The Relation between Professional Ethics
and Individual - Organizational Factors:
A Study of Students' Perceptions in Ho Chi Minh City

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Abstract: By employing and adopting measures from the studies of Han, Park et al. (2013) and Valentine and Fleischman (2008), the present study aims to examine students' awareness of professional ethics. Students with different majors are the studied subjects. Reviewing the literature and conducting an empirical survey shows some noteworthy points. Firstly, not much can be found on professional ethics in Vietnam, in terms of academic studies and instructions (i.e. codes of conduct) for occupations. Secondly, from students' perspectives, individual ethical standards do not play any role in their awareness of professional ethics. As a consequence, a systematic educational program of professional ethics requires priority significantly.

Keywords: Professional ethics, individual organizational factors, students, Vietnam.

1. Introduction

Professionals play important roles in organizations and in society, as they are the ones who have specialized knowledge and skills which are necessary for organizational and societal development. Professionals have power to affect others with this knowledge and these skills [21]. Moreover, with such specialized knowledge and skills, professionals can practice and have a huge control over this knowledge and these skills and benefit society as well [7]. In other words, professional ethics can be referred to as the identifiable, complementary role rights and duties of clients,

customers and professional peers [8] and all professions have to keep ethical considerations within their practicing [6]. Therefore, whether society and its members can get benefits from professionals, depends on the way professionals practice their professional actions [7, 15]. In other words, professional ethics can be seen as individual ethical responsibility from an occupational perspective [4].

According to the study of Trevino (1986), personal values (such as personal ethical standards) are considerable factors which have an important influence on the way individuals make ethical decisions. Moreover, professionals perform their professional activities only in the occupational contexts which are promoted by organizations, on the one hand. A socially responsible organization, which has more

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opportunities to succeed than others do, will create an appropriate environment for ethical decisions of individuals [13]. Professional activities likely impact company's ethical development and CSR practice [25], on the other hand. Moreover, they are also a pivotal element of a company's value assets [14]. Thereby, organizational context can be considered as an important factor affecting professional ethics.

In Vietnam, professional ethics has been mentioned more frequently due to many professional scandals. However, the literature on professional ethics is still highly meager, not only in Vietnam but also in other countries, to provide practitioners and professionals with a comprehensive understanding to practice. Especially, students in Vietnamese universities have not been taught about professional ethics. According to the curriculum of two universities, the International University (IU_VNUHCM) and the Ho Chi Minh City University of Technology (HCMUT_VNUHCM), there is no course on professional ethics. This may lead to the conclusion that students do not have enough knowledge and information about ethics in their occupations.

In this regard, this study aims to examine students' awareness of professional ethics. To address this purpose, the following questions are proposed: (1) How do individual and organizational factors impact professional ethics?; (2) What are the differences in students' perspectives of professional ethics with regard to demographic indicators?

2. Literature review

2.1. Professional ethics and its role in business performance

It is clear that the success of business and business performance are dependent very much on workforce quality which is mainly expressed by professional ethics. As stated in the study of Abdul-Rahman, Hanid et al. (2013),

professional ethics is about moral responsibility, not of a single individual but of all professionals practicing in any particular occupation. It is also considered a tool to instill into the workforce a greater appreciation for ethics and social responsibility [25].

Therefore, all quality-related issues are dependent on the ethical behaviors of professions [1]. As an example, evidence from the construction industry in Malaysia is useful to illustrate that the sector is polluted by unethical behaviors. These researchers mentioned dilemmas of the sector, which have been happening due to unethical behaviors and the need for ethical conduct to be practiced. Such unethical behavior includes corruption, negligence, bribery, conflict of interest, bid-cutting, underbidding, collusive tendering, cover pricing, front-loading, bid shopping, withdrawal of tender, and payment games [1].

