



Determination Of Fraud And Misuse Of Information Technology On Academic Fraud Behavior With Self-Efficacy As A Moderating Variable

Syasha Aulia Zubetta ¹⁾; Sriwidharmanely ²⁾; Fachruzzaman ³⁾

¹⁾Master of Accounting Study Program, Faculty Of Economics and Business, Universitas Bengkulu, Indonesia

^{2,3)} Department of Accounting, Faculty Of Economics and Business, Universitas Bengkulu, Indonesia
Email: ¹⁾ syashaaulia11@gmail.com

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ABSTRACT

This study aims to analyze the influence of the fraud hexagon, which includes pressure, opportunity, rationalization, cability, arrogance, and collusion, as well as the misuse of information technology on academic fraud behavior, with the moderating role of self-efficacy in accounting students. This study employs a quantitative approach using a survey method targeting active accounting students at universities in Indonesia, both public and private, at the D3, S1, and S2 levels. Respondents were selected using convenience sampling, resulting in a sample of 385 participants. Data analysis was conducted using SmartPLS 4 software. The results indicate that the fraud hexagon (pressure, opportunity, rationalization, cability, arrogance, and collusion) influences academic fraud, whereas within the fraud hexagon moderated by self-efficacy, only the opportunity dimension significantly influences academic fraud. This indicates that high self-efficacy can reduce the influence of opportunity in driving academic fraud. Conversely, self-efficacy is unable to moderate the influence of pressure, rationalization, cability, arrogance, and collusion on academic fraud behavior. The misuse of information technology influences academic fraud behavior even when moderated by self-efficacy. This study contributes to the development of the fraud hexagon theory in the academic setting and underscores the importance of enhancing self-efficacy and strengthening academic integrity as efforts to minimize academic fraud in higher education institutions.

INTRODUCTION

Academic fraud is any dishonest act committed by an individual in an academic environment, particularly during the learning process, assessments, or in the creation of scientific papers. Academic fraud occurs when an individual disregards the values of honesty and integrity in order to achieve their goals (Andayani & Sari, 2019). Academic dishonesty remains a recurring and concerning problem in the academic environment, as it can damage the credibility of higher education institutions, erode public trust, and ultimately threaten the financial sustainability of higher education institutions, particularly private universities (Box et al., 2020; Mawutor et al., 2019).

As the rapid development of digital technology has brought about major transformations in the world of education, the emergence of artificial intelligence (AI) has not only facilitated the learning process but also opened up opportunities for the misuse of technology for academic fraud, digital plagiarism. This can occur because artificial intelligence (AI) models such as these can automatically generate writing based on given criteria or instructions (Cotton et al., 2024). This situation allows students to commit academic fraud by collecting writing generated by artificial intelligence (AI) systems and then claiming it as their own work (Dehouche, 2021). This situation can have negative impacts, as it creates new opportunities and also makes it easier for students to commit fraud.

Fraudulent behavior is becoming commonplace today. The Association of Certified Examiners (2024) revealed that fraudsters in the professional workplace are largely accounting graduates. There is a strong link between academic fraud and unethical behavior in future professional settings.

Research by Guerrero-Dib et al. (2020) shows that students who commit fraud in academic settings are more likely to engage in similar dishonesty in their future workplaces. The involvement of accountants in various recent financial scandals over the past ten years has placed the integrity of the accounting profession under public scrutiny (Wira Utami & Purnamasari, 2021). Therefore, it is crucial to prevent unethical behavior, maintain public trust, and ensure that prospective accountants acquire strong ethical principles before entering the professional world. Given that the accounting profession demands a high level of integrity in every aspect of professional practice, students as aspiring accountants need to instill the values of honesty.

Academic integrity is the primary foundation for developing character, competence, and professional responsibility that they will carry into the workplace. Therefore, students must recognize that every learning process, assignment completion, exam administration, and other academic activities must be conducted honestly and in accordance with applicable academic ethics. By upholding the values of integrity, students not only acquire optimal knowledge and skills but also build the credibility, professionalism, and moral commitment necessary to practice the accounting profession responsibly and in accordance with applicable ethical standards.

LITERATURE REVIEW

Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is a theory developed from the Theory of Reasoned Action (TRA) proposed by Ajzen and Fishben in 1988. The Theory of Planned Behavior (TPB) represents a theoretical framework that provides a practical conceptual foundation for understanding the complexity of human social behavior (Ajzen, 1991). This theory seeks to predict and understand the effects of motivation on behaviors beyond an individual's control.

