

# The Influence on Ethical Thinking Toward Effective Accounting Education

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**Abstract:** The prior empirical researches indicate the significance of accounting education in the higher institution. Thomas (2010) states the effect of accounting education for making decision of the earlier year business students in the university. Berman (1990) emphasized how the engagement of teachers to develop basic social skills of students is. Saito & McLeod (2016) examined how significant for first-year or second-year American students to acknowledge social consciousness and indicated that students' social consciousness such as respect, belonging, and leadership, affect their goal setting to learn accounting. The mission of accounting education is to foster future accounting professionals with competencies of critical and ethical thinking. This paper focuses on what kind of factors to influence on good ethical mind and attitude for students. The statistical analysis using the questionnaire gives some findings as follows; First, the more acquired for generic skills students are, the more ethical thinking the students oriented to. Second, some influences of basic accounting skills and usefulness of learning accounting on students' ethical thinking were not found. Third, curiosity of corporate performance and management that students have, make the positive effect related to their ethical thinking.

**Key words:** ethical thinking; career building; accounting professionals; accounting education; curriculum development

**JEL code:** M41, M49

## 1. Introduction

The prior empirical researches indicate the significance of accounting education in the higher institution. For example, Thomas (2010, p. 399) states that accounting education affects making decision of the first-year business students in the university. The positive impact of university education for normative consciousness or ethical thinking is also shown by several researches (Armstrong, 1993; Cohen & Pant, 1989; Keller et al., 2007). Berman (1990) stated that education for social consciousness succeed to foster students by teachers' encouragement to develop their basic social skills. Consciousness is one of the important factors to workplace performance among managers and workers and then to achieve the goals (Chaturvedi et al., 2013). Teachers sometimes choose the case studies of accounting to instruct students in the classroom. Their target is to foster their ethical thinking. The global cases of financial statements fraud not in the specific areas, are treated as the effective educational tools to understand the significance of ethical judgement for students, who would be the future human resources, such as

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entrepreneurs, managers, accountants and workers of some global firms. Nowadays, it is clearly expected that good accounting education can contribute to foster people's ethical mind and stop the occurrence of fraudulent activities in the society. In addition, it can support for preventing global financial market and business activities from financial statements frauds.

Saito & McLeod (2016) examined the effect of social consciousness on the American students' goal setting for learning accounting. We got a lot of findings shown by this research. Students who had the obvious goal for studying accounting were more positive in the classroom. Clearly, we found that there was the difference between female students and male students to acknowledge more social consciousness and to set their own goal for learning accounting. In addition, the nearer students approaching to the society after graduation like senior or graduate students tend to be strongly identify their goals for leaning accounting. This is an interesting implication how significant for first-year or second-year students to acknowledge social consciousness in the earlier year. This study suggested us the characteristics of students who already have it by nature, could set the positive goal to study accounting. In other findings, it showed that students' social consciousness such as respect, belonging, and leadership affect their goal setting to learn accounting. Social consciousness had a significant positive impact on students' goal setting for learning accounting. Students positively set the target to study accounting when they identify more their social consciousness for learning accounting. Specifically, the higher respect students have, they tend to set the goal for learning accounting. These results teach us the improvement of accounting education to set the environment for boosting their learning motivation, that could support their ethical thinking. At least, for the quality assurance of accounting standards, the development of accounting professionals with the ability and knowledge of adequate making decision cannot be ignored in any countries, facing on never stopping a series of fraud, even if the regulations strengthen in most countries, or some countries has already set the strict rules for disclosure and corporate governance like the Sarbanes Oxley Act in the United States. Unfortunately, we know that somebody would break the law in near future.

## **2. Research and Theory**

### **2.1 Change of Educational Environment**

In the current century, the circumstances surrounding university education have been changed. Globalization has given us a lot of evolution and innovation in the classroom of the world. The progress of information technology spectacularly realized the use of online class and mobile. Our campus life is becoming convenient and efficient day by day. Even while staying home, students can attend the class, putting their face on the screen. Some universities positively have been seeking the alliance with other universities inside or outside the country to enhance each education and to get new students. Such changes in the classroom and university are supported on the borderless of business activities. In the other hand, globalization causes the wider inequality of education, rights, and economy over the world. The economic gap among countries is getting wider. The more gap of income increases ratio of crimes. We can tell such current situations, caused by the inequality in Asian countries. For example, according to the survey of the United Nations Office on Drugs and Crime (UNODC), in Japan the crime ratio of youth in 2013 was bigger than that of adults. Table 1 showed the large ratio compared with other developed countries.

ASEAN countries have experienced the rapid growth of economy, however, that results the higher ratio of crime. Throughout the past research activities, we have witnessed the similar phenomenon of younger generation

in Indonesia, where has the biggest number of populations in the region. In that country accounting as a major is the most familiar in business and economic faculty, but after getting the bachelor’s degree some of people face on severe competition to get a job against people from outside countries. Over thousands of foreign firms already entered in Indonesian market. Other entering firms expect for the potential and scale, but most of Japanese companies mention that there is the shortage of higher educated local accountant (Saito, 2017). It might be considerable that huge number of universities in Indonesia makes the quality gap of accounting education. For the achievement of national working competence, the government has set a standardization in Indonesia, has established a National Working Competence standardization system<sup>1</sup>. Regional liberalization in the ASEAN region makes not only good and service but also even people to easily access to another country. The job opportunity and qualified education without inequality are becoming an urgently significant issue toward the raise of working competence. Cameron (2002) pointed out that education gap was the biggest factor of inequality among many researches in the different point of views for inequality. We interpret that accounting education in higher education also could be the contribution for leading youth to actively work in any place.