In another study conducted in Iran, Beikzad, Abdolapoor et al. (2012) found that professional ethics have a significant impact on intellectual capital and its dimensions, including human, structural and relationship capitals. These capitals are key resources for commercial development of companies and help to create competitive advantages. Similarly, in their research finding of a study conducted in the United States, Valentine and Fleischman (2008) found that professional ethics is associated with social performance. This finding echoes with previous studies in terms of professional standards enhancing a company's ethical development and corporate social responsibility activities.

In summarizing, professional ethics plays a pivotal role in business performance, organizational ethics and corporate social performance. An important issue is to identify factors which affect (positively and negatively) professional ethics. The remainder of this section is to seek the relations between these factors.

2.2. Individual factors

In the light of the literature on professional ethics, ethical decisions are influenced by individual factors [23, 24]. These individual factors are clarified by many studies as personal values, which include knowledge, attitudes, and intention [10, 14]. In their study, Beikzad, Abdolapoor et al. (2012) reviewed two components of knowledge, including knowledge of society culture and sufficient knowledge of the occupation. Personal values are classified by the beliefs that individual have consciously or unconsciously about the world [10]. These beliefs are different between individuals. Moreover, Hunt and Vitell (1986) include personal values as personal experiences [10]. Similarly, Karassavidou and Glaveli (2006) also confirmed that personal values have an important impact on attitudes and behaviors which directly affect the way individuals make decisions.

In the same light as these studies, Berings and Adriaenssens (2012) also find a certain connection between personal values and work ethics [5]. In particular, they also analyse the effects of personalities on work ethics. Meanwhile, in a study conducted by Knapp, Handelsman et al. (2013), professional ethics is studied in the situation that personal virtuosity and professional relationship have conflict with each other [17].

Therefore, it can be concluded that personal values are closely connected with professional ethics [25]. Therefore, this study, firstly, is to answer the question "What is the relationship between individual factors and PE?"

2.3. Organization factors

In the organizational context, personal values are interacted with organizational factors. Furthermore, Longenecker, Moore et al. (2006) also pointed out that the ethical framework formed by the organization constrains individual ethical behaviors in

decision making [18]. This means individuals' responses to ethical issues in their profession are framed and determined by the interactions between the individual and organizational factors [13]. This point is also confirmed by the study of Douglas, Davidson et al. (2001), even though these factors affect individuals differently [10]. In a study reviewing professional ethics literature, Treviño, Weaver et al. (2006) categorized factors in the organizational context, including: language, rewards/punishment, ethical infrastructure, ethical climate/culture, and leadership [24]. Adapting these organizational factors, many researchers conducted their investigation of the impacts of rewards/punishment, peers, and leader on professional ethics.

Punishment and rewards are factors having strong impacts on the ethical behavior of an individual [2]. An individual will be strongly impacted in his/her professional behaviors, if he/she observes a co-worker punished or rewarded. From such an observation, rules and regulations become accustomed to by the observer [2, 13]. In particular, none of us wants to suffer from any unethical behavior. Therefore, unethical behaviors in a profession will be limited if the management board applies appropriate punishment. Similarly, ethical behaviors are encouraged and reinforced if they are treated by rewarding.

From the observation of whether (un) ethical behaviors of peers are punished or rewarded, individuals are also affected by these behaviors. The more the interaction with peers, the stronger the impact from them is on an individual [24]. This point is also confirmed by many research findings [9, 11, 12, 13, 20]. These studies point out, the way in which an individual responds to a situation (ethically or not) depends much on the moral approval from a peer. Therefore, individual's professional ethics are likely to be impacted by the ethical behaviors of his or her peers.

One crucial factor in the context of organizations affecting professional ethics is the manager. This factor is the influential factor

impacting others (e.g. rewards/punishments, peer's ethical behaviors). In fact, from a management perspective, managers are figureheads of their organizations [3], and they create the ethical environment through their own ethical/unethical behaviors/activities. Managers show their disagreement with unethical behaviors by setting types of punishments; or they can encourage ethical ones by rewarding employees having ethical attitudes. Therefore, employees observe, pay attention, and imitate managers' ethical behaviors as a model of norms and expectations for appropriate conduct [19].