This theory identifies three main factors in predicting behavior: First, attitude toward behavior: an individual's evaluation of the behavior as positive or negative. In this case, it refers to how students evaluate themselves before committing fraud and consider the consequences of what will happen after committing the fraud.

Fraud Hexagon Theory

The fraud hexagon theory was introduced by Georgios L. Vousinas (2019). This theory examines the factors that can trigger fraud and deception. The fraud hexagon theory is a development and refinement of previous fraud theories, namely the fraud triangle theory by Donald R. Cressey (1953), the fraud diamond theory by Wolfe and Hermanson (2004), and the fraud pentagon theory by Crowe Howarth (2011). The fraud hexagon consists of six elements: pressure, opportunity, rationalization, ability, arrogance, and collusion. Collusion is a new component added to explain that fraudulent acts can be committed when perpetrators collaborate, which can then undermine the independent verification process in committing fraud (Vousinas, 2019).

Academic Fraud

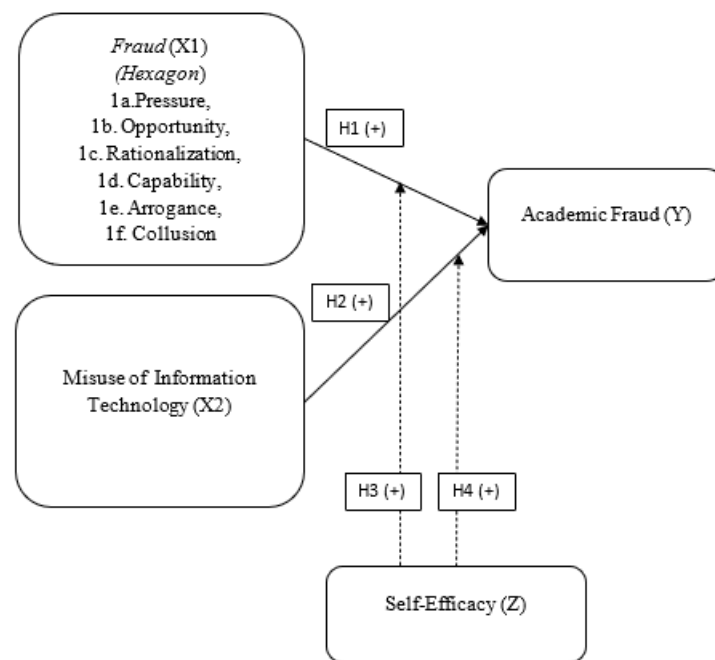
Albrecht (2012) explains that fraud is a fraudulent activity or act in which an individual or group intentionally acts to benefit the perpetrator. Academic dishonesty is an act carried out by students to deceive, cover up, and deceive lecturers with the aim of gaining an unfair advantage to achieve academic success (Dewi & Pertama, 2020). Acts of academic fraud are carried out in various ways by perpetrators to achieve their goals.

According to Erikson and McGee (2015), academic fraud falls into four main categories: cheating by using unauthorized materials or information in exams, falsifying information or quotations, providing assistance to other students, and plagiarism. With the development of technology and the rapid advancement of information, the forms and methods of academic cheating have become increasingly complex. While previously cheating was mostly carried out through conventional methods, such as copying students' answers or bringing notes to exams, the practice has now shifted towards the use of digital technology.

One increasingly common form is digital plagiarism, which involves copying, modifying, or using information or work obtained from the internet without citing the original source. The development of artificial intelligence (AI)-based technology presents new challenges to academic integrity. Students can utilize AI to compose essays, papers, or research reports and then submit them as their own work, or use AI to complete assignments and answer exam questions. Various AI platforms, such as ChatGPT, Gemini, Perplexity, and Microsoft Copilot, can generate text and answers quickly, potentially facilitating academic cheating if their use is not accompanied by responsible and ethical academic practices. Thus, technological advances not only facilitate the learning process but also open up opportunities for new forms of technology abuse that can threaten academic integrity (Asasi & Sriwidharmanely, 2025).

Research Framework

The research framework describes the conceptual relationship among the variables examined in this study based on the underlying theories and previous empirical studies. This study investigates the effect of the dimensions of the Fraud Hexagon and the misuse of information technology on academic cheating behavior among accounting students, with self-efficacy acting as a moderating variable. The independent variables consist of the six dimensions of the Fraud Hexagon, namely pressure, opportunity, rationalization, capability, arrogance, and collusion, along with the misuse of information technology. The dependent variable is academic cheating behavior, while self-efficacy is proposed to moderate the relationship between the independent variables and academic cheating behavior. The conceptual framework of this study is presented in Figure 1.

Figure 1. Research Framework

METHODS

Data Analysis

This study used quantitative data obtained from questionnaires completed by respondents. The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the assistance of SmartPLS version 4 software. The analysis was conducted in two stages: evaluation of the measurement model (outer model) and the structural model (inner model). The outer model evaluation aimed to test the quality of the instrument through convergent validity, discriminant validity, and construct reliability. Next, the inner model evaluation was conducted to examine the relationships between variables using path coefficients, R-square (R^2), and Q-square (Q^2), as well as testing the significance of hypotheses through a bootstrapping procedure. Moderation variables were tested by establishing interaction constructs between self-efficacy and each of the independent variables: pressure, opportunity, rationalization, ability, arrogance, collusion, and misuse of information technology. These interaction constructs were used to evaluate the role of self-efficacy in moderating the influence of the independent variables on academic fraud.

RESULTS

Respondent Characteristics

This study involved 385 respondents, consisting of accounting students from public and private universities in Indonesia. Detailed analysis results are shown in Table 1 below.

Table 1. Respondent Characteristics

Respondent Profile		Frequency	Percentage (%)
Gender	Female	279	72,47%
	Male	106	27,53%
Total		385	100%
Age	< 20 years	94	24,42%

	20 – 25 years	265	68,83%
	26 – 30 years	22	5,71%
	> 30 years	4	1,04%
Total		385	100%
University	State Universities	198	51,43%
	Private Universities	187	48,57%
Total		385	100%
University Regions	Sumatera	316	82,08%
	Java	63	16,36%
	Kalimantan	3	0,78%
	Sulawesi	3	0,78%
Total		385	100%
Level of Study	D3 Accounting	13	3,38%
	S1 Accounting	338	87,79%
	S2 Accounting	34	8,83%
Total		385	100%
Year of Entry	≤ 2019	1	0,26%
	2020 – 2023	195	50,65%
	2024 – 2025	189	49,09%
Total		385	100%

Source: Data Processed, 2026

This study involved 385 accounting students from various universities in Indonesia. Respondents were classified based on gender, age, type of university, university region, level of study, and year of enrollment. The classification of public and private universities was conducted by the researchers using information obtained from the official websites of each university and other credible online sources.

As presented in Table 1, the respondents were predominantly female (72.47%), while male respondents accounted for 27.53%. Most respondents were between 20–25 years old (68.83%), indicating that the sample primarily represented students in early adulthood who were actively engaged in higher education. In terms of university type, 51.43% of respondents were enrolled in public universities, while 48.57% attended private universities, reflecting a relatively balanced distribution. Regarding geographical distribution, the majority of respondents were from universities located in Sumatera (82.08%), followed by Java (16.36%), whereas Kalimantan and Sulawesi each contributed 0.78% of the sample.

Furthermore, the respondents were dominated by undergraduate accounting students (87.79%), followed by master's students (8.83%) and diploma students (3.38%). Based on the year of enrollment, most respondents entered university during 2020–2023 (50.65%), followed closely by those entering in 2024–2025 (49.09%), while only 0.26% enrolled in or before 2019. Overall, the respondent profile indicates that the study primarily represents undergraduate accounting students from public universities in Sumatera who are currently studying during the rapid digitalization of higher education. This demographic profile is considered appropriate for examining the influence of the Fraud Hexagon dimensions, information technology misuse, and self-efficacy on academic cheating behavior.

Descriptive Statistics

Descriptive statistics were used in data analysis. Minimum, maximum, mean, and standard deviation were used to describe the variables in general. All item statements were measured using a five-point Likert scale.

Table 2. Descriptive Statistics

Variable	N	Mean	Minimum	Maximum	Standard Deviation
X1. Fraud Hexagon					
Pressure	385	12,57	4	20	4,876
Opportunity	385	13,21	4	20	5,248
Rationalization	385	12,80	4	20	4,930
Capability	385	12,33	4	20	4,856
Arrogance	385	9,75	3	15	3,896
Collusion	385	13,62	4	20	5,119
Misuse of Information Technology	385	9,04	3	15	3,722
Self-Efficacy	385	10,47	4	20	4,674
Academic Fraud	385	16,11	5	25	6,360

Source: Data Processed, 2026

Based on the descriptive analysis results, this study involved a total of 385 respondents across all variables studied: the Fraud Hexagon (pressure, opportunity, rationalization, ability, arrogance, collusion), Information Technology Misuse, Self-Efficacy, and Academic Fraud. Among the Fraud Hexagon dimensions, collusion recorded the highest mean (13.62), followed by opportunity (13.21), rationalization (12.80), pressure (12.57), capability (12.33), and arrogance (9.75). Most of these mean values exceeded their theoretical means, suggesting that respondents generally perceived relatively high levels of fraud-related factors in the academic environment. In contrast, the mean score of information technology misuse (9.04) was slightly below its theoretical mean, indicating that the tendency to misuse digital technology for academic dishonesty was relatively moderate. Meanwhile, self-efficacy had a mean value of 10.47, which was lower than its theoretical mean, implying that respondents tended to have relatively low confidence in their ability to complete academic tasks independently.

