self-administered questionnaires was considered appropriate, as it allows respondents to reflect on their academic experiences while ensuring anonymity and confidentiality. To minimize social desirability bias, respondents were informed that their responses would be used solely for research purposes and would not affect their academic standing.

The measurement of academic fraud was adapted from prior studies and reflects students' self-reported engagement in unethical academic behaviors, including plagiarism, cheating during examinations, and unauthorized collaboration. The independent variables, pressure, opportunity, rationalization, capability, arrogance, and collusion, were measured using indicators derived from the Fraud Hexagon Theory. Artificial intelligence was operationalized as students' perceived use of AI-based tools to assist in completing academic tasks.

Table 1. Research Instrument

Variable	Question Items
Academic Fraud	1. I often give cheats to my friends during exams and vice versa. 2. I often copy my friends' assignments. 3. I often quote either from the internet or books without citing the source. 4. I often cheat in various ways during exams, including making small cheat sheets. 5. I often help friends by cheating, such as through cooperation. 6. When working on group assignments, they often take names and cheat by dealing in completing group and individual assignments. 7. I often leave my absences to my friends for not attending class. 8. I often ask for leaked questions from other classes.
Pressure	1. I did not understand the material and found it difficult to answer the exam questions, so I committed academic fraud. 2. For me, GPA is important. 3. My parents demand that I always get high grades. 4. I feel there is competition with my friends to get high grades.
Opportunity	1. I felt that the invigilators did not provide close supervision during the exam. 2. Lecturers never give severe punishment to students who commit plagiarism or other academic fraud. 3. I committed plagiarism because the lecturer did not correct them one by one. 4. Internet technology makes it easy for me to copy and paste without mentioning the source.
Rationalization	1. I commit academic fraud because many of my friends do it too. 2. I cheat like normal plagiarism. 3. For me, academic cheating does not harm others. 4. I commit academic fraud because it is a common thing and a form of solidarity.
Capability	1. I can suppress feelings of guilt or even feel no guilt after committing academic fraud. 2. I have self-confidence when committing academic fraud. 3. I can think of ways to commit academic fraud if the opportunity arises and have a specific strategy. 4. I am good at slipping and using electronic devices during exams.
Arrogance	1. I can do difficult assignments or tests without the help of others and cheating. 2. I am not afraid of the sanctions I will get if I am caught cheating.

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Variable	Question Items
	3. I do not care about my self-esteem or integrity to commit academic fraud; the most important thing is to get high grades. 4. I cheat academically to get high grades and gain recognition from friends and lecturers. 5. I feel better than others with the skills I have, so I dare to cheat. 6. I always say "Yes, you can" to others, even for tasks that I may not necessarily be able to do.
Collusion	1. I manage to influence my friends to cooperate on tests or assignments and take attendance. 2. I forced my friends to give me cheats during exams or when there was an assignment. 3. I still cheat, such as cooperating in exams, despite knowing that it is unethical behavior. 4. I feel normal when I assign group tasks to other group members without participating in the work. 5. For me, it is easier to get ahead by taking shortcuts. 6. I have received gifts from my friends for helping with assignments and vice versa.
Artificial Intelligence	1. I am aware of Chat GPT. 2. I am skilled in using GPT Chat. 3. I utilize the sophistication of GPT Chat to complete college assignments. 4. I often look for answers using Chat GPT rather than opening a book. 5. I write scientific papers/works with the help of Chat GPT.

Source: Oktarina & Ramadhan (2023) and Lestari & Mutmainah (2024)

Data analysis was conducted using Structural Equation Modeling with the Partial Least Squares approach (SEM-PLS), as implemented in SmartPLS. This method was chosen due to its suitability for predictive analysis and its ability to handle complex models with moderating variables. The analysis involved two stages: evaluation of the measurement model, including validity and reliability testing, and evaluation of the structural model to test the proposed hypotheses.

RESULTS AND DISCUSSION

Description of Research Subject

Table 2. Characteristics of Respondents Based on Gender

Gender	Frequency	Percentage
Man	49	26%
Women	140	74%
Total	189	100%

Source: Processed Data

Based on their gender, the questionnaire fillers were dominated by women as many as 140 respondents or 74%, while the rest were male, namely 49 respondents or 26%.