**Table 1 Comparison of Youth Crime Ratio**

	Youth* a	Adult** b	Magnification (a/b)
Japan	279.6	192.6	1.45
France	1384.0	1814.5	0.76
Germany	1432.1	2370.5	0.60
United States	1445.1	4175.2	0.35
Sweden	527.2	1263.5	0.42
Russia	228.7	818.7	0.28

\* Youth: crime arrest population of less than 18 years per 100,000

\*\*Adult: crime arrest population aged 18 and over per 100,000

Source: UNODC 2013, “Crime and Criminal Justice Statistics”.

### **2.2 Motivation of First-Year Education**

As Thomas (2010) stated, the education for the first-year business students in the university is very significant. Specifically, it affects their making decision. Surely, the fulfillment of accounting education is not exceptional. Most of first-year students are fresh in any situations, when they begin learning in the university. They would be exciting just in a new campus life and most of them meet accounting or in the first time. Pintrich & Schunk (2002) emphasize the important role of university to motivate students toward the active learning. Once they feel exciting for accounting, the motivation could influence on their willingness to learn other business subjects surrounding accounting. After that, they would conscious what an impact of accounting has in the business society and then how influential the decision-making in business depends on accounting knowledge. It is because the ability of accounting knowledge and technique is the inevitable basis to measure a series of business activities and capture the cash flow (Kawai & Saito, 2019).

The foundation of social consciousness in higher education is the preparation to the society for students. In the other research, we recognized the significance of first-year or second-year students in the United States to acknowledge social consciousness in the earlier grade (Saito & McLeod, 2016). Most of the first-year business students expect for university to widen their potential and to build good career. Some people want to become an

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<sup>1</sup> It is called in Indonesia, Standar Kompetensi Kerja Nasional Indonesia (SKKNI).

entrepreneur. Or others want to get to higher status and position, belonging to the firm. Teachers have the responsibility to such expectation in the future career. Using academic knowledge and information, they try to put them in good educational environment. The one method of solutions is improving a new educational tools and methods in the classroom. There are a lot of different styles for modules development, such as the new textbooks and handouts, or development of curriculum and faculty. Module can be used for the certification exam simulation which is needed to achieve the basic competencies (Hastuti & Novianty, 2016). For the preparation of good module, we first need to know what kind of attribute or characteristics the accounting students is. Is there any common types or categories for the accounting freshmen in learning? Or not? We understand that the research of their trend or preference could help us to effectively develop the educational materials in accounting education. The realization leads the formation of good ethical thinking of youth. Already the challenge is the common agenda in Asian countries as well as over the countries.

### **2.3 Gender Gap in Workplace**

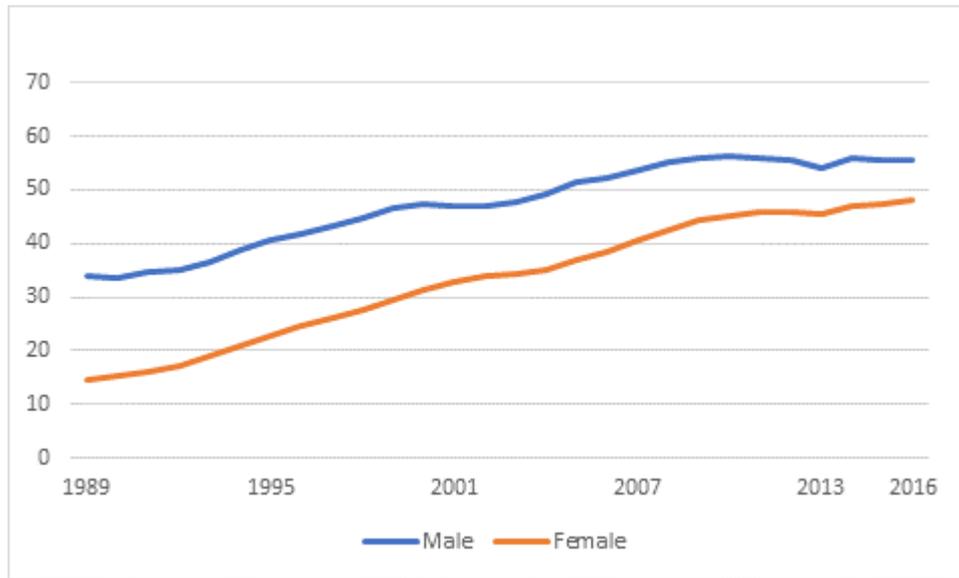
The 81.5 percent shows the enrollment ratio of higher education in Japan has reached to the largest record in 2018 since the government statistic began (MEXT, 2018). The enrollment ratio for university and junior college was 57.9 percent and among them, the female was recorded as 45.1 percent in 2018. Table 2 indicates the numbers is approaching very closely to male. The engagement of female career opportunity in workplace is becoming now one of the significant criteria for investors. Most of them believe that the diversity of employees and managers could affect the fulfillment of corporate governance. The belief tends to be stronger among the investors who are interested in Environment, Social, and Governance. They are often called as ESG investors. On the other hand, Japan, a developed economy, has still serious gender gap in workforce. Several international surveys show that clearly there remain the gap of job opportunity and career between male and female. As showed on Figures 1-2, the ratio of female at the managerial position in Japan is the extreme low level under on average. Korea and Malaysia, both of Asian countries, are low, compared with other countries. According to the 2018 joint report of International Labour Organization (ILO) and OECD, the United States was 39.7 percent, EU was 34.4 percent. In meanwhile, the overwhelming level in Japan was only 12.0 percent. It shows that the number was the worst rank in the G7 countries in 2018. This is so far to reach the G20 gender target in labour force participation by 25 percent by 2025 (ILO & OECD 2019, p. 1)<sup>2</sup>. The low level of female as manager is the characteristics of Asian countries.

Globalization accelerates global firms to face on severe competition to get good-educated human resource in the local area. In any countries, positive promotion of female is the urgently common agenda to serve the healthy and strong global economy. We recognize that the countries would develop more without gender gap in the workplace. It is that fact that there are men and women as human being in the globe. The working force of female should be also precious in any firms, areas, and countries. For the elimination of gender gap in recruitment, accounting education has the big potential to contribute. That potential is supported by our previous study to discover the difference of female students and male students to acknowledge more social consciousness and to set their own goal for learning accounting. The contribution of accounting education toward no gender gap could be explained by accounting, as a business language. The common and technical knowledge such as financial statements, transactions, journalizing, budget-making, calculation of manufacturing cost, so on, surely help them

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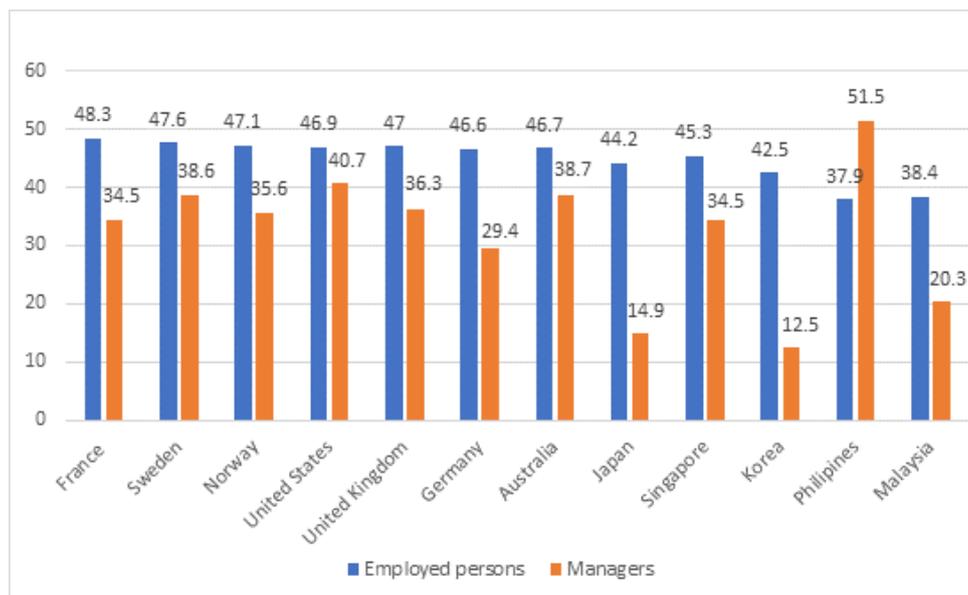
<sup>2</sup> This report titled, "Women at Work in G20 countries: Progress and policy action Summary, 22 April 2019" published in the 2nd Meeting of the G20 Employment Working Group under the Japanese G20 presidency Tokyo, 22-24 April 2019.

to work effectively in any companies or organizations. At least, our several survey in ASEAN countries clarified show the shortage of accounting professionals with sophisticated financial knowledge inside and outside the country. In parallel with higher qualified education for students, teachers need to impress the significance of the equality of evaluation for recruitment for the executive officers and managers of firms. Today, firms must understand that the large investment might be given by promotion of female working force.



**Figure 1 Enrollment Ratio to University in Japan**

Refer: Gender Equality Bureau Cabinet Office (GEBCO) 2019, “White Paper on Gender Equality 2019” (August 7, 2019).  
Source: Statics of Japan and MEXT



**Figure 2 Proportion of Female in Employed and in Managerial Positions**

Refer: Gender Equality Bureau, Cabinet Office (GEBCO) 2019, “White Paper on Gender Equality 2019 -Summary”  
Source: Ministry of Internal Affairs and Communications (MIAC) 2018, “Labour Force Survey (Basic Tabulation)” and International Labor Organization (ILO) 2018, “ILOSTAT”

**Table 2 G7 Ranking of Female Managers**

Countries of G7	Proportion in 2018 (percent)	rank
United States	39.7	1
British	35.9	2
Canada	35.3	3
France	32.1	4
Germany	29.2	5
Italy	26.9	6
Japan	12.0	7

Source: International Labor Organization (ILO) 2019. Women at work: Trends 2018 (March 7).

### 3. Theoretical Development

#### 3.1 The Entrance of Accounting Education

Once new students enter the university or junior college, they mostly meet some subjects in the first time. In each business faculty of universities, there are a lot of related subjects with business in the curriculum. Business is categorized in social science and is deeply associated with economy and society. And there are subjects in liberal arts like foreign language, ethics, science. For graduation, they must master in combination with most of social science and few of liberal arts. That is the benefit as of college education and for students the college life is the preparation to belong to the business society. Accounting is usually treated as the one of main business subjects. Generally, in Japan, first-year student belonging to business faculty start to learn the basis of accounting. At that time, it is familiar most of Japanese universities set the beginning step to learn bookkeeping as the introductory subject. This content of bookkeeping as a subject mainly includes the technique and knowledge of how to record such as understanding transaction, journalizing, posting, preparation of financial statements.

The subject of bookkeeping is regarded as the entrance to master accounting, but even teachers do not specify the difference between bookkeeping and accounting. Students think bookkeeping as the quite different subject with accounting. To identify the trend of the textbooks for first-year students as class materials in the university, we enforced the survey for students from four universities. Through the survey, we found that most of bookkeeping textbooks in the classroom have the characteristics that focus on the only book-keeping. They do not always touch the difference between accounting and bookkeeping. And then, they don't explain each of the roles. The other survey for Japanese firms shows that we would seek for the human resource who have the knowledge of financial statement analysis. In other words, those books aim to instruct how to *keep record* (Kawai & Saito, 2019, p. 106). The developed process of those textbooks had many discussions for the relationship and difference between accounting and bookkeeping.

In the meanwhile, bookkeeping is originally the only one of components in accounting (Paton, 1922). Accounting traditionally aims for reporting by financial statements. Due to the complexity of business transactions, the clear difference is sometimes confused for students and even teachers. So, students do not always reach to the boundary between bookkeeping and accounting, understanding the differences. Some do not find the significance of learning accounting and quit for learning even bookkeeping. Once freshmen lose motivation to learn bookkeeping, they do not want to take accounting subjects when they are second-year students. Such a traditional education style in the university that begins from bookkeeping has a lot of the outcome to foster accounting professionals and generic skills in the workforce. A lot of accountant were produced by higher

education and mostly contributed to work. So many companies enter the foreign market and become the global companies. We witness that the economy growth of Japan has been supported by the reliability of accounting. Use of technical words and a process of bookkeeping maintain the accuracy of recording transactions and the measurement of income.

However, the increase of enrollment of university caused the diversity of students. They do not always seem to satisfy our traditional education style and seek for the suited innovation for accounting education. In a sense, it is considerable that the next generation would be needed the leadership rather than workforce. In addition, they support people their making-decisions in managerial opportunities and strategies. Ignored for the change, what happened to us? It means that the development of the new design and modules in the classroom would be old-fashioned for transformed students in the next. Their losing motivation or interests for learning bookkeeping go far away to accounting. In accounting education, we can never stop developing for some innovations for younger generations to foster.

### 3.2 Findings of Prior Research

The prior researches show a lot of implications in accounting education for us. First, that is the significant role of education in the university to motivate students toward the active learning. Second, that is the large effect of students' motivation of the first-year students. Third, that is the effectiveness of education for social consciousness to develop students for ethical thinking and making decisions. Thus, in this study, we try to study for the impact of their ethical mind of business students when to learn accounting. To foster good ethical mind for students, it is quite important for us to know what kind of factors to influence on their ethical thinking. Because the factors teach us how to improve effective modules and instructions for students.

All of the universities have social responsibility to foster the youth. That mission never changes in the past and the future everywhere. Specifically, we got the implication for the usefulness of education for the first-year students. Through the theoretical background, our study supposed the factors that influence on their ethical mind. We think that this research would be the one of the good solutions to improve educational modules, instructions, any kind of innovations to motivate students to learn accounting. In this research, we developed the theoretical model, followed by the past studies of Berman (1990), Thomas (2010) and Saito & McLeod (2016). This study prepared the questionnaire for students with twenty-five items (Refer to Appendix). They are categorized mainly with six factors; (1) ethical thinking, (2) generic skill, (3) basic skill of accounting, (4) usefulness for learning toward the future career (5) curiosity of corporate performance and (6) curiosity of management and reputation. In that questionnaire, students mark by prepared five scales from strongly agree (five point) to strongly disagree (1 point) in their own understanding and evaluation. Toward the elimination of the fraudulent activities, we cannot forget that accounting education has the important mission expected to foster youth with seeking truth from facts and never letting their justice fall and send them to the global society.

### 3.3 Variables and Hypotheses

Among the above six factors, the dependent variable Y is *Ethic*, composed with question no. 4, 5, and 18. We set the five independent variables; *generic skills* to X1 with question no. 1-3, *accounting skills* to X2 with question no. 6-10, *usefulness of learning accounting* to X3 with question no. 21-25, *curiosity of corporate performance* to X4 with question no. 11-15, and *curiosity of management* to X5 with question no. 16-20. We use the sample data of 186 business students collected in Japan for an empirical analysis. As the Figure 3 shows, we submit the following six hypotheses based on the theoretical model. Those independent variables are measured on a five-level Likert scale (1: strongly disagree, 5: strongly agree). The dependent variable is *Ethics* (shown by *ETHI*)

that indicates the students' attribution for justice or ethical activity. Generally, in our understanding, the students who orient to learning for accounting have higher possibility that some of them would become the accounting technicians, CPA, Tax accountant, or other managerial position, because the reason why for them to make a decision for learning accounting subjects in business faculty is that they expect to closely get to the professional career after graduation. Or even if their purpose simply to get the credit, they know well that accounting is one of the significant subjects in the faculty. In a sense, the concrete goal setting for the professional career makes students to get motivated to learn accounting.

In addition, in accounting education, they might meet several opportunities to learn the fraud cases in global firms. At that time, students study the cases that the fraudsters have been the accounting professionals. And they would experience that those who take crime would not think their selves as the bad people. When the crime happened, most of them insisted a kind of excuses for their fraudulent activities. That is *rationalization*, as the Cressey's theory shown. Historically, the continuous fraudulent activities in global firms show that the fraudsters used well-educated accounting and finance for their unethical crimes. Thus, we supposed some different attributions or backgrounds of students to learn accounting and then got interested in the effect of ethical thinking, followed by the basic skills of accounting and other subjects in liberal arts, associated on the essence of human being. Thus, if people need to have strong ethical mind against the temptation for the fraud or anti-ethical thinking, the risk might approach to them before they know it.