Regarding the dependent variable, academic cheating behavior obtained a mean score of 16.11, exceeding its theoretical mean (15), indicating a relatively high tendency toward academic cheating among respondents. Furthermore, this variable showed the highest standard deviation (6.360), reflecting considerable variation in academic cheating behavior among students. Overall, the descriptive statistics indicate that respondents experienced relatively high levels of fraud-related factors while demonstrating moderate levels of information technology misuse and relatively low self-efficacy. These findings provide preliminary evidence supporting further analysis of the relationships among the research variables using Structural Equation Modeling (PLS-SEM).

Results of Measurement Model Evaluation (Outer Model)

Evaluation of the measurement model (outer model) was conducted to ensure that each research indicator accurately represented the latent construct being measured. In the analysis using SmartPLS, the quality of the outer model was evaluated using three main criteria: convergent validity, discriminant validity, and composite reliability.

Convergent Validity

Convergent validity was assessed using the outer loading and Average Variance Extracted (AVE) values. An indicator is considered valid if its outer loading exceeds 0.70, while a construct is regarded as having adequate convergent validity when its AVE value is greater than 0.50. These criteria indicate that the indicators adequately represent the latent construct being measured and explain more than 50% of the variance of their respective constructs.

The results presented in Table 3 show that all indicators have outer loading values above 0.70, and all constructs have AVE values exceeding 0.50. Therefore, all measurement indicators satisfy the convergent validity requirements and are considered appropriate for measuring their respective latent constructs. These findings indicate that the measurement model has adequate convergent validity and can be used for subsequent analyses.

Table 3. Loading Factor Value

Variable	Indicator	loading factor	AVE	Description
Fraud Hexagon				
Pressure	X1.1.1	0.862	0.755	Valid
	X1.1.2	0.864		
	X1.1.3	0.866		
	X1.1.4	0.883		
Opportunity	X1.2.1	0.913	0.817	Valid
	X1.2.2	0.926		
	X1.2.3	0.885		
	X1.2.4	0.889		
Rationalization	X1.3.1	0.885	0.763	Valid
	X1.3.2	0.842		
	X1.3.3	0.892		
	X1.3.4	0.874		
Capability	X1.4.1	0.896	0.754	Valid
	X1.4.2	0.894		
	X1.4.3	0.824		
	X1.4.4	0.857		
Arrogance	X1.5.1	0.91	0.835	Valid
	X1.5.2	0.904		
	X1.5.3	0.927		
Collusion	X1.6.1	0.867	0.791	Valid
	X1.6.2	0.921		
	X1.6.3	0.89		
	X1.6.4	0.879		
Misuse of Information Technology	X2.1	0.902	0.774	Valid
	X2.2	0.806		
	X2.3	0.926		
Academic Fraud	Y1	0.897	0.804	Valid
	Y2	0.878		

	Y3	0.912		
	Y4	0.901		
	Y5	0.893		
	Z1	0.843	0.747	
Self-Efficacy	Z2	0.867		Valid
	Z3	0.886		
	Z4	0.861		

Source: Data Processed, 2026

Based on Table 3, all indicators in each construct have outer loading values exceeding the minimum limit of 0.70, while the Average Variance Extracted (AVE) values for all constructs are above 0.50. These findings indicate that the research indicators adequately reflect the latent constructs and have a good level of consistency in measuring the same concept. Thus, all constructs meet the criteria for convergent validity, thus the measurement model is declared valid and can be continued with discriminant validity, reliability, and structural model testing.

Discriminant Validity

Discriminant validity was evaluated using the Fornell-Larcker criterion, Heterotrait-Monotrait Ratio (HTMT), and Cross Loading. As presented in Table 4, the square root of the AVE for each construct exceeded its correlations with other constructs, all HTMT values were below 0.90, and each indicator exhibited the highest loading on its respective construct. These results indicate that all constructs possess adequate discriminant validity and are empirically distinct from one another, confirming the adequacy of the measurement model for subsequent structural model analysis.

