IMPACTING THE INDUSTRY 4.0 ON THE TRAINING QUALITY AND STUDENT'S SATISFACTION AT LAC HONG UNIVERSITY

Nga Phan Thi Hang, University of Finance-Marketing
Le Thu Thuy, Lac Hong University
Phan Thanh Tam, Lac Hong University

ABSTRACT

The purpose of this study is to explore the industry 4.0 affecting the training quality and student's satisfaction who studying at Lac Hong University. The research result is a science evident for LHU managers to improve the training quality and student's satisfaction.

One of the most important tasks of 2015-2020 at LHU is to improve the quality of training to meet the needs of the society and to meet the demands of the fourth industrial revolution. The purpose of this study is to examine the industry 4.0 affecting training quality and its implications and how training quality influences student's satisfaction. The researchers surveyed 400 students who are studying at LHU and answered 20 questions. The primary sources of data collected from July 2017 to March 2018 at LHU and simple random sampling technique. The Data analyzed Cronbach's Alpha and the exploratory factor analysis (EFA), which used for Structural Equation Modelling (SEM) technique and using partial least squares method. Student's responses measured through an adapted questionnaire on a 5-point Likert scale: Conventions: 1: Completely disagree, 2: Disagree, 3: Normal; 4: Agree; 5: completely agree. Hard copy distributed among 7.000 students of LHU. In addition, the findings of the study have three factors (Human resource, training facility and technology capability) affecting training quality and training quality affecting student's satisfaction with significance level 0.01.

Keywords: Training Quality, Country's Economic, Social, LHU Development.

INTRODUCTION

Nowadays, the world is experiencing unprecedented changes. The industry 4.0 continues to be a tremendous change. It affecting all aspects of life. This revolution will deeply affect the global economy, society, including education and training. It poses urgent problems for education, considering education and training especially university education as the necessary preparation for the learner to enter life confidently. Besides, the universities need to equip all the skills necessary for students, not only for the present but also for the future jobs. This is a great opportunity for Vietnam to accelerate industrialization and modernization. The problem is that Vietnam is addressing low-level labour-productivity challenges in order to be

ready for a new phase on the basis of industrial science 4.0. Moreover, the industry 4.0 based on some main areas: Big Data, IOT, Artificial Intelligence (AI).

The industry 4.0 breaking the structure of almost every industry, foreshadowing the transformation of the entire production, management system and training. The industry 4.0 will be the foundation for a dramatic transition from a resource-based, low-cost to knowledge-based economy. This is increasing share of economic structure in comparison to traditional manufacturing and service industries. LHU solves the problem of quality in higher education is not simple; it touches the whole system and training process from A to Z. The researchers think that there are 3 important factors that are decisive: Human resources, training facility and technology capability for training quality and international integration capacity.

It can be seen that the human factor is always the leading factor, directly influencing the training process in the university. The human element refers not only to the teachers but also to the management staff. The success of a performance depends not only on the actors on stage. To serve a classroom teacher must be accompanied by a staff from the program, scheduling, preparation of facilities, teaching equipment. The professional level of the teacher, the professional capacity of the staff is critical. And the person is professional, work hard and good working conditions will affect the quality of training. Moreover, the material facilities have been invested quite a lot in laboratory equipment, electronic library, teaching facilities, but still not used effectively in training. Lacking of good models, job training, practice, vocational internship in the LHU or have good model but effective use is not high especially, the complexity of the training and education systems need to develop to meet the demands of the fourth industrial revolution necessitate interdisciplinary and collaboration as a precondition for innovation.

How do human resources, training facility and technology capability are sufficient to meet and how important international integration? This is a breakthrough and important to improve the quality of training is being implemented effectively at Lac Hong University. Above mentioned things, the researchers chose topic "*Impacting the industry 4.0 on the training quality and student's satisfaction at Lac Hong University*" as a paper. This paper helps LHU managers who apply the research results for improving policy on the management of the training quality and education at LHU in the future

LITERATURE REVIEW

Training Quality

There are as many theories of training quality as there are writers. These different views of quality are often confusing and contradictory. For instance, (Abdullah, 2006) viewed training quality as a spectrum between two polar establishing acceptable criteria and standards of good performance. This definition focuses on performance-based and accepted criteria. Besides, the training quality of higher education has always been a top concern for many subjects whether or not they participate in the education process. In addition, (Benešová, 2017) showed that to the increasing number of learners, the decline in quality, the changing societal pressures and the competitive process make recruiters demand high quality education. Training quality is always a problem for governments and agencies, where education policy and educational research are

planned. For many reasons, the quality of education has always been a major concern. According to (Abdullah, 2006) showed that the concept of quality is a relative concept. For each person, the concept of quality is different and so we often question the "*quality of who*". In each position, people perceive quality in different aspects. According to (Lagrosen, 2004) showed that students, employers, teaching and non-teaching staff, government and donor agencies, censors, auditors, assessors have their own definitions. According to (Yin, 2015) showed that the concept of quality. In fact, there are many ways of defining quality, but it can be grouped into five groups of qualities: quality is superior, is perfection, is fit for purpose, is worth the money, and is worth the conversion.

