

## Students Cheating Behaviors: The Influence of Fraud Triangle

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— *Review of* —  
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### ABSTRACT

The role of educational institution is not only for transferring knowledge but also building up character and self-integrity values; it is critical issue in the workplace or business environment. Increasing academic fraud by student becomes the research background. Research method used questionnaire survey to find out students attitude in fraud triangle framework. The research purposes to get empirical result aligned with the research focus: Are incentives, opportunities and rationalization influence on students cheating behaviors? The result shows that only incentive variable has significant value to students cheating behaviors. The role of institution is a major factor to detect and prevent fraud. Understanding student behavior related to academic fraud will be beneficial for the institution to conduct an evaluation of the learning process in the academic community.

**Keywords:** fraud triangle, incentive, opportunity, rationalization

### I. INTRODUCTION

University as an educational institution plays an important role in the birth of a virtuous intellectual generation. The role of educational institutions not only transfers of knowledge but also plays a role in forming the character and values of integrity as a preparation to enter the workplace or business. McCabe et al (2001) revealed that it is currently in the decade after the scandal Sarbanes-Oxley, the conduct of the business demands the creation of a strong ethical culture, supervisory employee code of conduct, and the creation of programs and processes (including the reporting system) that support compliance with laws and regulations. University should also do the same thing. Since there was empirical evidence that cultural while in school or college can help prepare students towards their organizational experience later.

Nonis and Swift (2001) examined academic integrity both in the classroom and in the workplace. The study was conducted on six different campuses using a questionnaire. It was found that students who believe that fraudulent or dishonest acts acceptable are more likely to act in dishonest behavior, rather than students who believe that the dishonest act is something that can not be accepted. In addition, students who use dishonest actions in the classroom are more likely to act dishonestly in the workplace. Morris (2006) in his survey to undergraduate business major from

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seven universities found a significant number of students who admitted to cheating in college also admitted to cheating in high school.

Academically fraudulent behavior such as cheating may distort the values of learning. "Cheating may indicate that values considered essential to good citizenship and to good business practice have not been instilled" (West, 2004). This study will show the results of a survey conducted on students at UPH Surabaya (UPHS). The goal is to gather evidence related to the following research issues: Is the incentive, opportunity and rationalization have an influence on student cheating behavior. Understanding student behavior related to academic fraud will be beneficial for the institution to conduct an evaluation of the learning process in the academic community.

## II. THEORETICAL BACKGROUND

Fraud terminology is one of the concerns in auditing. Anyone can commit fraud. Fraud is different from errors by the intent to deceive (Rittenberg, 2005). A common denominator in all fraud is the intent to deceive for personal benefit. Albrecht (2006) make definitions of fraud as:

"Fraud is a generic term, and embraces all the multifarious means which human ingenuity can devise, which are resorted to by one individual, to get an advantage over another by false representations. No definite and invariable rule can be laid down as a general proposition in defining fraud, as it includes surprise, trickery, cunning and unfair ways by which another is cheated. The only boundaries defining it are those which limit human knavery".

The three elements of the fraud triangle are the incentive, opportunity, and rationalization (Albrecht (2006); Becker (2006); Wells (2005)). Three conditions for fraud arising from fraudulent financial reporting and misappropriations of asset are described in PSAS 70 (SA 316), and then refereed as the fraud triangle (Elder, 2009). In this research, fraud triangle used as a framework to get insight about students cheating behaviors.

The first element of the fraud triangle is the incentive or pressure, which is the motivation for cheating may come from the students themselves or others such as parents, fellow student, and the pressure to be able to maintain a GPA (Grade Point Average). Wolfe (2004) revealed the first element as "incentive: I want to, or have a need to, commit fraud". Or in other words, a person may have an impulse or under pressure that gives him/her the motivation to commit fraud (Ramos, 2003).

The second element of the fraud triangle is opportunity that comes from a variety of sources. Some students see their academic community give an opportunity to cheat when such lecturers are not too concerned about plagiarism, or lecturer does not seem to explain the consequences of cheating during exams (Becker, 2006). In line with this understanding, Wolfe (2004) revealed "opportunity: there is a weakness in the system that the right person could exploit. Fraud is possible ". In the other words, where the environment provides the opportunity for fraud to be carried out, such as the absence of controls, ineffective controls, or the ability of management override control (Ramos, 2003).

The third element is rationalization, which offers students the ability to see the cheating behavior is consistent with their personal code of ethics (Kock & Davinson

in Becker, 2006). For example, lack of punishment for misbehaving academic, unclear limits borrowing other people ideas when writing papers. Wolfe (2004) revealed the "rationalization: I have convinced myself that this fraudulent behavior is worth the risk". Or in other words, the third element is the ability to rationalize a fraudulent act as being consistent with the perpetrators personal code of ethics. Kock & Davinson in Becker (2006) revealed students justify cheating behaviors when they face unfair competition or if they believe their actions are still within the limits of acceptable behavior. It is also in line with the opinions of Ramos (2003) that some individuals positioning an attitude, character or set of ethical values that allow them to know and perform cheating intensively.

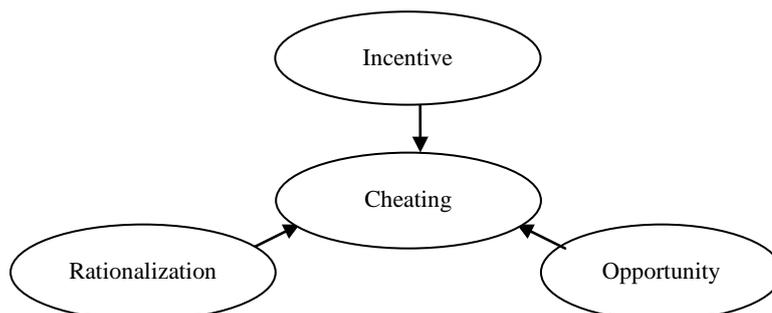


Fig 1. Model of Cheating Behavior (Becker, 2006)

“Fraud Scale” used to illustrate the concept which included the components of situational pressures, perceived opportunities, and personal integrity. When situational pressures and perceived opportunities are high and personal integrity is low, occupational fraud is much more likely to occur than when the opposite is true (Fig.2).

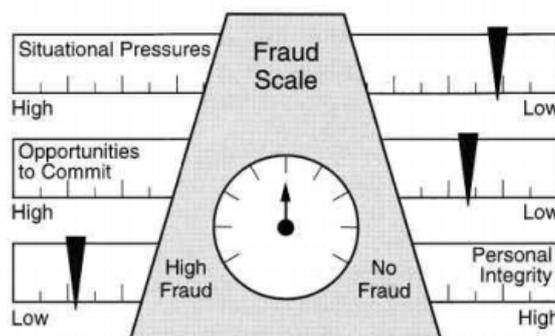


Fig. 2 Fraud Scale (Wells, 2005)

McCabe et al (2006) collected data from 54 universities in the United States and Canada in 2002-2003 and 2003-2004 academic years as part of a large project organized by the Center for Academic Integrity at Duke University. The survey was conducted by sending an email questionnaire to all undergraduate and graduate students on campus. The dependent variable used is academic dishonesty, while the independent is the understanding and acceptance of academic integrity policies, perceptions of cheating behavior of fellow students, and the certainty will be reported

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by fellow students, as well as a severe punishment. McCabe et al (2006) found that the behavior of cheating among graduate of business students is higher than graduate of non-business students. In the study, the perception that other students cheat have the greatest effect. Correlation analysis also showed that in contrast to the certainty of fraudulent behavior will be reported by their fellow students as well as the understanding and acceptance of academic integrity policies. Fraudulent behavior has positive value with perceptions of cheating behavior of their fellow students. Fraudulent behavior is not the opposite if it is associated with the severe punishment.

Becker (2006) in his study used questionnaires of 476 college students to get the results that cheating behavior is explained 20.42% by each of the variables fraud triangle, where the cheating behavior increases with incentive, opportunity and the rationale for such behavior. He also conducted a sensitivity analysis on the influence of student GPA, gender, hours of work, and hours of study, age and frequency of doing party all year college to cheating behavior. As a result there is no influence of student GPA, gender, study hours and hours of work to cheating behavior. While there is a significant negative effect between age students to cheating behavior and there is a positive effect between the frequencies of the students doing the party to cheating behavior.

Based on previous theoretical background and studies, the hypotheses in this research are:

- H1 : Is the incentive, opportunity and rationalization have an influence on student cheating behavior.
- H2 : Is the incentive has an influence on student cheating behavior.
- H3 : Is the opportunity has an influence on student cheating behavior.
- H4 : Is the rationalization has an influence on student cheating behavior.

### **III. RESEARCH METHOD**

Participants in this survey are students in each department of Universitas Pelita Harapan Surabaya. Students were asked to rate the acceptability of each behavior using a four point rating scale ranging from (1) Strongly Agree to (4) Strongly Disagree. The scale purposely did not have a midpoint to prevent respondents from taking a neutral stance. Questions are adopted from Becker (2006).

Incentive was measured by questions: In some classes, I can't get the grade I want without cheating; I don't have enough time to complete some assignments without cheating; I have difficult time keeping up with my classes; I feel pressure to get good grades any way I can. Opportunity was measured by questions: Many students in my classes have copied the answer to a test; Opportunity to act plagiarism and cheating on test; There are no substantial actions to deter academic dishonesty by Faculty; Another student who had earlier of the same examinations, offers the answers to me; Many students in my classes have copied someone else's homework. Rationalization was measured by questions: If someone leaves a test where I can read the answers, then its his/her fault if I copy; The faculty rarely detect academic dishonesty; If a lecturer leaves the room during a test, the lecturer is in effect okaying cheating; The penalties for academic dishonesty at UPHS are not severe; I have personally observed (or heard about) another student cheating on a test many times at UPHS.

Cheating behavior as a dependent variable was measured by questions: Copied material and turned it in as your work; Used unfair methods to learn what was on a test before it was given; Copied a few sentences of material from a published source without giving the author credit; Helped someone else cheat on a test; Cheated on a test in any way. Students reported the number of times they had participated in each behavior, ranging from zero times to more than five times. Each student's response to these question were summed to create one score cheating score, this is consistent with prior research (Becker, 2006). Data analysis used in this study consists of: validity and reliability test for the questionnaire, descriptive statistics (mean), tests of data quality (classical assumption), and regression method.

#### IV. RESULT AND DISCUSSION

Respondents used in this research were 106 students that come from six study programs (Management: 27%, Accounting: 16%, Law: 23%, Psychology 14%, Information System 13%, and Industrial Engineering: 7%). Test validity by comparing the  $r$  counted with  $r$  table for degree of freedom ( $df$ ) = 104 the value is 0.1909. Value of each item questionnaire in the column Corrected Item-Total Correlation in Cronbach Alpha's output must be greater than the value of  $r$  table (Ghozali, 2006). The reliability test results show the value of Cronbach alpha for the variable Rationalization (R) 0.662, Opportunity (O) 0.731, Incentive (I) 0.771 and Cheating (C) 0.797. This value is greater than 0.600, shows that the answers of the respondents are consistent and stable over time so reliable for use in this study.

Normality test indicates the significant value of Kolmogorof Smirnov 0.825 greater than 0.05 significance level means that the data are normally distributed. Multicollinearity test results indicate that all the independent variables had tolerance values  $> 0.1$  and VIF values  $< 10$  which means not occurs multicollinearity. White Test result  $R^2$  0.072 so that  $c^2$  can be calculated and obtained value 7.632. These results demonstrate the value of  $c^2$  counted  $< c^2$  table 128.804 so there is no heterocedastisity.

The coefficient of determination adjusted  $R^2$  0.217, it means 21.7% a change in the behavior of cheating (Cheating) can be explained by the variable Rationalization (R), Opportunity (O), and Incentive (I), the rest is influenced by other variables not examined in this study. The results of hypothesis testing using the F test indicates that the variable Incentive (I), Opportunity (O), and Rationalization (R) jointly influence the behavior of cheating (Cheating) indicated by the significant value of 0.000 is smaller than 0.05. This means that the fraud triangle affect student cheating behavior, so the first hypothesis is accepted. Regression equation as follow:

$$C = 24.698 - 1.472 I + 0.019 O + 0.140 R$$

**Table 1. Regression Result**

Model	Var	Coef. Reg	Sig.
$C = \alpha + \beta_1 I + \beta_2 O + \beta_3 R + e$		24.698	0,000
	I	-1.472	0,000
	O	0.019	0,953
	R	0.140	0,641
Adjusted R <sup>2</sup> of model	: 0,217		
F value of model	: 10.708 with p = 0,000*		
*statistically significant at $\alpha = 5\%$			

Source: data processed (2013)

Meanwhile, if the affect is partially seen through t tests indicates that the only variable Incentive (I) which have an influence on cheating behavior (Cheating) as indicated by the significant value of 0.000, so the second hypothesis is accepted. Cheating behavior will decrease as the incentive or pressure that gives students the motivation to commit fraud has increased, and vice versa. This is indicated by a negative beta coefficient 1.472. This finding contrasts with the results of Becker (2006) that shows the positive direction. Descriptive statistics indicates the average value of the respondents are in the interval  $2.5 \leq 3.25$  for each question, which means students tend to disagree if the reason is not enough time to complete the task, difficulties in the classroom, as well as the pressure to get good grades and then directing them to cheating. About 82% of student used in this survey have a  $GPA \geq 3$  (from scale of 4), its means they have good grade. Almost 66% students have number to study each week out of class 0-10 hours, 22% students have number 10-20 hours and, 12 % students have number more than 20 hours. It means they have good time allocation to manage their academic activity so they didn't motivate to cheating. Moreover, ability to maintain integrity and honesty is able to direct a person to not behave fraudulently even though the students had the incentive or pressure from themselves and other people. In line with this explanation, West et al. (2004) also found out that moral judgments are not significantly related to cheating behavior, but the honesty which has a negative significant relationship to cheating behavior. Individuals with high integrity and low opportunity need high pressure to be dishonest (Albrecht, 2006).