Table 4. Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT)

	X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X2	Y	Z
Pressure (X1.1)	0.869	0.891	0.81	0.884	0.805	0.805	0.787	0.857	0.493
Opportunity (X1.2)	0.811	0.904	0.85	0.859	0.842	0.848	0.801	0.853	0.447
Rationalization (X1.3)	0.727	0.776	0.873	0.871	0.82	0.893	0.799	0.857	0.436
Capability (X1.4)	0.794	0.784	0.787	0.868	0.86	0.841	0.872	0.888	0.555
Arrogance (X1.5)	0.724	0.769	0.739	0.776	0.914	0.831	0.777	0.846	0.411
Collusion (X1.6)	0.73	0.78	0.808	0.766	0.754	0.89	0.837	0.873	0.487
Misuse of Information Technology (X2)	0.689	0.715	0.705	0.76	0.687	0.747	0.88	0.844	0.577
Academic Fraud (Y)	0.786	0.796	0.788	0.817	0.779	0.809	0.761	0.897	0.471
Self-Efficacy (Z)	0.456	0.423	0.407	0.502	0.388	0.46	0.505	0.448	0.864

Source: Data Processed, 2026

Based on Table 4, all constructs meet the Fornell-Larcker Criterion, as indicated by higher AVE values compared to the correlations between constructs. Furthermore, all HTMT values are below 0.90, indicating that each construct has good discriminant validity and is capable of empirically measuring different concepts.

Cross Loading

The cross loading results in Table 5 show that each indicator has the highest loading value on the construct it represents compared to the other constructs. This finding confirms that all indicators meet the discriminant validity criteria, thus confirming that the measurement model is valid and can be used for structural model analysis.

Table 5. Cross-Loading Value

Construct	Indicator	Loading Range on Own Construct	Loading Range on Other Constructs	Description
Pressure (X1.1)	X1.1.1-X1.1.4	0,862-0,883	0,383-0,746	Valid
Opportunity (X1.2)	X1.2.1-X1.2.4	0,885-0,926	0,359-0,741	Valid
Rationalization (X1.3)	X1.3.1-X.3.4	0,842-0,892	0,317-0,742	Valid
Capability (X1.4)	X1.4.1-X1.4.4	0,824-0,896	0,379-0,798	Valid
Arrogance (X1.5)	X1.5.1-X1.5.3	0,904-0,927	0,337-0,730	Valid
Collusion (X1.6)	X1.6.1-X1.6.4	0,867-0,921	0,352-0,734	Valid
Misuse of Information Technology (X2)	X2.1-X2.3	0,806-0,926	0,383-0,726	Valid
Self-Efficacy (Z)	Z1-Z4	0,843-0,886	0,254-0,525	Valid
Academic Fraud (Y)	Y1-Y5	0,878-0,912	0,356-0,756	Valid
Interaction (Z x X1-X2)	Z x X1-X2	1	-0,216 sd 0,868	Valid

Source: Data Processed, 2026

Based on Table 5, all indicators show the highest cross-loading values for the constructs they represent compared to other constructs. These results indicate that each indicator accurately measures the intended latent construct and has good discrimination ability against other constructs in the model. Therefore, all indicators meet the criteria for discriminant validity, confirming that the measurement model is valid and suitable for use in the structural model analysis stage.

Reliability Test

Construct reliability was tested using Cronbach's Alpha and Composite Reliability (CR) to evaluate the internal consistency of each research construct. As shown in Table 6, all constructs achieved Cronbach's Alpha and Composite Reliability values exceeding the minimum threshold of 0.70. This finding indicates that the indicators within each construct have a high level of consistency in measuring the same concept.

The test results indicate that all constructs met reliability criteria, thus the research instrument was deemed capable of producing consistent and reliable measurements. With the

validity and reliability of the measurement model met, the analysis can proceed to evaluate the structural model to examine the relationships between the research variables.

Table 6. Reliability Test

Variable	Cronbach's alpha	Composite reliability (rho_c)	Description
Pressure (X1.1)	0.892	0.925	Reliabel
Opportunity (X1.2)	0.925	0.947	Reliabel
Rationalization (X1.3)	0.896	0.928	Reliabel
Capability (X1.4)	0.891	0.924	Reliabel
Arrogance (X1.5)	0.901	0.938	Reliabel
Collusion (X1.6)	0.912	0.938	Reliabel
Misuse of Information Technology (X2)	0.853	0.911	Reliabel
Academic Fraud (Y)	0.939	0.953	Reliabel
Self-Efficacy(Z)	0.889	0.922	Reliabel

Source: Data Processed, 2026

Based on Table 6, all constructs demonstrated Cronbach's Alpha and Composite Reliability values above 0.70, thus meeting the reliability criteria recommended in SEM-PLS. These results indicate that the indicators in each construct have good internal consistency in measuring the latent variables they represent. Thus, the measurement model is deemed reliable and suitable for use in testing the structural model (inner model).

Structural Model Evaluation Results (Inner Model)

Structural model testing (inner model) is conducted after the measurement model (outer model) is declared valid and reliable. Evaluation of the structural model, or inner model, aims to predict the relationships between hypothesized constructs or latent variables. Inner model evaluation is performed by examining the model fit test value, coefficient of determination (R^2), and predictive relevance (Q^2).

Table 7. Evaluation Goodness of Fit

	Saturated model	Saturated model
SRMR	0.056	0.056
d_ULS	2.002	1.999
d_G	0.826	0.825
Chi-square	1955.984	1952.84
NFI	0.855	0.855

Source: Data Processed, 2026

Based on Table 7 above, the SRMR (Standardized Root Mean Square Residual) calculation is 0.056. This indicates that the obtained model is good for use in making predictions because the SRMR value is <0.08 . This means the model has a high ability to explain empirical data.

Table 8. Coefficient of Determination (R-Square) Test

Variable	R-square	R-square adjusted
Academic Fraud (Y)	0,808	0,8

Source: Data Processed, 2026

According to Table 8, the R-Square value for the Academic Fraud Behavior variable is 0.808, indicating that 80.8% of the variation in academic fraud behavior can be explained by the Fraud Hexagon dimensions, information technology misuse, and self-efficacy as moderating variables. Meanwhile, the remaining 19.2% of the variation is influenced by factors outside the research model.

Furthermore, the Adjusted R-Square value of 0.800 indicates that the model's ability to explain the dependent variable remains high even after accounting for the number of variables used. These results indicate that the model has strong explanatory power and is suitable for analyzing structural relationships between variables.

Predictive Relevance (Q-Square) Test

A model is said to have predictive relevance if the Q^2 value is >0 . The Q^2 value is obtained through calculations based on the information presented in Table 4.9, with the calculation results as follows:

$$Q^2 = 1 - (1 - R^2)$$

$$Q^2 = 1 - (1 - 0,808)$$

$$= 0,808$$

Based on calculations, the Q^2 value for the Academic Fraud Behavior variable is 0.808, indicating that the model has excellent predictive relevance, as its value is greater than 0. This result indicates that the model has high predictive ability in explaining variations in academic fraud behavior. These findings indicate that the Fraud Hexagon dimensions, information technology misuse, and self-efficacy as moderating variables provide strong predictive power for academic fraud behavior. Thus, the proposed structural model has good predictive quality and is suitable for use in testing the relationships between research variables.

Hypothesis Testing Results

Hypothesis testing was conducted using the bootstrapping procedure in PLS-SEM by evaluating the path coefficient, t-statistic, and p-value. The hypothesis was declared supported if it met the criteria of t-statistic > 1.96 and p-value < 0.05 . The test results presented in Table 10 show the influence of the Fraud Hexagon dimensions and information technology misuse on academic fraud behavior, as well as the role of self-efficacy as a moderating variable. Table 9 displays the hypothesis test findings.

Table 9. Hypothesis Testing

Pathways	Path Koefesien	T-statistics	P values
Pressure -> Academic Fraud	0.169	2.621	0.009
Opportunity -> Academic Fraud	0.132	2.3	0.021
Rationalization -> Academic Fraud	0.121	2.226	0.026
Capability -> Academic Fraud	0.161	2.325	0.02
Arrogance -> Academic Fraud	0.113	2.011	0.044
Collusion -> Academic Fraud	0.156	2.57	0.01
Misuse of Information Technology -> Academic Fraud	0.14	2.339	0.019
Self-Efficacy -> Academic Fraud	-0.016	0.442	0.658
Pressure x Self-Efficacy -> Academic Fraud	-0.046	0.742	0.458

Opportunity x Self-Efficacy -> Academic Fraud	-0.126	2.267	0.023
Rationalization x Self-Efficacy -> Academic Fraud	-0.001	0.024	0.981
Capability x Self-Efficacy -> Academic Fraud	0.011	0.121	0.904
Arrogance x Self-Efficacy -> Academic Fraud	-0.001	0.016	0.988
Collusion x Self-Efficacy -> Kecurangan Akademik	0.013	0.183	0.855
Misuse of Information Technology x Self-Efficacy -> Academic Fraud	0.147	2.078	0.038

Source: Data Processed, 2026

Based on Table 9, the results of hypothesis testing using the bootstrapping procedure indicate that all dimensions of the Fraud Hexagon—pressure, opportunity, rationalization, ability, arrogance, and collusion—have a positive and significant effect on academic dishonesty ($p < 0.05$). Furthermore, misuse of information technology was also shown to have a positive and significant effect on academic dishonesty. These findings indicate that the higher the levels of pressure, opportunity, rationalization, ability, arrogance, collusion, and misuse of information technology, the higher the likelihood of students committing academic dishonesty. Therefore, Hypotheses 1a–1f and Hypothesis 2 are supported.