2.4. Professional ethics and studies on professional ethics in Vietnam

Even though research on professional ethics issues is not new, explorations of ethical perceptions, understanding, and awareness of Vietnamese employees have been too meager to depict a comprehensive overview on this issue. According to the review of the literature, the researchers cannot find any studies on professional ethics conducted in the Vietnamese context, except a conceptual paper of Trang, Khoa et al. in 2014 [22].

This paper aims to conduct an overview of professional ethics literature. The result shows that there are six dimensions, including laws and rules; personal ethics; knowledge of society culture; professional competence; professional standards/norms; and corporate ethics. Among these six factors, professional competence and corporate ethics can be quantitatively measured. These researchers then investigated students' perceptions of these two factors.

Except Trang, Khoa et al.'s study, which can be considered as an academic view, professional ethics in practice in Vietnam is fragmentary and unguided. Searching the internet to find instructions on professional ethics, the researchers found some points that need to be considered. Firstly, there are some professions/sectors that do have instructions or issued codes of conduct, like lawyers,

accountants-auditors, medical professions and stock agencies. The codes of conduct for these occupations are issued by professional associations (like the Vietnam Lawyer association and the Vietnam Association of Certified Public Accountants); or related ministries (like the Ministry of Health). The other professions do not have clear instructions and the term 'professional ethics' is understood differently in different sectors. Secondly, there are some large corporations (like FPT, Holcim, Vinamilk, Vietcapital…) who issue codes of conduct for their employees. This means the professions in these sectors do not share similar norms/standards in performing occupations and firms/organizations do not pursue and force their workforce to apply these codes. These points might be the reasons leading to PE to being a "hot" issue which is frequently mentioned in Vietnam due to many scandals in different sectors.

From the background of PE in literature and in practice in Vietnam, this study employs the method conducted in the study of Han, Park et al. (2013) to examine the influences of individual and organizational factors on PE. Obviously, punishment, rewards, peers' ethical behaviors and leaders' unethical behaviors are considered as organizational factors. In an organization, if an unethical behavior of an employee is not punished, it may be learned and adopted by the others and become a popular one [23]. Similarly, if ethical behaviors are rewarded, it may foster and spread out through the organization. From that, employees are accustomed to organizational regulations and norms. Therefore, we propose the first two hypotheses to explore the relations between organizational factors and PE:

H1: Punishment and an individual's PE have a positive relation.

H2: Rewards and individual's PE have a positive relation.

In a working context, according to Loe et al. (2000), an individual is easily impacted by peers' behaviors; even if they are ethical or unethical [13]. Importantly, previous studies

have pointed out that peers' behaviors have a crucial impact on professionals' ethical behaviors (Brugman and Weisfelt, 2000; Deshpande and Joseph, 2009; Deshpande et al., 2006) [13]. These arguments are the base for us to propose the third hypothesis:

H3: Perception of peer's ethical behaviors and an individual's PE have a positive relation.

Punishment or rewards for unethical/ethical behaviors of employees is determined and decided by leaders. Moreover, Petrick and Quinn (2000) found that leaders are always an example for employees because their integrity and morality affect employees' action and moral judgments [13].

H4: Perception of leaders' integrity and individual's PE have a positive relation.

3. Methodology

The main purpose of the present study is to empirically examine the level of students' awareness of professional ethics. Therefore, a quantitative approach to gather a large number of participants is chosen. The participants are involved in a survey using a questionnaire to collect data. The study focuses on students as its main sampling because students are the potential workforce provided by colleges and universities to practical businesses. The awareness of students is crucial to reflect their attitudes and behaviors in later occupations.