Individual and contextual factors also play a role in the behavior of the student. Students' perceptions of the behavior of his colleagues as well as policies and programs to maintain the integrity of academic institutions is one of the most influential (Mc Cabe et al. 2001). The contextual factors such as peer cheating behavior, peer disapproval of cheating behavior, and perceived severity of penalties for cheating; and the individual factors such as age, gender, and GPA.

Variable Opportunity (O) has no effect on the students cheating behavior, so the third hypothesis is not accepted. Descriptive statistics indicates the average respondents gave high marks, which means do not agree with cheating. Academic community at UPHS has little chance that allows students to make a cheat sheet for the exam answers. Nonis and Swift (2001) revealed that the Faculty is responsible for

encouraging ethical behavior among college students. Faculty should be able to build an academic atmosphere that emphasizes ethical standards, modeling appropriate decision making, as well as teaching ethical dimension in the classroom. Universities must consistently communicate the rules relating to academic dishonesty to the students, faculty, administrators, and all parties must accept and support this concept. Regulations about the code of conduct in academic dishonesty at UPH Surabaya find in the Code of Campus Discipline as the rules and regulations organizing the technical process in which this disseminated both through formal media (bulletin boards) as well as direct delivery by lecturers.

Although other students had previously followed the same test, the average respondent did not agree with the behavior offer the test's answer to other students who will take the same exam. In line with McCabe et al (2006) which revealed that the cheating behavior of college students conducted by studying the exam from other students who have taken the exam in the previous class, cheating on assignments should be done individually, and cheating by using technologies such as plagiarism from the internet. McCabe et al (2006) suggested that individuals in the Faculty should use strategies to reduce the perception that other students cheating. For example, to address the possibility they have learned first exam questions that have been given in the previous class is not supposed to use the same questions for the exam for two times. The common practice with technology and collaborative working individual tasks can be solved by limiting the use of mobile phones in the exam. Supporting this opinion, UPH Surabaya has certainly made efforts, so although there are still opportunities are not able to influence students to behave cheat.

Variable Rationalization (R) has no effect on the behavior of cheating due to the significant value of the t tests is greater than 0.05, so the fourth hypothesis is not accepted. Descriptive statistics indicates the average value of the respondents were in the interval of high value means tend to disagree to the question: "If someone leaves a test where I can read the answers, then its his/her fault if I copy; The faculty rarely detect academic dishonesty; If a lecturer leaves the room during a test, the lecturer is in effect okaying cheating; The penalties for academic Dishonesty at UPHS are severe". The results of this study show the attitude of respondents are not strong enough to direct them to rationalize a situation to cheat. Ethical values may be formed because the majority of respondents were aware that the Faculty attempts to detect academic dishonesty, and provide sanctions or penalties for this. This is aligned with Hauptman in Morris (2006), he offer the solutions has come to take action to preserve professional credibility: punishment should be harsh enough; critics and whistleblowers should be celebrated not condemned.

"When the importance of the academic integrity is actively communicated to students, it becomes harder for them to justify or rationalize cheating (Morris, 2006)". Students and businesses reported the need to balance the decisions of practical and ethical requirements (Lawson in Becker, 2006). Therefore the role of character education is very important in an educational institution, so there is no rationalize for the values or unethical behaviors. UPHS through transformational holistic education seeks to achieve a balance between knowledge, faith in God and glorious character development. This has led to rationalization does not have an influence on student cheating behavior.

"An effective honor code must be more than mere window dressing; a truly effective code must be well implemented and strongly embedded in the student

culture (McCabe, 2001)". Furthermore, a formal code is not the only way to achieve the desired result. As suggested earlier, a strong culture of academic integrity can exist at an institution that has no formal code but communicates the importance the community places on integrity in other ways.

## V. CONCLUSIONS

Fraud triangle influences students cheating behaviors. If the affect is partially seen through t tests indicates that the only variable Incentive (I) which have an influence on cheating behavior (Cheating). Understanding student behavior related to academic fraud will be beneficial for the institution to conduct an evaluation of the learning process in the academic community. Faculty who know specific factors that lead to cheating will be able to prevent and detect academic dishonesty. Without some kind of pressure, fraud rarely occurs. Opportunities can be eliminated by having good internal control in the institution. If the institution actively communicates value or ethical behavior to all members, it can reduce or eliminate rationalizations to commit fraud.

Future research might used a modified version of the survey include students motive and ethical dimension; improve the model by adding other variables, not only contextual factor but also individual factors; compare between different study program and gender; and make some in-dept interview with respondents to strengthen quantitative result.

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