Student's Satisfaction

There are a several findings of definition regarding to the concept or term "*satisfaction*" in the services and marketing literature. According to (Douglas, 2006) satisfaction is a pleasurable fulfilment which in general consumers are familiar that consumption completes some goal, desire and consequently this completion creates a pleasurable feeling. As for (Douglas, 2006) satisfaction refers to an alternate response that is centered on matching the result of the product with some standard set prior to the purchase and measured during or after consumption. On the contrary, (Ibrahim, 2014) describes satisfaction as a common evaluation based on the result of the product perceived after the purchase and compared with prospects prior to the purchase. Additionally, the term satisfaction has been researched thoroughly in many empirical studies through massive personal interviews and meetings with consumer groups. Satisfaction according to (Truong, 2016) comprises of three crucial elements which are first, a general affective response that varies in its intensity, secondly a focus on the choice of product, purchase or consumption and lastly, the moment of determination that varies according to different situations and duration in time. The term satisfaction itself creates a vast diversity within industry and societal perspectives and varies with regard to the object focus and level of specificity. According to (Douglas, 2006) satisfaction consists of levels of satisfaction with a product or service, purchase decision experience, performance attribute, consumption-use experience, department or store of the business organization, lastly with a pre-purchasing experience.

Human Resources

There are a several findings of definition regarding to the concept or term "*Human resources*" in the human resource management literature. It plays an important part of developing and making a company or organization at the beginning or making a success at the end, due to the labour provided by employees. According to (Debnath, 2012) human resources are intended to show how to have better employment relations in the workforce. Also, according to (Lien, 2017) human resources are to bring out the best work ethic of the employees and therefore making a move to a better working environment. The development of human resources is essential for any organization that would like to be dynamic and growth-oriented. Unlike other resources, according to (Gallifa, 2010) human resources have rather unlimited potential capabilities. The potential can be used only by creating a climate that can continuously identify,

bring to surface, nurture and use the capabilities of people. (Brown, 2011) studied that the lecturers and staffs of the university are sufficient soft skills to need for the management of the training and education. According to (Hadullo, 2017) studied that the lecturers and staffs of the university are sufficient major knowledge to need for the management of the training and education. And (Hill, 2003) studied that the lecturers and staffs of the university are sufficient information technology (IT) skills to need for the management of the training and education. (Sackey, 2016) studied that the lecturers and staffs of the university are sufficient research skills to need for the management of the training and education. (Douglas, 2006) studied that the lecturers and staffs of the university are sufficient English skills to need for the management of the training and education.

The above mentioned human resources, the researchers have hypotheses 1 and 2 following:

H1   *The human resources had positive relation to the training quality at Lac Hong University.*

H2   *The human resources had positive relation to the student's satisfaction at Lac Hong University.*

Training Facility

There are a several findings of definition regarding to the concept or term "*Facility or equipment*" in the training services literature. According to (Yin, 2014) showed that a training facility for adult professionals must have flexible and technologically-advanced learning environments that are safe, healthy, comfortable, aesthetically-pleasing, and accessible. It must be able to accommodate the specific space and equipment needs of the training program and curriculum. (Widaryanti, 2016) showed that a training facility for adult professionals must have flexible and technologically-advanced learning environments that are safe, healthy, comfortable, aesthetically-pleasing, and accessible. It must be able to accommodate the specific space and equipment needs of the training program and curriculum. According to (Sackey, 2016) support spaces geared toward adult needs, such as a business station that allows students to carry out some business functions during their training sessions, must be seamlessly integrated into the facility as well. Large-size rooms designed for lecture-style instruction, training and auditorium equipped with partitions to create smaller training venues at the university. (Hadullo, 2017) studied that multiple purpose medium-size instruction rooms and the seating configuration, the rooms may accommodate lecture-style instruction or encourage interaction in the form of roundtable discussions and teleconferences at the university. (Gallifa, 2010) explained that computer training rooms equipped with computer workstations and internet access for each student, staffs and lecturers at the university. Learning using telecommunication technologies like cable television, internet, satellites, and videotapes at the university (Mtebe, 2014).

The above mentioned training facilities, the researchers have hypotheses 3 and 4 following:

H3   *The training facilities had positive relation to the training quality at Lac Hong University.*

H4   *The training facilities had positive relation to the student's satisfaction at Lac Hong University.*

Technology Capability

There are a several findings of definition regarding to the concept or term "*Information technology*" in the information technology literature. According to (Parpala, 2011) IT has created a society which expects instant results. This technological revolution has increased the rate at which information is exchanged between stakeholders. A faster exchange of information can benefit businesses as they are able to react quickly to changes within their operating environment. However, an ability to react quickly also creates extra pressure as businesses are expected to deliver on their promises within ever decreasing time scales. (Sackey, 2016) showed that the Internet is having a profound impact on the marketing mix strategy of organizations. Consumers can shop 24 hours a day from where ever they want and however they want via smart phones, laptops and tablets. Technology has become an indispensable tool for business, industry, and education. