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Determinants Influencing Quality of Finance and Accounting Education: The Case Study of Vietnam

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Abstract
The quality of undergraduate program in general and in the discipline of finance and accounting in particular is one of the big concerned issues in society. For a long time, Vietnam has trained a large number of bachelor students which exceeds the real needs, especially in the field of economics. In the dimension of this study, we investigate the impact levels of determinants on quality of financial and accounting education in the context of the 4th Industrial Revolution. Data were collected by receiving questionnaire feedbacks from students of Trade Union University of Vietnam. By employing the tests of Cronbach's Alpha, exploratory factor analysis and multivariate regression, the results show that four determinants including (i) role of trainers, (ii) innovation of the training program, (iii) applying information technology; (iv) and social behavior skills of students influence positively the quality of education in the field of finance and accounting.
Keywords: Education quality, finance and accounting, Vietnam

1. Introduction

Industrial Revolution 4.0 with breakthrough achievements in the science is one of the top concerns currently and brings many advantages and challenges to all areas of society. To some extent, undergraduate training in general and finance & accounting training in particular are also affected by this revolution. In order to determine the determinants influencing the training quality, we examine the influence of factors on the training quality in finance and accounting major in the context of 4th industrial revolution.

Some studies have been conducted for investigating the quality of accounting training in the international context. Prosser and Trigwell (1999), Yunwei (1997) argued that the development of curriculum and teaching methods were important factors in the quality of accounting training. Kara and Oscar (2004) focused on the relationship between student satisfaction and the training quality. According to Diamantis and Benos (2007), the satisfaction of undergraduate students on the course was very important in assessing the training quality.

In Vietnamese context, some researches on the quality of training with the evidence of some universities recently. According to Le and Nguyen (2016), there were five factors influencing the training quality including training programs, professional qualifications of trainers, personality of trainers, output standards, and facilities. Pham (2016) studied the model of three factors including teaching facilities, training programs and service ability. Pham and Niem (2017) argued that there were three influencing factors of training programs, profession ethics & teaching methods of lecturers and student support services. Nguyen (2017) said that the lecturers in the 4th Industrial Revolution are important determinants who help students to study and create the learning environment.

Basing on the prior studies, we investigate the determinants influencing quality of financial and accounting education in the context of the 4th Industrial Revolution in the context of university of trade union.

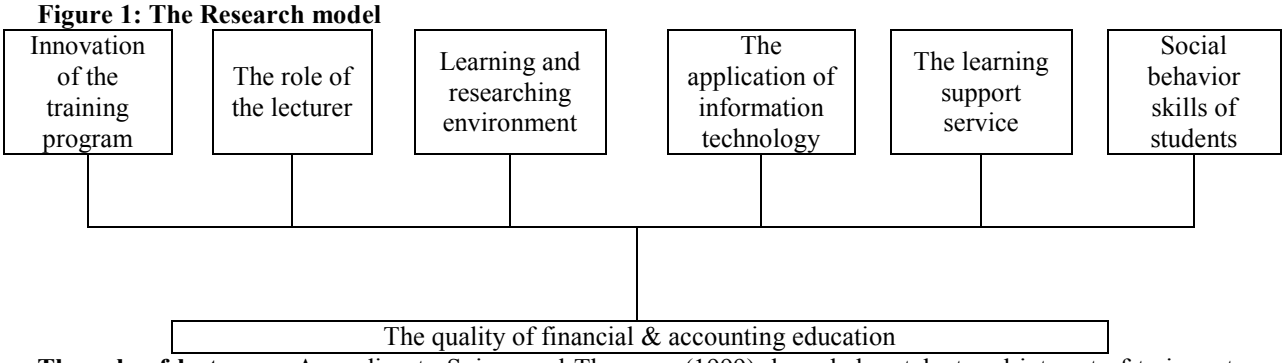
This research is structured as follows. Section 2 reviews the determinants affecting the quality of finance and accounting education. Section 3 describes the data sample collection and methodology employed in the conduct of the research. Section 4 sets out a discussion of key results and gives key conclusions.

2. Determinants Influencing the Quality of Finance and Accounting Education

Based on the prior studies, six determinants synthesized influencing the quality of financial & accounting training in the 4th Industrial Revolution. These factors are the role of the lecturers, the innovation of the training

program, the application of information technology, the support in learning & research and social behavior skills of students. This is illustrated in the Figure 1 as below:

Figure 1: The Research model



The role of lecturers: According to Snipes and Thomson (1999), knowledge, talent and interest of trainers to learners are the most important factors in the quality of training. Professional qualifications and personality of trainers have positive impacts on student satisfaction and perceptions. Lecturers who discuss with students with care about the content of the lesson will have a positive impact on the quality of training (Dang, 2017). The teaching process needs to shift from transferring knowledge to forming learner personality and developing learner capacity in the 4th Industrial Revolution.

Innovation of the training program: According to Jacqueline Douglas et al. (2006), credits in training programs are related to the quality of training. The Finance-Accounting training program at undergraduate level should refer and compare to other financial and accounting training programs in top universities and prestigious professional organizations around the world (Pham et al., 2017).

Student's learning and researching environment: Groomer and Murthy (1996) found that the type of professional or non-professional training influenced the quality of training. The environment is a place where learners can discover their own talents and intellect. The renovation in the examination form and methods in education and training towards the working ability and creativity of learners will improve the quality of training in the 4th Industrial Revolution 4.0 (Tran, 2017).

The application of information technology: In order to improve the quality of training, it is vital to apply information technology into training methods. The lectures, teaching methods, and case studies need to be built on modern software. According to Nguyen and Cao (2017), the use of virtual classrooms, virtual teachers, virtual devices, virtual labs, virtual libraries, and so on under the intelligent electronics support will help to improve the quality of training in the current context.

The learning and researching support services: Universities should invest in modern reading rooms and foreign language skills. The school should not only guides students go through the material but also provide services in other forms such as interaction with real businesses and projects (Nguyen and Cao, 2017).

Social Behavior Skills: According to Pham et al. (2017), in order to enhance practicality in the training process and to bridge the gap between training and the needs of society, universities need to strengthen the relationship with society. By increasing opportunities for students to work in institutions when they are still in universities through practical training, that will improve the quality of training (Ngo, 2017). In addition, social factors will have a positive impact on the quality of training (Nguyen, 2015).

3. Research Methodology

The study is carried out basing on the designing questionnaires with a 5-level Likert scale (1: Totally disagree to 5: Totally agree) to measure the dependent and independent variables and its attributes. Sample results are tested for reliability by the Cronbach's Alpha coefficient and EFA analysis and running regression model.

According to Hoang and Chu (2008), the sample size is large enough for the analysis of the EFA if the number of observations is at least 5 times the number of variables. Therefore, the minimum sample size of this study is 190 observations (38 times 5). Data were collected by random sampling method from students, lecturers in finance and accounting field in Trade Union University. After selecting the sample, 220 questionnaires were sent via face-to-face or emails in the 2nd quarter of 2018. In consequences, 200 questionnaires were received including 170 students (85%) and 30 lecturers (15%).

4. Results and Discussions

Testing Reliability of variables

Cronbach's Alpha technique is employed for checking reliability of variables. According to Hoang and Chu (2008), if the coefficient of Cronbach's Alpha from 0.8 to nearly 1, the scale is good; the coefficient from 0.7 to nearly 0.8 is usable; and the coefficient from 0.6 can be used in cases when the concept of measurement is new

or new to respondents in the research context. The scale is good when the Cronbach's Alpha coefficient of overall > 0.6 (Dinh, 2011). A good reliability scale ranges from 0.7 to 0.8. Cronbach's Alpha ≥ 0.6 is acceptable in terms of reliability (Nguyen, 2012). The results of the reliability test of the scale are shown in Table 1.

Table 1: Cronbach's Alpha Coefficients

Determinants	Coding	Cronbach's Alpha
Innovation of the training program	ITP	0.815
The role of lecturers	RL	0.880
Student's learning and researching environment	LRE	0.872
Application of information technology	AIT	0.817
The learning and researching support services	LRS	0.456
Social Behavior Skills	BS	0.811
Training Quality	TQ	0.722

The reliability of the observed variables in the scale of RL, ITP, LRE, AIT, BS have Cronbach's Alpha higher than 0.8 and coefficient of correlation higher than 0.3. Thus, these scales are qualified for further analysis. The scale of TQ is 0.722 < coefficient Cronbach's Alpha < 0.8, so it is usable with good reliability. The LRS scale has the coefficient Cronbach's Alpha < 0.6, which is not satisfactory, should be discarded. Thus, through the Cronbach's Alpha test, the model has six scales that ensures the quality of the representative variables.