The questionnaire is adapted from Han, Park et al. (2013) and Valentine and Fleischman (2008). It includes 30 items to measure. For individual and organizational factors, we adopt the measurements and scales from Han, Park et al. (2013). The scale of individual standards of ethical values has 9 items. There are 4 factors with 16 items in organizational factors, namely: punishment; reward; peers' ethical behaviors; and the ethical integrity of the boss. Five items to measure professional ethics are adopted from Valentine and Fleischman (2008). According to Valentine and Fleischman, professional ethics standards are based on the content of similar "company ethics"; and higher scores indicated a belief that a profession was ethical.

All the items are adjusted to suit the context of the study. Finally, the questionnaire with 6 factors is presented as follows:

Factor 1: Individual standards of ethical values

1. IEV1_I shouldn't harm others psychologically

2. IEV2_For my own interest, I should not harm others

3. IEV3_One shouldn't harm others no matter how small it may be

4. IEV4_Any behavior harming others' dignity and peace shouldn't be allowed

5. IEV5_I shouldn't harm others physically

6. IEV6_I shouldn't pursue my own interest at the expense of others' welfare

7. IEV7_Everybody has different moral standards

8. IEV8_Something that is moral for one may be immoral for another

9. IEV9_Each situation or society requires different ethical standards

Factor 2: Reward for ethical behaviors

1. REB10_My ethical behavior is reflected in my annual performance evaluation

2. REB11_Ethical behavior is recognized and rewarded by our company

3. REB12_Our company gives incentives for ethical behavior

Factor 3: Punishment for unethical behaviors

1. PUB13_If I behave unethically, my annual incentives will be reduced

2. PUB14_If I behave unethically, my annual performance assessment will be negatively affected

Factor 4: Peers' ethical behaviors

1. PEB15_I think my colleagues generally behave ethically

2. PEB16_My colleagues work as ethically as possible

3. PEB17_My colleagues try to abide by the ethical principles of the profession

Factors 5: The ethical integrity of the boss

1. EIC18R_My boss tends to intentionally exaggerate my mistakes and convey unfavorable information on me to my direct supervisor

2. EIC19R_My boss may dismiss an employee just because he/she doesn't like the employee

3. EIC20R_My boss intentionally undermines employees' rapport with one another

4. EIC21R_My boss occasionally attempts to intentionally distort what I said

5. EIC22R_My boss may take advantage of my idea

6. EIC23R_My boss hesitates to have employees trained and educated

7. EIC24R_My boss tends to attribute his/her mistakes to me

8. EIC25R_My boss intentionally turns down my requests

9. EIC26R_My boss tends to dwell on my mistakes instead of being forgiving

Factor 6: Professional ethics

1. PE27_I believe that my profession is guided by high ethical standards

2. PE28_My profession reprimands individuals and companies that behave unethically

3. PE29_Individual and organizational ethical standards are supported in my profession

4. PE30_My profession encourages continued ethical development and training

5. PE31_I believe that people in my profession conduct business in an ethical manner

Data were collected in two steps. The purpose of the first step was to refine the contents and measurement scales before conducting a final survey based on convenient sampling. Potential respondents were students in both majors, engineering (e.g. civil engineering, chemical engineering, and environmental engineering) and business administration in two universities (IH_VNUHCM and HCMUT_VUNHCM), who were over 20. The questionnaire includes 31 items.

According to Hair et al. (2006) with the rule of 5 for each question, the required sample size is about 155. Therefore, two hundred and fifty questionnaires were sent to reach the sample, and 230 questionnaires were returned and only 220 questionnaires were valid.

The data is cleaned and processed by using exploratory factor analysis (EFA technique) in SPSS software. Before applying the EFA method, the reliability of the scales has been tested by using Cronbach's alpha criteria; it should be at least 0.6 to be accepted (Nunnanly and Burnstein, 1994). Then, EFA technique is applied with data exploration and variable reduction steps. The EFA process is accepted with the threshold of KMO measure higher than 0.5 and significant at 5%. Eigen values must be larger than 1, Factor loadings of each variable should be at least 0.5, there is not any cross-loading above 0.35 into more than one factor (Hair et al., 2006). Besides, the difference between students' awareness of professional ethics distinguished by demographic variables are considered by ANOVA analysis.