Table 3. Characteristics of Respondents Based on Courses Taken

Courses	Frequency	Percentage
Business Ethics & Accounting Profession	9	5%
Auditing	21	11%
Business Ethics & Accounting Profession and Auditing	159	84%
Total	189	100%

Source: Processed Data

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Based on the courses being taken, most respondents have taken business ethics and accounting and auditing professions, namely 159 respondents or 84%, while the rest are still taking one of the two courses. This shows that almost all respondents already know and understand very well what is meant by ethical principles ranging from ethical attitudes to fraud, so that in general respondents can easily understand each questionnaire question well.

Table 4. Characteristics of Respondents Based on College Origin

College Type	College Origin	Frequency	Percentage
State University	Universitas Airlangga	25	13%
State University	Universitas Pembagunan Negeri Veteran Jawa Timur	17	9%
State University	Universitas Islam Negeri Sunan Ampel	15	8%
State University	Universitas Negeri Surabaya	13	7%
Privat University	Universitas Hayam Wuruk Perbanas	40	21%
Privat University	Universitas Ciputra	11	6%
Privat University	Universitas Muhammadiyah Surabaya	11	6%
Privat University	Universitas Kristen Petra	9	5%
Privat University	Universitas Nahdlatul Ulama Surabaya	9	5%
Privat University	Sekolah Tinggi Ilmu Ekonomi Indonesia	9	5%
Privat University	Universitas PGRI Adi Buana Surabaya	8	4%
Privat University	Universitas Widya Kartika	8	4%
Privat University	Universitas Wijaya Kusuma Surabaya	8	4%
Privat University	Universitas Surabaya	6	3%
	Total	189	100%

Source: Processed Data

Based on their college origin, 119 respondents, 63%, came from private universities in Surabaya, while the remaining 70 respondents, 37%, came from public universities in Surabaya. This shows that the ethical characteristics of respondents are stronger because there are many ethics or soft skills strengthening programs carried out by private universities in Surabaya, for example, the implementation of the super soft skills mentoring program, which is carried out for a full semester for new students in semester 2. The program equips students with good soft skills so that students can easily overcome problems related to ethical issues, including academic fraud (NHE, 2021).

Structural Equation Modeling-PLS Analysis

Table 5. Validity Test Result

Variables	AVE	√AVE	Information
Academic Fraud	0.613	0.783	Valid
Pressure	0.611	0.782	Valid
Opportunity	0.595	0.771	Valid
Rationalization	0.733	0.856	Valid
Capability	0.672	0.820	Valid
Arrogance	0.702	0.838	Valid
Collusion	0.654	0.809	Valid
Artificial Intelligence	0.703	0.838	Valid

Source: Processed Data

Based on table 5, it shows that all variables have an AVE value of more than 0.5, which means that all variables are valid.

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Table 6. Reliability Test Result

Variables	Composite Reliability	Cronbach's Alpha
Academic Fraud (AF)	0.927	0.909
Pressure (PR)	0.862	0.786
Opportunity (OP)	0.854	0.772
Rationalization (RT)	0.917	0.879
Capability (CP)	0.891	0.837
Arrogance (AR)	0.904	0.857
Collusion (CL)	0.919	0.894
Artificial Intelligence (AI)	0.922	0.893

Source: Processed Data

Based on table 6, it shows that all composite reliability values and Cronbach alpha values on each variable are more than 0.7, which means that all variables are reliable.

Table 7. R-Square and Q-Square Test Results

	R-Square	Q-Square
Academic Fraud	0.592	0.800

Source: Processed Data

Based on table 7, it shows that the R-square value is 0.592, which means that the variables of pressure, opportunity, rationalization, ability, arrogance, collusion, and artificial intelligence can explain 59.2% of the Academic Cheating variable, the remaining 0.408 or 40.8% is influenced by other variables outside the model. Table 7 also shows a Q-square number of 0.800, which means that the variables and data can predict the model or have a good observation value with a percentage of 80%

Table 8. Hypothesis Test Results

Relationship Between Variables	Coefficient	P-Values	T-Statistic	Results
PR → AF	0.315	<0.001	4.608	Accepted
OP → AF	0.129	0.035	1.820	Rejected
RT → AF	0.212	0.001	3.033	Accepted
CP → AF	0.109	0.063	1.533	Rejected
AR → AF	-0.057	0.216	-0.786	Rejected
CL → AF	0.213	0.001	3.049	Accepted
PR*AI → AF	-0.075	0.150	-1.040	Rejected
OP*AI → AF	0.088	0.109	1.237	Rejected
RT*AI → AF	0.141	0.024	1.996	Accepted
CP*AI → AF	-0.136	0.028	-1.916	Rejected
AR*AI → AF	0.101	0.078	1.423	Rejected
CL*AI → AF	-0.089	0.107	-1.247	Rejected

Source: Processed Data

Based on table 8, it shows that only the variables of pressure, rationalization, and collusion have P-values and T-statistics that meet with positive coefficient values, meaning that each variable of pressure, rationalization and collusion has a positive influence on the possibility of academic fraud. The higher the pressure, rationalization and collusion, the greater the likelihood that someone will commit academic fraud.

For moderating variables, artificial intelligence is only able to moderate between rationalization and academic fraud with a positive coefficient. This means that the higher the rationalization, the higher the possibility of academic fraud.

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Effect of Pressure on Academic Fraud

The findings indicate that pressure has a significant positive effect on academic fraud, suggesting that students who experience higher levels of academic pressure are more likely to engage in unethical behavior. Within the Fraud Hexagon Theory, pressure functions as a primary motivational driver that encourages individuals to seek alternative means to achieve desired outcomes when legitimate efforts are perceived as insufficient.

In the academic context, pressure arises from both internal and external sources. Internally, students are driven by the desire to achieve high grades or maintain a strong grade point average, which is often perceived as a key determinant of academic success and future career opportunities. Externally, pressure may stem from parental expectations, scholarship requirements, and institutional performance standards that emphasize timely graduation and academic excellence. When these demands exceed students' perceived capabilities, academic fraud may be viewed as a rational response to cope with excessive expectations.

This finding is consistent with prior empirical studies that identify pressure as a significant antecedent of academic fraud. Selviana & Irwansyah (2023) report that academic pressure significantly increases students' likelihood of engaging in dishonest academic practices. Similar results are documented by Pratama et al. (2023) and Achmada et al. (2020), who argue that performance-oriented educational environments intensify stress and weaken ethical resistance. Collectively, these findings suggest that pressure not only motivates academic fraud but also interacts with students' ethical reasoning processes, making it a critical factor in understanding academic misconduct.

Effect of Opportunity on Academic Fraud

The results indicate that opportunity does not have a significant effect on academic fraud. This finding suggests that the presence or absence of situational opportunities is not a decisive factor in motivating students to engage in unethical academic behavior. Although the Fraud Hexagon Theory posits opportunity as a critical antecedent of fraud, its influence appears to be less pronounced in the academic context examined in this study.

One possible explanation is the role of institutional and ethical controls within higher education environments. Universities actively promote academic integrity through orientation programs, ethical codes, and structured learning processes that emphasize honesty and responsibility. Continuous exposure to ethical education, particularly through professional and business ethics courses required for accounting students, may reduce students' willingness to exploit available opportunities for academic misconduct. As a result, even when opportunities exist, students may refrain from engaging in academic fraud due to internalized ethical norms and fear of reputational or academic consequences.

This finding is consistent with prior studies reporting that opportunity does not significantly influence academic fraud. Lestari & Mutmainah (2024) find that institutional controls and ethical awareness weaken the role of opportunity in academic misconduct. Similar results are documented by Theotama et al. (2023), Nailah & Murtanto (2023), Firmansyah & Oktarina (2023), Djaelani et al. (2022), and Apsari & Suhartini (2021), who argue that strong ethical climates and academic regulations can neutralize situational opportunities for fraud. Collectively, these findings suggest that in academic settings, opportunity alone is insufficient to trigger fraudulent behavior without accompanying psychological motivation or rationalization.

Effect of Rationalization on Academic Fraud

The findings indicate that rationalization has a significant positive effect on academic fraud, suggesting that students who are able to justify unethical behavior are more likely to engage in academic misconduct. Within the Fraud Hexagon Theory, rationalization functions as a cognitive mechanism that enables individuals to neutralize moral constraints and legitimize fraudulent actions.

In academic settings, rationalization often emerges through the normalization of cheating behavior among peers. When academic fraud is perceived as common practice or as an act of solidarity, students may reinterpret unethical behavior as acceptable or even necessary. Such cognitive justification reduces feelings of guilt and weakens ethical resistance, thereby increasing the likelihood of academic

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fraud. This phenomenon is particularly evident in collaborative learning environments, where group cohesion may unintentionally legitimize dishonest practices.

This finding is consistent with prior empirical studies that identify rationalization as a dominant antecedent of academic fraud. Lestari & Mutmainah (2024) report that students who rationalize cheating as harmless or justified are significantly more prone to academic misconduct. Similar results are documented by Theotama et al. (2023), Pratama et al. (2023), Djaelani et al. (2022), Apsari & Suhartini (2021), and Achmada et al. (2020), who emphasize that rationalization plays a crucial role in weakening ethical judgment and facilitating academic fraud. Collectively, these findings underscore the importance of addressing cognitive justification processes in efforts to strengthen academic integrity.

Effect of Capability on Academic Fraud

The findings indicate that capability does not have a significant effect on academic fraud. This result suggests that possessing the technical ability or skills to commit academic misconduct does not necessarily lead students to engage in fraudulent behavior. Although the Fraud Hexagon Theory identifies capability as a key element of fraud, its influence appears to be conditional in academic settings.

One possible explanation lies in the distinction between capability and intention. While students may have the technical competence to engage in academic fraud—such as the ability to use digital tools or exploit technological resources—such capability alone is insufficient to trigger unethical behavior without strong motivational or justificatory factors. Continuous exposure to ethical education and academic integrity norms within universities may restrain students from misusing their capabilities despite having the necessary skills.

Additionally, psychological considerations may weaken the effect of capability on academic fraud. Students may experience fear of detection, concern over academic sanctions, and anxiety about reputational damage, which discourage them from acting on their abilities. As a result, capability functions as an enabling factor rather than a direct determinant of academic fraud.

This finding is consistent with prior studies reporting that capability does not significantly influence academic fraud. Rahmat & Setiawan (2024) find that students' technical competence does not necessarily translate into fraudulent behavior. Similar results are documented by Theotama et al. (2023) and Nailah & Murtanto (2023), who argue that ethical awareness and perceived risk limit the behavioral manifestation of capability in academic contexts.

Effect of Arrogance on Academic Fraud

The results indicate that arrogance does not have a significant effect on academic fraud. This finding suggests that a sense of superiority or overconfidence does not necessarily motivate students to engage in unethical academic behavior. Although the Fraud Hexagon Theory posits arrogance as a factor that may increase the likelihood of fraud, its role appears to be less salient in academic settings.

One possible explanation lies in the nature of arrogance within the student context. Unlike organizational environments, where arrogance may manifest as power dominance or authority over systems, students generally operate within structured academic regulations and limited autonomy. Consequently, expressions of arrogance may not translate into fraudulent behavior when institutional controls and peer accountability are present.

Furthermore, universities actively promote character development through orientation programs, leadership training, and student activity units designed to foster humility, cooperation, and ethical conduct. These initiatives may mitigate the behavioral impact of arrogance by reinforcing social norms that discourage unethical actions. As a result, even students who exhibit confidence or assertiveness may refrain from academic fraud due to normative and institutional constraints.