Based on the prior researches, it would be effective that at the earlier year accounting education need to instruct students who can distinguish good and evil and make decisions with ethical mind, fostering how the ethical decision is. Some implications give us the more effect of the first-year students. The success of these education results in the protection of younger generation from such a risk for perpetrating the crime or the fraud as well as in the sustainability of global society. For this mission, we are getting motivated to know the association of accounting education with the student' ethical thinking. To know the attribution for justice or ethical activity of the students, might get to the close way to prepare the better educational environment. It is because the formation of ethical mind or thinking is one of significant roles in accounting education. Our efforts should be increase younger generation against the fraud and contribute to prevent our society from corporate fraud. We are focusing on first-year students' attribution shown by the dependent variable, *Ethics*. At least, if that is related to the basic skill of accounting, we would find the evidence on the correlation analysis. It would be effective for first-year students to combine with the ethical thinking education and the instruction of the education of basic accounting. If not so, anything else to influence on their ethical thinking? Students do not always learn accounting well to master a subject. Some students might set the target to get the credit. But for most of first-year students, it would be good opportunities for them to have what the significance of learning accounting is and then how the impact of accounting frauds is in the financial market. The more surprised they feel, the more motivated they have.

What are another factors or variables in educational environment to influence on their ethical thinking? We suppose that there are several factors to influence the variable, such as *GENE*, *ACCO*, *USEF*, *PERF*, and *MANA*. *GENE* is an integrated variable that shows students' self-analysis of their own specialty, generally called as principal generic skills, such as mathematics, writing and reading skills, memory ability. Those skills if anything, would be belonged to the nature of human being. And *GENE* might be influenced by the background of students. We supposed that we would not ignore the influence of family discipline or elementary-secondary education, if there were the relationship between higher skills of *GENE* and the better ethical thinking, *ACCO* is defined as the students' basic of accounting skill for journalizing, writing a book, preparation of financial statements,

clarification of accounting elements: assets, liabilities, equity, revenue, and expense. USEF shows how students feel the usefulness of learning accounting or accounting knowledge. Do they are useful for their life in the future? For their career after graduation? Or there is the usefulness of their living area and their belonging organization? When they feel something, they would orient to their goal. PERF is a variable to show students' curiosity of firms' performance. What of firms makes students curiosity? The scale of income and properties? The funding power and the breakdown of cost? All of them show intangible feeling of firms when students imagine the word of firm. Finally, MANA means the interesting of students for management such as management, reputation, products, and business. We expect that there would be something associated with those variables. As the Figure 3 shows, we submit the following five hypotheses based on the theoretical model. In this examination, we prepare the data set, composed of 186 business students collected in Japan for an empirical analysis.

H1: Generic skills of students have the positive effect on their ethical thinking or mind.

H2: Basic accounting skills of students have the positive effect on their ethical thinking or mind.

H3: Usefulness of learning accounting for students has the positive effect of their ethical thinking or mind.

H4: Students' curiosity for corporate performance has the positive effect of their ethical thinking or mind.

H5: Students' curiosity for management has the positive effect of their ethical thinking or mind.

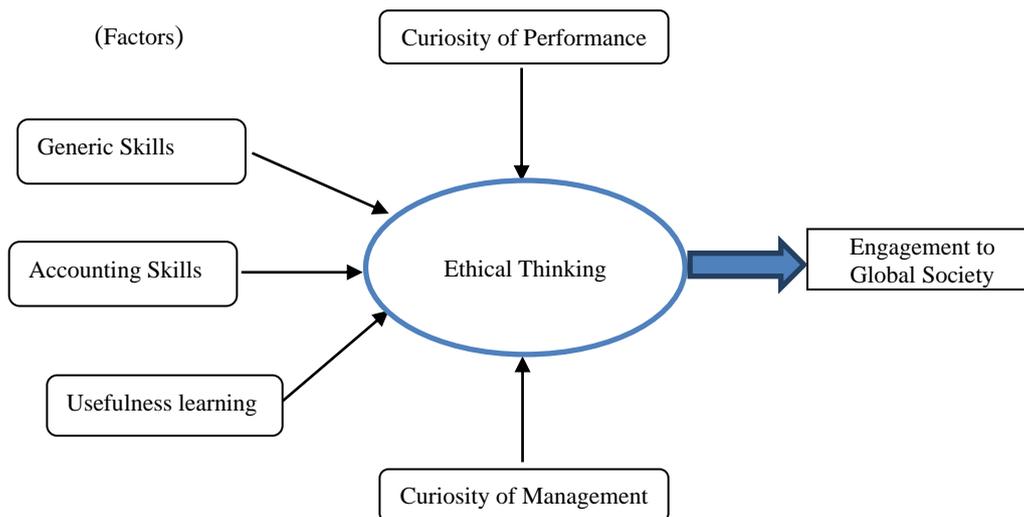


Figure 3 The Theoretical Model

## 4. Analysis

### 4.1 Research Design

Based on the theoretical hypotheses, we got two steps to examine the above hypothesis. First, to measure the attribution of ethical thinking for students, we developed multiple regression models with five independent variables (GENE, ACCO, USEF, PERF, and MANA). To eliminate the problem of collinearity among variables, we checked the variance inflation factors (VIF), which is a simple approach to identify collinearity among explanatory variables. Second, we used principal component analysis (PCA) regression to avoid the VIF, to check the factor of attribution of students' ethical thinking to raise the motivation that students want to learn accounting.