Factors Analysis

We analyze the exploratory factor to test whether the variables in each scale are truly reliable. According to Dinh (2011), if 0.5 <KMO< 1, discovery factor analysis is appropriate for actual data. The significance level of the Bartlett test < 0.05, the observed variables are linearly correlated with the representative factor. The cumulative covariance value must be > 50% to satisfy the explanatory requirement of the observed variables for the factor. Using the analysis of the EFA, there are two rejected attributes of x9 and x10 due to factor loading < 0.5. The results of Bartlett's test and the KMO of other variables and total cumulative variance are shown in Table 2 and Table 3.

Table 2: KMO and Bartlett Test Results

Kaiser-Meyer-Olkin index		0.741
Bartlett test	Approx. Chi-Square	4,359.620
	Df	210
	Value of Sig.	0.0001

Table 3: Total Cumulative Variance

Attributes	Eigenvalues initialized			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% variance	% accumulation	Total	% variance	% accumulation	Total	% variance	% accumulation
1	4.402	20.963	20.963	4.402	20.963	20.963	3.894	18.543	18.543
2	3.518	16.751	37.714	3.518	16.751	37.714	3.557	16.937	35.479
3	2.894	13.779	51.493	2.894	13.779	51.493	2.891	13.767	49.246
4	2.512	11.960	63.454	2.512	11.960	63.454	2.704	12.875	62.122
5	2.381	11.340	74.793	2.381	11.340	74.793	2.661	12.672	74.793
6	0.986	4.694	79.488						
7	0.878	4.180	83.668						
8	0.622	2.963	86.631						
9	0.519	2.472	89.103						
10	0.483	2.301	91.404						
11	0.438	2.086	93.490						
12	0.325	1.546	95.036						
13	0.274	1.304	96.340						
14	0.229	1.090	97.431						
15	0.177	0.843	98.273						
16	0.121	0.574	98.848						
17	0.091	0.432	99.280						
18	0.079	0.375	99.654						
19	0.028	0.135	99.789						
20	0.027	0.126	99.916						
21	0.018	0.084	100.000						

Results in Table 2 show that KMO = 0.741> 0.5; Test Bartlett has Sig. = 0.0001 <0.05. In Table 3,

cumulative variance = 74.793 > 50%. Thus, the variables are closely correlated and the analytical model is viewed to be suitable. Table 4 shows the matrix of rotated factors.

Table 4: Factor Rotation Matrix

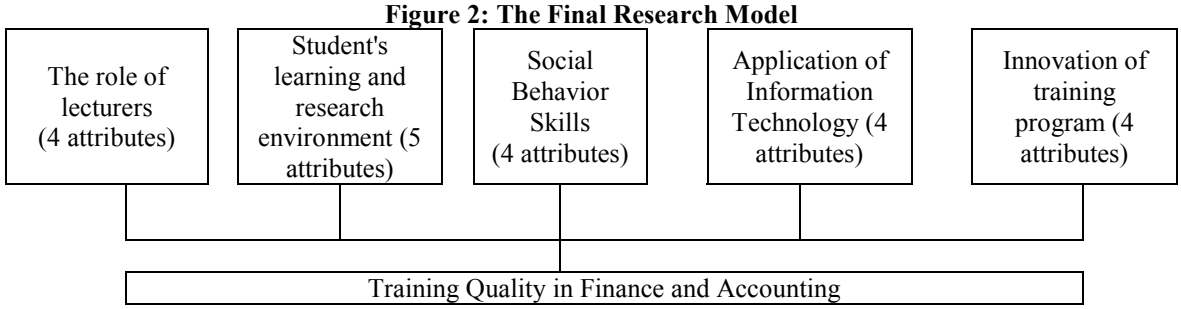
Attributes	Factors				
	Group 1	Group 2	Group 3	Group 4	Group 5
x7	0.987				
x11	0.982				
x8	0.978				
x6	0.971				
x13		0.919			
x12		0.892			
x16		0.873			
x15		0.741			
x14		0.710			
x29			0.925		
x27			0.887		
x25			0.852		
x26			0.686		
x17				0.924	
x19				0.866	
x18				0.816	
x20				0.621	
x3					0.902
x1					0.868
x2					0.763
x5					0.690