This finding is consistent with prior empirical studies reporting that arrogance does not significantly influence academic fraud. Lestari & Mutmainah (2024) find that arrogance is not a determinant of academic misconduct among students. Similar results are documented by Rahmat & Setiawan (2024), Oktarina & Ramadhan (2023), Djaelani et al. (2022), and Achmada et al. (2020), who argue that academic environments with strong ethical norms weaken the behavioral relevance of arrogance.

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Effect of Collusion on Academic Fraud

The findings indicate that collusion has a significant positive effect on academic fraud, suggesting that collective involvement increases the likelihood of unethical academic behavior. In the Fraud Hexagon Theory, collusion represents a social mechanism that facilitates fraud by distributing responsibility among multiple individuals, thereby reducing personal accountability and moral resistance.

In academic settings, collusion often emerges through the blurred boundaries between legitimate cooperation and unethical collaboration. Group-based assignments and collaborative learning activities, while pedagogically valuable, may unintentionally normalize practices such as sharing answers, dividing individual tasks improperly, or collectively using unauthorized resources. When such behaviors are framed as acts of solidarity or mutual assistance, students may reinterpret collusion as acceptable cooperation rather than academic misconduct.

This social normalization weakens individual ethical judgment and fosters a diffusion of responsibility, where accountability is perceived as shared rather than personal. As a result, students are more likely to engage in academic fraud when supported or encouraged by peers. This finding highlights the critical role of social influence in academic misconduct, indicating that academic fraud is often a collective rather than purely individual decision.

The result is consistent with prior studies reporting a positive relationship between collusion and academic fraud. Oktarina & Ramadhan (2023) find that peer collaboration significantly increases academic misconduct among students. Similar evidence is provided by Nailah & Murtanto (2023), Firmansyah & Oktarina (2023), and Apsari & Suhartini (2021), who emphasize that collective behavior and peer justification are central drivers of academic fraud in higher education.

Effect of Artificial Intelligence as a Moderating

The results indicate that artificial intelligence moderates only the relationship between rationalization and academic fraud. This finding suggests that AI does not independently trigger academic misconduct but amplifies fraudulent behavior when cognitive justification is already present. In other words, artificial intelligence strengthens academic fraud primarily by reinforcing students' rationalization processes.

Rationalization represents a cognitive mechanism through which individuals justify unethical behavior as acceptable or harmless. When supported by artificial intelligence, this justification becomes stronger, as AI-based tools reduce perceived effort, increase task efficiency, and blur the boundary between legitimate academic assistance and misconduct. Consequently, students who already perceive academic fraud as acceptable may rely on AI to legitimize their behavior, thereby increasing the likelihood of unethical academic practices.

In contrast, artificial intelligence does not moderate the effects of pressure, opportunity, capability, arrogance, or collusion on academic fraud. This result suggests that technological access alone is insufficient to intensify these fraud antecedents. Students' exposure to ethical education, institutional regulations, and academic integrity norms may limit the behavioral impact of AI, even when students face academic pressure, possess technical capabilities, or engage in collaborative activities. As a result, AI functions as a contextual amplifier of cognitive justification rather than a universal catalyst for academic fraud.

Overall, these findings highlight that the ethical risks associated with artificial intelligence in higher education are primarily psychological rather than structural. Artificial intelligence becomes problematic not because of its technological features, but because it supports existing rationalizations that weaken ethical judgment. Therefore, efforts to prevent AI-assisted academic fraud should focus on strengthening students' ethical reasoning and clarifying the boundaries of acceptable AI use, rather than solely restricting access to technology.

CONCLUSION

This study investigates academic fraud among university students using the Fraud Hexagon Theory and examines the moderating role of artificial intelligence. The findings reveal that pressure, rationalization, and collusion significantly increase academic fraud, indicating that psychological pressure, cognitive justification, and peer influence play a dominant role in shaping unethical academic behavior. In

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contrast, opportunity, capability, and arrogance do not have a significant effect, suggesting that structural controls and individual competencies alone are insufficient to trigger academic fraud. Furthermore, artificial intelligence is found to moderate only the relationship between rationalization and academic fraud, implying that AI primarily strengthens cognitive justification rather than creating new opportunities or capabilities for misconduct. These results extend the application of the Fraud Hexagon Theory to the academic context and highlight the importance of addressing ethical reasoning and peer norms in preventing academic fraud in the era of artificial intelligence.