#### Model:

The Impact on Ethical Thinking

$$ETHI = \beta^0 + \beta^1 GENE + \beta^2 ACCO + \beta^3 USEF + \beta^4 PERF + \beta^5 MANA + \varepsilon$$

ETHI = students' attribution for ethical thinking toward the justice or the truth

GENE = students' generic skills (sum of mathematics, writing and reading skills, memory ability)

ACCO = students' basic of accounting skill (sum of journalizing, writing a book, preparation of financial statements, clarification of accounting elements)

USEF = learning usefulness of students (sum of goals setting to future life and career, self-satisfaction, belonging to the area or organization)

PERF = students' curiosity of corporate performance (sum of income and properties, funding power and financial statements)

MANA = students' curiosity of management (sum of management, products, and reputation)

#### 4.2 Results

In this section, we describe the findings from the multiple regression models. Cronbach's alpha coefficient is 0.903 calculated in a reliability of the data, which means that the instrument is reliable, as Table 3 shown. We got 185 effective answers from undergraduate students of business faculty in Japan. The means (standard deviations) of the variables are in Table 4. As shown by the Table 5 below, validity is computed using both of Pearson and Spearman correlations. It shows the correlations among variables. Each of the Tables gives us the correlation coefficients for each dimension. In the dimensions, i.e., ETHI, GENE, ACCO, USEF, PERF, and MANA, the correlations indicate that the dimensions are valid with a significance at the 0.01 level (2-tailed) or 0.05 level (2-tailed) and a high score ( $p > 0.05$ ).

**Table 3 Reliability Analysis**

Case Processing Summary			
		N	%
Case	Valid	178	96.2
	Excluded <sup>a</sup>	7	3.8
	Total	185	100.0
a. Listwise deletion based on all variables in the procedure			
Cronbach's Alpha		N of Items	
.903		25	

**Table 4 Descriptive Statistics**

	N	Mean	Std. Deviation
ETHI	185	9.75	2.145
GENE	185	8.90	2.394
ACCO	185	12.90	4.593
USEF	185	17.82	5.011
PERF	185	16.88	5.074
MANA	185	14.49	3.714

Table 5 Correlation Analysis

(1) Pearson

	ETHI	GENE	ACCO	USEF	PERF	MANA
ETHI	1.000	.409**	.231**	.276**	.575**	.586**
GENE	.409**	1.000	.414**	.170*	.307**	.317**
ACCO	.231**	.414**	1.000	.276**	.354**	.150*
USEF	.276**	.170*	.276**	1.000	.500**	.455**
PERF	.575**	.307**	.354**	.500**	1.000	.740**
MANA	.586**	.317**	.150*	.455**	.740**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

(2) Spearman

	ETHI	GENE	ACCO	USEF	PERF	MANA
ETHI	1.000	.384**	.254**	.197**	.515**	.506**
GENE	.384**	1.000	.382**	.160*	.294**	.291**
ACCO	.254**	.382**	1.000	.307**	.357**	.168*
USEF	.197**	.160*	.307**	1.000	.459**	.350**
PERF	.515**	.294**	.357**	.459**	1.000	.682**
MANA	.506**	.291**	.168*	.350**	.682**	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

### 4.3 Discussions

Based on the above hypotheses, we used the SPSS version 24 to examine the correlation and multi regression analysis and then got the following empirical results. Shown by the Table 6. this regression model shows a significantly good fit ( $F = 27.546, p < 0.0001$ ) by the ANOVA test and the adjusted R square is 0.419. We do not need to discuss the potential for a VIF problem in the model because all of collinearity statistics of VIF are between 1.318 and 2.663 ( $VIF < 5$ ). In the first hypothesis, we propose that generic skills on self-consciousness as for mathematics, writing and reading skills, memorization is a positive factor into the foundation of ethical thinking of students to learn accounting.

Hypothesis 1 is supported and significant (t value of 3.504 at  $p < 0.001$ ). It means that the more acquired for generic skills students have, the more ethical thinking the students oriented to. The second hypothesis proposes an influence of a conscious of accounting skills as for journalizing, writing a book, preparation of financial statements, clarification of accounting element, was not also supported with a t value of .009 ( $p = 0.993 > 0.05$ ). This result was acceptable for us, because we thought that accounting knowledge is the added competency and is not significantly influenced on the orientation of ethical thinking and the awareness of ethical activities. However, the assumption was supported. At least, we learned from this evidence of the possibility that we might distinct the education for students' basic skills of accounting and that of their ethical consciousness in accounting education. The third hypotheses did not show the positive effect that the students who feel sensitively something for the usefulness of accounting knowledge in the learning process of accounting toward their future after graduation, oriented to the ethical thinking. Students do not always orient to ethical thinking, founded on the sense of usefulness of accounting knowledge. You can see the t value and significance of *USEF* (t value of -0.841 at  $p >$

0.05). In a meanwhile, the hypotheses 4 and 5 are supported as before the examination. *PERM* has *t* value of 3.219 ( $p < 0.01$ ) and *MANA* has *t* value of 3.633 ( $p < 0.0001$ ).

**Table 6 Regression Result in Basic Model**

**(1) Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.659 <sup>a</sup>	.435	.419	1.635	1.722
a. Predictions: (Constant), MANA, ACCO, GENE, USEF, PERF.					

**(2) ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regressions	368.125	5	73.625	27.546	.000 <sup>b</sup>
	Residual	478.437	179	2.673		
	Total	846.562	184			
a. Dependent Variable: ETHI						
b. Predictors: (Constant) MANA, ACCO, GENE, USEF, PERF.						