The results of each factor group are shown as below:

- Group 1: Attributes of x6, x8, x11 and x7 (factor loading from 0.970 to 0.986) called “The role of lecturers”.
- Group 2: Attributes of x14, x15, x16, x12 and x13 (factor loading from 0.711 to 0.918) are called “Student's learning and research environment”.
- Group 3: Attributes of x26, x25, x27 and x29 (factor loading from 0.685 to 0.924) are called “Social Behaviour Skills”.
- Group 4: Attributes of x20, x18, x19 and x17 (factor loading from 0.620 to 0.923) are called “Application of Information Technology”.
- Group 5: Attributes of x5, x2, x1 and x3 (factor loading from 0.691 to 0.901) called “Innovation of the training program”.

Based on the above results, the final research model is illustrated in Figure 2 below:

Figure 2: The Final Research Model



Regression Model

Regression analysis is conducted for identification of determinants that influence the quality of training of finance and accounting. Results of regression analysis are shown in Table 5 as below.

Table 5 : Model Summary[b]

Model	R	R^2	R^2 correction	Standard error of estimation	Durbin-Watson value
1	0,840[a]	0,705	0,699	0,287	1,352
a. Predictor variables: (Constant), ITP, LRE, RL, AIT, BS					
b. Dependent variables: TQ					

The R^2 coefficient = 0.699, meaning 69.9% of the variation of dependent variable - training quality (TQ) is caused by variation of independent variables – ITP, LRE, RL, AIT, BS. The remaining 30.1% is due to other factors not studied in the model.

According to Hoang & Chu (2008), if 1 < Durbin-Watson value < 3, we can conclude that the model has no autocorrelation. Durbin-Watson value of the model = 1,352, so the model does not have autocorrelation phenomena.

The test results for significance levels are shown in Table 6.

Table 6: Analysis ANOVA[a]

Model		Sum of squares	Df	Average of squares	F value	Sig. value
1	Regression	41,021	5	8,204	99,914	0,000[b]
	Surplus	17,161	209	0,082		
	Total	58,182	214			
a. Dependent variable: TQ						
b. Predictor variable: (Constant), ITP, LRE, RL, AIT, BS						

The F value = 99.914 with Sig. = 0.000 < 0.01, it can be concluded that the given model corresponds to the data. In other words, the variables ITP, LRE, RL, AIT, BS variables are positively correlated with the 99% confidence.

Results of the regression coefficients of the model are shown in Table 7.

Table 7: Regression coefficients[a]

Model		Not standardized coefficient		Standardized coefficient	T	Sig. value	Statistics multicollinearity	
		B	Standard variation	Beta			Acceptance	VIF
1	(Constant)	0.907	0.195		4.661	0.000		
	RL	0.359	0.020	0.695	18.252	0.000	0.975	1.026
	LRE	-0.053	0.031	-0.066	-1.741	0.083	0.970	1.031
	BS	0.207	0.025	0.322	8.393	0.000	0.961	1.040
	AIT	0.145	0.047	0.117	3.059	0.003	0.971	1.030
	ITP	0.088	0.023	0.146	3.850	0.001	0.988	1.012
a. Dependent variable: TQ								

The result shows that LRE has Sig. = 0.083 > 0.01 so this variable is not statistically significant to the training quality. Variables RL, BS, AIT, ITP have Sig. < 0.01, these variables correlate significantly with training quality with 99% confidence.

The smaller the VIF, the less multicollinearity will be. VIF is considered the best if it is less than 2 (Nguyen, 2012). In Table 7, all independent variables have coefficients VIF <2, so there is no multicollinearity.