REFERENCES

Achmada, T., Ghozali, I., & Pamungkas, I. D. (2020). Detection of Academic Dishonesty: A Perspective of the Fraud Pentagon Model. *International Journal of Innovation, Creativity and Change. Www.Ijicc.Net*, *13*(12), 266–282. www.ijicc.net

Apsari, A. K., & Suhartini, D. (2021). Religiosity as Moderating of Accounting Student Academic Fraud with a Hexagon Theory Approach. *Accounting and Finance Studies*, *1*(3), 212–231. https://doi.org/10.47153/afs13.1512021

Djaelani, Y., Zainuddin, Z., & Mustari Mokoginta, R. (2022). Academic Fraud of Students in the Covid-19 Period: Testing with the Pentagon's Fraud Dimension. *International Journal of Research in Business and Social Science (2147- 4478)*, *11*(2), 414–422. https://doi.org/10.20525/ijrbs.v11i2.1640

Firmansyah, M. F. A., & Oktarina, D. (2023). The Effect of Hexagon Fraud Theory Components of Academic Fraud for Accounting Department Students with Gender as a Control Variable. *Asia Pacific Fraud Journal*, *8*(2), 369–380. https://doi.org/10.21532/apfjournal.v8i2.318

Lestari, S., & Mutmainah, S. (2024). Academic Fraud Enigma among Accounting Vocational School Students: Insights from Heptagon Framework and Relevance of Artificial Intelligence. *Jurnal Dinamika Akuntansi Dan Bisnis*, *11*(2), 207–228. https://doi.org/10.24815/jdab.v11i2.37442

Nailah, Z., & Murtanto. (2023). The Effect of Hexagon Fraud Dimensions and Abuse of Information Technology on Academic Fraud. *Oktober*, *4*(4), 1123–1134. https://doi.org/10.53697/emak.v4i4

Oktarina, D., & Ramadhan, N. S. (2023). Academic Fraud Behavior of Accounting Students in Dimensions of Fraud Hexagon Theory. *Journal of Auditing, Finance, and Forensic Accounting*, *11*(1), 33–48. https://doi.org/10.21107/jaffa.v11i1.18432

Pratama, R. D., Sangka, K. B., & Nugroho, J. A. (2023). The Influence of Fraud Diamond Perspective and Artificial Intelligence Factors on Academic Dishonesty Indonesian College Student. *International Journal of Multicultural and Multireligious Understanding*, *10*(11), 164. https://doi.org/10.18415/ijmmu.v10i11.5248

Rahmat, A., & Setiawan, M. A. (2024). Pengaruh Fraud Hexagon dan Self Efficacy terhadap Kecurangan Akademik Mahasiswa. *JURNAL EKSPLORASI AKUNTANSI*, *6*(1), 164–178. https://doi.org/10.24036/jea.v6i1.1218

Selviana, & Irwansyah. (2023). *Pengaruh Fraud Hexagon, Faktor Organisasi dan Integritas terhadap Perilaku Kecurangan Akademik Mahasiswa Akuntansi*. *08*(01), 2023. https://doi.org/https://doi.org/10.29040/jie.v8i1.11447

Theotama, G., Waskita, Y. D., Nugrahesthy, A., & Hapsari, S. (2023). Fraud Hexagon in the Motives to Commit Academic Fraud. *Jurnal Ekonomi Dan Bisnis*, *26*(1), 195–220. https://doi.org/https://doi.org/10.24914/jeb.v26i1.7395

Vousinas, G. L. (2019). Advancing Theory of Fraud: The S.C.O.R.E. Model. *Journal of Financial Crime*, *26*(1), 372–381. https://doi.org/10.1108/JFC-12-2017-0128

Wakang, A. A. (2024, July 18). *Penjelasan Kampus Soal Nilai Peserta Simak UI yang Diduga Gunakan AI dan Lolosa Jadi Maba*. Tempo.Co.

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