**(3) Coefficients<sup>a</sup>**

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics		
	B	Std. Error	Beta			tolerance	VIF	
1	(Constant)	3.577	.635		5.632	.000		
	GENE	.203	.058	.226	3.504	.001	.759	1.318
	ACCO	.000	.031	.001	.009	.993	.707	1.414
	USEF	-.024	.028	-.056	-.841	.401	.714	1.400
	PERF	.125	.039	.295	3.219	.002	.375	2.663
	MANA	.185	.051	.321	3.633	.000	.404	2.475

a. Dependent Variable: ETHI

We can regard as those evidences that students on learning accounting have stronger curiosity of corporate performance or management tend to be ethical. Thus, they can teach us the significant factors into the foundation of their ethical thinking. Once students get interested in business activities and management, there are the possibilities to influence students' attitude in ethical mind. This shows a good direction of accounting education including the foundation of their ethical mind. The stimulation of students' curiosity of cooperate performance and management, has the possibility to lead their good consciousness. No matter how they face to fraud or unethical behaviors, it is expected that they would overcome. We also understand that the more learning opportunities of global firms make students more stimulated for learning accounting. After well-educated, social consciousness of students would be built in their mind as the preparation of members of global society.

By this examination, we strongly remain the significant role of accounting education and again recognize the significance of liberal arts in that education. If we prepare so many kinds of specialized subjects in accounting curricula and teach them for students, they do not always orient to the ethical thinking against the accounting frauds or crimes. Some teachers tend to stick to the instruction of technique or skill of recording. Because it would be easy for them to get the higher performance of students to measure their understanding. But too oriented technique and skill for accounting might be risky to put some students far away from their interesting of accounting. Or the others might eliminate their curiosity to learn accounting. The biased curricula of specified

accounting subjects are not so effective to foster capable accounting professionals in the future and good human resource in global firms. The integration of liberal arts and specialized subjects in accounting education could be the true contribution to foster youth to the global society. This could be realized in higher education as the entrance to the society. In addition, this examination indicates the interesting trend that students who are interested in business activities and management have stronger for ethical thinking than others. This is the effectiveness of case studies for current business topics in the classroom. Their orientation of seeking for justice and truth is partly based on the knowledge and experience of various cases of firms or managers. So, accounting education should be living, not separated with current business activities and management. The change and innovation of business styles to the society treated in accounting education would make students more motivated to learn accounting. That is why here is the true role of accounting as the business language.

## 5. Conclusion

In this paper, we examined the attribution of Japanese students for ethical thinking, using statistical analysis. It is because we want to know what kind of effective factors lead students to foster their ethical mind to distinguish good and evil and to make decisions. We expected that this examination would give us some implications for the innovative improvement of accounting education. The adequate orientation of ethical thinking prevents youth from some risk for perpetrating the crime or the fraud as well as develop the sustainability of global society. And we suggested the existence of factors to influence on their ethical thinking. To measure it, we tried to distinguish the relationship with the attribution of students for justice or ethical activity and other factors. At that time, we put the students' attribution for ethical thinking, as the dependent variable, *Ethics*. The variable means the extend of ethical thinking. The higher it is, the student have the stronger ethical mind for justice or truth.

In the multi regression and correlation analysis, we set the five independent variables, i.e., *GENE*, *ACCO*, *USEF*, *PERF*, and *MANA*. This multi-regression model is statistically supported through the ANOVA analysis ( $F = 27.546$ ,  $p < 0.0001$ ). There are some interesting findings as follows. Firstly, there were significant correlations between those variables ( $p < 0.01$  or  $p < 0.05$ , 2-tailed). Secondly, we got the positive impacts of three variables: *GENE*, *PERF*, and *MANE* at the significant level ( $p < 0.001$  or  $p < 0.01$ , 2-tailed). However, thirdly, we could not find some significant effects of two factors: *ACCO* and *USEF* on the dependent variable, *Ethics*. Those findings taught us the basic accounting skills of students might not always give them the ethical judgement, however, higher generic skills of students would have the stronger consciousness for justice and truth than others. Students who have stronger ethical mind, tend to be interested in business activities, corporate performance, and management. They indicate one suggestion that there would be any different attributions of people who got motivated in accounting or not. We can just tell that the foundation of ethical mind and how to think ethically for youth is influenced on or related to the curiosity of such above factors of business. This is the evidence to show what the effectiveness of case study of firms or experience to touch the activities for students is.

Getting some implications in this study, we acknowledge the innovated possibility of curriculum development in accounting education. It includes the adequate instruction of students' consciousness for ethical thinking and mind. Several prior research that showed the difference of their identified consciousness and the higher goal setting made students more motivated. This examination shows the relationship with higher motivation of business and management and stronger ethical thinking in the students. Then, we found the

influence of generic skills on their ethical thinking, although we did not find the effect of basic accounting knowledge on their ethical thinking. If people have basic skills of accounting, they are not always ethical. Rather than so biased to accounting subjects, the integration of liberal arts and specified subjects of related to accounting could make youth more ethical thinking. In the scope of accounting curricula, there is the effectiveness of case studies for students to understand business activities and management organized in accounting education.

A various of corporate activities and fraudulent cases and knowledge of liberal arts gives students good opportunities to understand inside and outside countries, people, and culture. It is followed by Berman (1990) stated that social consciousness is formed by the development of an understanding of people interdependence, such as global education, multicultural education, environmental education. In our study, there are limitations of the number and component of sample data. We got the data from Japanese students, who are composed with inequivalent number of male and female students. And the data set was collected in the only university. To boost the explanation of this research, we need to widen in other universities where are in Japan and other countries and analyze the comparative study. And we want to try to get the equivalent data of students in each academic year to know the difference between years of students. We believe that our contribute to the curriculum development of global accounting education including the formation of ethical thinking will increase the quality of accounting professionals, boost the sustainability of global market, and prepare job equality.