4. Data analysis

The respondents' information and their answer choices were input into the SPSS database that is further used for the related analysis. The characteristics of the sample include gender and majors. In the valid sample, the percentages of male and female students are 59 and 41, respectively. Regarding major categories, 50.5% respondents are studying engineering and 49.5% are in majors of business administration.

Most of the items are dispersed in the Likert 5 scales with mean from neutral to agree (Table 1). That means the student's perceptions on Professional Ethics described by these variables is not high. This could be due to the fact that all participants are students, not yet joining the labor force; therefore they do not have much experience and understanding of the working context.

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IEV1	220	1	5	3.94	.845
IEV2	220	1	5	4.27	.859
IEV3	220	1	5	3.56	.897
IEV4	220	1	5	4.16	.871
IEV5	220	2	5	4.14	.782
IEV6	220	1	5	3.85	.922
IEV7	220	1	5	4.33	.818
IEV8	220	1	5	3.68	1.047
IEV9	220	1	5	3.94	.909
REB10	220	1	5	2.88	.939
REB11	220	1	5	3.40	.899
REB12	220	1	5	3.93	.776
PUB13	220	1	5	3.42	.969
PUB14	220	1	5	3.62	.926
PEB15	220	1	5	3.58	.770
PEB16	220	1	5	3.45	.772
PEB17	220	1	5	3.45	.742
EIC18R	220	1	5	3.46	.913
EIC19R	220	1	5	3.68	1.102
EIC20R	220	1	5	3.72	.989
EIC21R	220	1	5	3.87	.957
EIC22R	220	1	5	3.46	1.140
EIC23R	220	1	5	3.47	.924
EIC24R	220	1	5	3.59	1.032
EIC25R	220	1	5	3.51	.958
EIC26R	220	1	5	3.48	.938
PE27	220	1	5	3.70	.772
PE28	220	1	5	3.46	.923
PE29	220	1	5	3.46	.867
PE30	220	1	5	3.82	.790
PE31	220	1	5	3.50	.819

Based on the results of the EFA, we classified *Individual ethical values* into two factors: Idealism (IEV1 to IEV6) and Relativism (IEV7 to IEV9) (Table 2).

Cronbach's alpha for Idealism and Relativism were 0.809 and 0.581, respectively.

When item IEV7 was excluded, Cronbach's Alpha of this factor increased to 0.601. All remaining items were loaded on each factor as the research model and received the Cronbach's Alpha from 0.644 (for REB) to 0.909 (for EIC), satisfy the condition mentioned above. Therefore, all of these indicators will be used in the EFA steps.

Taking the first EFA for 30 items, we eliminated two variables (REB12 and EIC18R) because they did not meet the requirement of factor loading or cross loading. The remaining 28 observed variables continued taking EFA; they are divided into 6 components that satisfied factor loadings from 0.504 to 0.851. That increases the explanation of accumulated variances extracted from the six factors of higher than 60%; Bartlett's test results to determine the variations overall related to each other has been confirmed (Sig = 0.000 < 0.05), and KMO = 0.820; all the scales satisfy convergent validity and discriminate. The detailed results and reliability levels of each component are presented in Table 3.

As shown in Table 3, both factors *Reward for ethical behaviors* and *Punishment for unethical behaviors* group in one component when compared to the proposed model. Under respondents' opinion, two constructs have a close relation together and cannot be separated, especially in the organization. Therefore, this new factor is formed and named *Company's policy for ethical behavior*. Other factors retain their names.

Based on this result, the proposed hypotheses are now re-stated as follows:

H1: Company's policy for ethical behavior and individual's PE have a positive relation.

H2: Perceptions of peers' ethical behaviors and individual's PE have a positive relation.

H3: Perception of leaders' integrity and individual's PE have a positive relation.