The RL, BS, AIT, and ITP variables all have coefficient B > 0, so they all affect positively on the training quality. From the results of the analysis, the regression equation estimates the factors affecting the quality of training in Finance - Accounting in the Industrial Revolution 4.0 is:

TQ = 0.359 x RL + 0.207 x BS + 0.145 x AIT + 0.088 x ITP + 0.894 + ε

Beta value indicates the importance of the independent variable for the dependent variable. Table 7 shows the influence of four independent variables on dependent variable. The influence of RL is 69.5%, the BS is 32.2%, the AIT is 11.7% and the ITP is 14.6%. Thus, the order that affects the quality of training from strong to weak is RL, BS, ITP and AIT.

Results of balance variance testing are shown in Table 8.

Table 8: Correlation Matrix

			ITP	RL	LRE	AIT	BS
Spearman's rho	ITP	Correlation coefficient	1.000	-0.010	-0.014	0.083	0.019
		Sig. value	-	0.879	0.840	0.223	0.780
		n	200	200	200	200	200
	RL	Correlation coefficient	-0.010	1.000	0.082	0.003	0.124
		Sig. value	0.879	-	0.230	0.964	0.069
		n	215	215	215	215	215
	LRE	Correlation coefficient	-0.014	0.082	1.000	0.086	0.086
		Sig. value	0.840	0.230	-	0.208	0.208
		n	215	215	215	215	215
	AIT	Correlation coefficient	0.083	0.003	0.086	1.000	0.088
		Sig. value	0.223	0.964	0.208	-	0.200
		n	215	215	215	215	215
	BS	Correlation coefficient	0.019	0.124	0.086	0.088	1.000
		Sig. value	0.780	0.069	0.208	0.200	-
		n	215	215	215	215	215

According to the test results, all RL, BS, AIT and ITP variables have Sig. > 0.05, thus, the research model has unchanged balance variance.

Thus, through coefficients such as calibrated R^2 = 0.698, Sig.F = 0.000, unchanged balance variance, no autocorrelation and multicollinearity, it is possible to conclude that the model is appropriate to explain the factors affecting the quality of training in Finance and Accounting major in the Industrial Revolution 4.0.

Result Discussions

Research results show that the role of lecturers, the social behavior of students, the innovation of the training program and the application of information technology have a positive impact on training quality in finance and accounting major in the Forth Industrial Revolution in decreasing order. Thus, in order to improve the quality of current training in finance and accounting, it is necessary to focus on enhancing the role of lecturers, students' behavior, innovation of training program, and application of information technology. The lecturer is not only an instructor but a bridge between the student and the knowledge, and is the inspiratory model of students. The lecturer must be both ethical and knowledgeable to meet the needs of students today. In addition, the lecturer should enhance the application of teamwork and discussion in class through practical case studies in Vietnam and international context.

The close association between universities and enterprises as well as social organizations will bring more employment opportunities for graduates. At the same time, universities should cooperate with professional associations such as the Association of Finance, Vietnam and International Accounting and Auditing Associations, etc. to create a big and strong network to improve professionalism and academic level.

Training programs in universities must be updated promptly to approach new knowledge in Finance and Accounting to students. Specifically, learning objectives and standards should be developed in line with international standards such as AUN, CDIO, etc. to meet the demand for high quality human resources of the economy. Strengthen cooperation with national and international professional organizations (ACCA, CPA Australia, CIMA, etc.) to renovate curriculums, step by step introducing training contents applying information technology. With advanced training programs, in a modern information technology environment, with ethical and knowledgeable lecturers and a fully supported learning environment, the students' behavior will be sharpened to meet the market changes.

Nowadays, the application of information technology in teaching will improve the quality of Finance and Accounting training. Specifically, it needs to increases the practice amount of time in the modules: Virtual Securities Market, Virtual accounting information system, decision making in virtual business, etc. to help students gradually adapt to the use of information technology in the profession. Moreover, if possible, the school should provide students with access to cloud technology, artificial intelligence and block chain technology.

In short, this study identified determinants and its impacts on the training quality of Finance and Accounting major in the Fourth Industrial Renovation. The results show four determinants influencing positively to the quality of training, including the role of lecturers in universities, the behavior of students, the innovation of the training program, and the use of information technology in the curriculum.

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