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### References

- Armstrong M. (1993). "Ethics and professionalism in accounting education: A sample course", *Journal of Accounting Education*, Vol. 11, pp. 77-92.
- Berman S. (November, 1990). "Educators for social responsibility", *Educational Leadership*, Vol. 48, No. 3, pp. 75-80, accessed on September 20, 2015, available online at: [http://www.ascd.org/ASCD/pdf/journals/ed\\_lead/el\\_199011\\_berman.pdf](http://www.ascd.org/ASCD/pdf/journals/ed_lead/el_199011_berman.pdf).
- Cameron R. (2002). "Growth with or without equality?: The distributional impact of Indonesian development", *Asian-Pacific Economic Literature*, Vol. 16, No. 2, pp. 1-7.
- Chaturvedi D. K. and Arya M. K. (2013). "A study on correlation between consciousness level and performance of the worker", *Industrial Engineering Journal*, Vol. 6, No. 8, pp. 40-43, accessed on September 18, 2015, available online at: [http://works.bepress.com/manish\\_arya/1](http://works.bepress.com/manish_arya/1).
- Cohen J. and Pant L. (1989). "Accounting educators' perceptions of ethics in the curriculum", *Issues in Accounting Education*, Vol. 4, pp. 70-80.
- Cressey R. Donald (1973). *Other People's Money: A Study in the Social Psychology of Embezzlement*, Montclair, N.J. Patterson Smith.
- Gender Equality Bureau, Cabinet Office, Japan (GEBCO) (2019). "White paper on gender equality 2019 — Summary", announced June 2019, accessed on August 17, 2019, available online at: [http://www.gender.go.jp/english\\_contents/about\\_danjo/whitepaper/pdf/ewp2019.pdf](http://www.gender.go.jp/english_contents/about_danjo/whitepaper/pdf/ewp2019.pdf).
- Hastuti and Novianty I. (2016). "The development model of accounting module for accounting technician based on Indonesia National Competence Working Standard (SKKNI): Through the implementation of design theory", *International Journal of Economics, Commerce and Management*, Vol. 4, No. 11, pp. 128-141.
- International Labour Organization (ILO) & Organization of Economic and Development (OECD) (2019). "Women at work in G20 countries: Progress and policy action summary", published on 22 April 2019, accessed on October 2, 2019, available online at: [https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/leaders-summits/argentina2018/WCMS\\_713375/lang--en/index.htm](https://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/leaders-summits/argentina2018/WCMS_713375/lang--en/index.htm).

- Kawai Y. and Saito M. (2019). "Trend analysis of accounting and bookkeeping textbooks in Japan", *The Review of Economics and Business Management (Sanken Ronshu, Kwansai Gakuin University)*, Vol. 46, pp. 99-108.
- Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT) (2018). "Summary of report on school basic survey", announced on December 25, 2018, accessed on August 11, 2019, available online at: [http://www.mext.go.jp/component/b\\_menu/other/\\_icsFiles/afieldfile/2018/12/25/1407449\\_1.pdf](http://www.mext.go.jp/component/b_menu/other/_icsFiles/afieldfile/2018/12/25/1407449_1.pdf).
- Paton W. A. (1922). *Accounting Theory: With Special Reference to the Corporate Enterprise*, New York: The Ronald Press Company.
- Pintrich P. R. and Schunk D. H. (2002). *Motivation in Education: Theory, Research, and Application* (3rd ed.), Prentice Hall.
- Saito M. and McLeod M. A. (2016). "Social consciousness, goals setting, and accounting professional education", *Global Conference on Business and Finance*, Vol. 11, No. 1, pp. 238-245.
- Saito M. (2017). "Educational materials development of bookkeeping toward the sustainability in Indonesia", Activity Reports published on May 6, 2017, supported by Grant & Fellowship Program, The Japan Foundation Asia Center, accessed on May 11, 2019, available online at: <https://grant-fellowship-db.jfac.jp/en/fellow/fs1614>.
- Thomas S. (2012). "Ethics and accounting education", *Issues in Accounting Education*, Vol. 27, No. 2, pp. 399-418.
- UNODC (2013). "Crime and criminal justice statistics", access on July 28, 2019, available online at: <https://www.unodc.org/unodc/en/data-and-analysis/statistics.html>.

## **Appendix**

### Questionnaire of Students' Consciousness Survey

#### Questions:

No.

1. You are good at calculation.
2. You are good at writing and reading sentences.
3. You are good at memorizing.
4. You are good at never letting your justice fall.
5. You are good at seeking truth from facts.
6. You are good at journalizing.
7. You are good at finding errors in the book.
8. You are good at preparing the income statement.
9. You are good at preparing the balance sheet.
10. You are good at classifying the elements.
11. You are interested in the income of firms.
12. You are interested in the properties of firms.
13. You are interested in the cash of firms.
14. You are interested in the cost of firms.
15. You are interested in the performance of firms.
16. You are interested in the management of firms.
17. You are interested in the reputation of firms.
18. You are interested in the fraud of firms.
19. You are interested in the product of firms.
20. You are interested in the business activities of firms.
21. Getting accounting knowledge is helpful for yourself.
22. Getting accounting knowledge is helpful for the firms where you would belong.
23. Getting accounting knowledge is helpful for the society where you belong.
24. Getting accounting knowledge is helpful for your life.
25. Getting accounting knowledge is helpful for your future career.

Responses on a five-level Likert scale (1: strongly disagree, 2: disagree, 3: no opinion, 4: agree, and 5: strongly agree).