Table 2. Factor analysis of individual ethical values

Items	Factor 1	Factor 2
	Idealism	Relativism
IEV1	.585	
IEV2	.711	
IEV3	.770	
IEV4	.601	
IEV5	.528	
IEV6	.665	
IEV7		.384
IEV8		.681
IEV9		.637
KMO	0.852	0.600
Bartllett's test (sig)	0.000	0.000
Eigen value	3.081	1.635
Variance explained (%)	51.355	54.507
Cumulative variance explained (%)	51.355	54.507
Mean	3.9871	3.9803
Standard deviation	0.618	0.686
Cronbach's Alpha	0.809	0.581

Table 3. Results of factor analysis

	Factor					
	1	2	3	4	5	6
IEV1		.541				
IEV2		.697				
IEV3		.803				
IEV4		.588				
IEV5		.578				
IEV6		.650				
REB10				.554		
REB11				.648		
PUB13				.613		
PUB14				.712		
PEB15					.749	
PEB16					.823	
PEB17					.664	
EIC19R	.641					
EIC20R	.728					
EIC21R	.828					
EIC22R	.753					
EIC23R	.689					
EIC24R	.851					
EIC25R	.812					
EIC26R	.725					
PE27			.590			
PE28			.571			
PE29			.635			
PE30			.786			
PE31			.504			
IEV8						.645
IEV9						.683
Eigenvalue	6.433	3.534	2.337	1.889	1.481	1.319
Variance explained (%)	22.976	12.622	8.345	6.747	5.290	4.712
Cumulative variance explained	22.976	35.598	43.943	50.690	55.980	60.692
Cronbach's Alpha	0.912	0.809	0.756	0.730	0.811	0.601

Following EFA analysis, regression analysis is conducted for new related factors by Enter method. Results of regression showed that VIF < 2 and Tolerance was greater than 0.5, that means there was no multi-collinearity (Table 4).

Results of regression analysis showed that 3 factors, including: *The ethical integrity of the boss, Company's policy for ethical behaviors* and *Peers' ethical behaviors*, have positive relations with *Professional ethics* (summarized in Table 5). In the present study, there is no relation between Individual standards of ethical values and *Professional ethics*. It means that

students are not aware of the role of the individual in *Professional ethics*. This might be explained by the reasons that students are not provided/trained in *Professional ethics* in a systematic way. It might lead them to think individual values have no impact on Professional ethics.

Lastly, ANOVA analysis helps us examine the differences in students' awareness of Professional ethics in term of demographic indicators, such as gender and majors with a significance level of 5%. The results showed that there is a significant difference in male and female students. This difference is on two items PE28 and PE30. In both items, female students have a higher score than their male counterparts do (Table 6). Similarly, with a significance level of 5%, the results of the ANOVA analysis showed no differences in ethics awareness among business administration and engineering students.

Table 4. Regression analysis

Model	Unstandardized coefficients		Standardized coefficients			Collinearity statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1 (Constant)	-1,068E-16	.055		.000	1.000		
The ethical integrity of boss	.136	.058	.146	2.333	.021	.970	1.031
Company's policy for ethical behaviors	.163	.074	.161	2.202	.029	.706	1.417
Peers' ethical behaviors	.256	.072	.262	3.561	.000	.702	1.424

a. Dependent Variable: REGR factor score 3 for analysis 3.