Conversely, self-efficacy, as an independent variable, did not have a significant effect on academic dishonesty ($p > 0.05$). Although the path coefficient indicates a negative relationship, this effect is not statistically significant, indicating that self-efficacy levels do not directly influence students' likelihood of committing academic dishonesty.

In testing the moderation effect, the results indicate that self-efficacy only moderates the relationship between opportunity and misuse of information technology on academic dishonesty. Conversely, self-efficacy did not moderate the relationship between pressure, rationalization, ability, arrogance, and collusion on academic dishonesty, as all relationships had p -values above 0.05. Therefore, Hypotheses 3b and 4 were supported, while Hypotheses 3a, 3c, 3d, 3e, and 3f were not supported.

Overall, the test results indicate that most variables from the Fraud Hexagon dimensions and information technology misuse play a role as determinants of academic dishonesty. Meanwhile, self-efficacy's role as a moderating variable is limited, as it only strengthens the relationship between opportunity and information technology misuse but does not moderate the relationship between the other Fraud Hexagon dimensions. These findings suggest that the influence of situational factors and technology utilization is more dominant in explaining academic dishonesty than the moderating role of self-efficacy.

DISCUSSION

The results of the study indicate that all dimensions of the Fraud Hexagon, namely pressure, opportunity, rationalization, ability, arrogance, and collusion, have a positive and significant effect on the academic fraud behavior of accounting students. This finding strengthens the concept of the Fraud Hexagon Theory that fraudulent behavior is not only influenced by pressure and opportunity as explained in the Fraud Triangle, but also influenced by ability, arrogance, and collusion as factors that broaden the explanation of fraud behavior. In the academic context, pressure due to the demand for high grades, opportunities arising from

weak supervision, rationalization of unethical actions, the ability to exploit system loopholes, superior attitudes, and cooperation between students in committing academic violations have been shown to increase the tendency to commit academic fraud. This finding also strengthens the Theory of Planned Behavior (TPB), which explains that attitudes towards behavior, subjective norms, and perceived behavioral control contribute to students' decisions to commit academic fraud. The results of this study are consistent with those of Prastiwi et al. (2025), Muhammad and Purwanti (2025), Malva et al. (2024), Kurniawati et al. (2024), Murdiana et al. (2023), Dewi and Pertama (2020), and Asasi and Sriwidharmanely (2025).

In addition to the Fraud Hexagon factor, this study also shows that misuse of information technology has a positive effect on academic dishonesty. The development of digital technology, particularly the use of Artificial Intelligence (AI), makes it easier for students to obtain information and complete academic assignments. However, when technology is utilized without regard for academic ethics, this convenience can become a means for plagiarism, obtaining instant answers, or producing assignments that do not fully reflect students' abilities. These findings demonstrate that technological advances do not always have a positive impact on the learning process if they are not balanced with strengthening academic integrity. These results align with the Theory of Planned Behavior, which views technology as an external factor that can influence the formation of attitudes and perceptions of behavioral control in carrying out an action. These findings also support research by Juliardi et al. (2021), Alivia and Anwar (2024), and Surjo et al. (2024), which shows that misuse of information technology increases the likelihood of academic dishonesty.

Unlike other independent variables, self-efficacy does not directly influence academic dishonesty. These findings indicate that students' beliefs in their abilities do not necessarily determine their decisions to commit or avoid academic dishonesty. In certain situations, students' decisions are more influenced by external factors, such as academic pressure, opportunities to cheat, and easy access to technology, than by their beliefs in their abilities. These results indicate that self-efficacy is not a primary determinant of academic dishonesty behavior among accounting students. Therefore, increasing self-efficacy alone is insufficient to reduce such behavior without strengthening academic integrity and an effective oversight system.