Table 5. The result of proposed hypotheses

Hypothesis	Result
H1: Company's policy for ethical behavior and individual's PE have a positive relation.	Supported
H2: Perceptions of peers' ethical behaviors and individual's PE have a positive relation.	Supported
H3: Perception of leaders' integrity and individual's PE have a positive relation.	Supported

Table 6: ANOVA analysis results between male students and their counterparts

		Sum of Squares	df	Mean Square	F	Sig.
PE27	Between groups	.055	1	.055	.092	.762
	Within groups	130.540	218	.599		
	Total	130.595	219			
PE28	Between groups	3.574	1	3.574	4.254	.040
	Within groups	183.135	218	.840		
	Total	186.709	219			
PE29	Between groups	.511	1	.511	.679	.411
	Within groups	164.121	218	.753		
	Total	164.632	219			
PE30	Between groups	3.439	1	3.439	5.624	.019
	Within Groups	133.289	218	.611		
	Total	136.727	219			
PE31	Between Groups	1.225	1	1.225	1.833	.177
	Within Groups	145.770	218	.669		
	Total	146.995	219			

4. Discussion and conclusion

The present study is to examine students' awareness of professional ethics by employing and adapting the scales from the studies of Han, Park et al. (2013) and that of Valentine and Fleischman (2008). The analysis has shown that, in students' perspectives, individual ethical values do not have a significant impact on their awareness of professional ethics. Meanwhile, 17 variables in organizational factors are divided into 3 factors, namely: policy for ethical behaviors, peers' ethical behaviors, and the ethical integrity of the boss.

To analyze the difference in students' perspectives of professional ethics, a comparison is conducted regarding demographic indicators. The result has shown that there is a difference between male and female students' awareness of professional ethics; meanwhile, participants' majors do not make any such difference.

The research findings show some noteworthy points to discuss. As mentioned in the research background, there are not many studies on professional ethics. Therefore, this study can be considered as one of the pioneer ones conducted in Vietnam. According to Trang, Khoa et al. (2014), professional ethics is not paid enough attention in university and vocational education. There is no course relating to this topic. This fact helps much in explaining why students do not think individual values have impacts on professional ethics. Moreover, it might be also useful to understand there is no difference between perspectives of students in different majors.

The second point is that, when conducting the survey, students expressed their confusion in understanding the term *professional ethics*. One of the reasons is that they are not only not taught professional ethics in their curriculum, but they cannot even find easily what is (are) code(s) of conduct in their professions. This can also support the understanding that research in professional ethics is still meager.

The last point that needs to be considered is that there are not common/shared norms/standards in performing occupations in many sectors. Accompanied by the fact that no course is provided in university/vocational education, this fact has created more barriers for professionals in approaching and behaving ethically in their professions.

5. Implications and limitations

One pivotal implication from these research findings is that the education sector, especially the Ministry of Education and Training and universities, need to supplement a course of *Professional ethics* in university and vocational education programs. On the one hand, a course in *Professional ethics* needs to be added to the curriculum to provide students with an overview of knowledge and a general understanding of how to behave ethically in performing occupations. On the other hand, all courses in majors need to provide a chapter or a part on Professional ethics to provide students systematic information on codes of conduct of their occupations. Such action will help to increase students' awareness of individual values on professional ethics. This implication can be supported by the contribution from the study of Karassavidou and Glaveli (2006).

The research finding points out that students are not aware of the impacts of individual ethical values on *Professional ethics*. From this fact, it is necessary to develop an educational/training objective which can encourage and integrate individual ethical standards into the program. This point echoes with the suggestions of Brinkmann and Henriksen (2008). An educational/training program on professional ethics would be the first step for developing shared standards/codes of conduct in occupations.

Like other studies, the present research faces some limitations. Firstly, the approached participants in the study are students in two majors, business administration and engineering, rather than many other ones, such

as medicine, law, and pedagogy. For this reason, this study cannot represent the awareness of students in general. Further research should extend the sampling to many majors in universities to depict a more comprehensive understanding of professional ethics. Secondly, as explained in the study of Valentine and Fleischman (2008), the scale of *Professional ethics* is borrowed from *Corporate ethics*. Hence, the measures might be not as exact as their real meaning is for this specific research context. Moreover, the research finding of Trang, Khoa et al. (2014) also points out that it is necessary to undertake qualitative research to develop the measure for Professional ethics. This point is also suggested in the study of Karassavidou and Glaveli (2006) [16]. Further research should focus on developing a scale for professional ethics.

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