The research results indicate that self-efficacy does not moderate the influence of pressure, rationalization, capability, arrogance, and collusion on academic dishonesty. In other words, the level of self-efficacy—whether high or low—does not alter the relationship between these five factors and academic dishonesty. Factors such as pressure (e.g., grade demands, difficulty understanding material, and deadlines), rationalization (justifying cheating), capability (utilizing strategies or technology), arrogance regarding rules, and student collusion maintain a relationship with academic dishonesty that does not change significantly based on self-efficacy levels. From the perspective of the Theory of Planned Behavior (TPB), self-efficacy is linked to perceived behavioral control, yet its role as a moderator in this relationship was not empirically proven. These findings align with those of Murdiana et al. (2023), Alivia and Anwar (2023), Arianti (2024), and Diniyati (2024).

Conversely, self-efficacy was found to moderate the influence of opportunity on academic dishonesty, exhibiting a negative interaction coefficient. This indicates that higher self-efficacy weakens the impact of opportunity on academic dishonesty. While opportunities such as lax supervision, lenient sanctions, and the ease of using AI can encourage cheating, students with high self-efficacy tend to be more confident in meeting academic demands independently. This finding can be explained through the TPB—specifically the concept of perceived behavioral control—and is consistent with the work of Juniariani and Pradnyanitasari (2019). Self-efficacy was also shown to moderate the influence of information technology misuse on academic dishonesty. These findings demonstrate that self-efficacy does not always serve to reduce deviant behavior; confidence in one's ability to use technology can be directed toward either

ethical learning or the misuse of AI—such as seeking answers, plagiarism, document manipulation, and sharing answers. From the perspective of the Theory of Planned Behavior (TPB), self-efficacy—as a component of perceived behavioral control—can influence technology usage, though the direction of this influence depends on the behavioral context. These findings align with those of Surjo et al. (2024) and Nurhidayah (2022). Overall, the moderating role of self-efficacy is contextual; it is evident regarding opportunity and the misuse of information technology, but not regarding pressure, rationalization, capability, arrogance, and collusion.

CONCLUSION

This study demonstrates that all dimensions of the Fraud Hexagon—namely pressure, opportunity, rationalization, capability, arrogance, and collusion—as well as information technology guidance, positively influence the academic behavior of accounting students in Indonesia. These findings indicate that academic performance is shaped by a combination of individual, situational, and technological factors. Moderation analysis reveals that self-efficacy weakens the impact of opportunity on academic behavior, whereas the influence of information technology exposure—when moderated by self-efficacy—shows a positive direction. Conversely, self-efficacy was not found to moderate the relationships between pressure, rationalization, capability, arrogance, or collusion and academic behavior. Thus, the role of self-efficacy as a moderating variable is limited and contextual, while situational factors and ease of access to technology exert a more dominant influence.

Theoretically, this study reinforces the application of the Fraud Hexagon Theory and the Theory of Planned Behavior in explaining academic behavior by demonstrating the relevance of pressure, opportunity, rationalization, capability, arrogance, collusion, and information technology factors. Practically, higher education institutions need to strengthen policies, academic integrity, and the oversight of information technology usage, as well as systems for preventing plagiarism and digital-based academic misconduct. Lecturers can develop evaluation methods that are more authentic and focused on the learning process, while students must use technology responsibly and uphold academic integrity. Consequently, efforts to prevent academic misconduct require a combination of oversight, the strengthening of academic systems, and the development of student character and competence.

LIMITATION

This study has several limitations that need to be considered when interpreting the results. First, the distribution of respondents is still dominated by accounting students in the Bengkulu region, so generalizing the findings to accounting students in Indonesia requires caution. Second, the study used a cross-sectional design and a self-report questionnaire instrument, so the results only describe conditions during a specific period and have the potential to introduce subjectivity bias and social desirability bias. Third, the study used only a quantitative approach, thus failing to deeply explore students' motivations, experiences, and decision-making processes in committing or avoiding academic dishonesty.

Therefore, future research is recommended to expand the scope of respondents with a more representative distribution, use a longitudinal design, refine the measurement instrument, implement strategies to minimize response bias, and combine quantitative and qualitative approaches through in-depth interviews. Furthermore, the research model can be developed by adding variables such as academic integrity, digital literacy, individual morality, academic culture, self-control, and educational environmental factors to gain a more comprehensive understanding of the determinants of academic dishonesty behavior in the digital era.

TRANSPARENCY STATEMENT

1. Author Contributions:

SAZ: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original

SS : Visualization, Review and Editing, Supervision.

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The study did not involve any intervention, biological specimens, vulnerable groups, or sensitive personal data. Participation was voluntary, and the confidentiality of the respondents was maintained

5. Use of Artificial Intelligence (AI):

The authors used ChatGPT to assist with improving grammar and translating the text. All AI-generated output was thoroughly reviewed and edited by the authors. The authors take full responsibility for the content of the article.

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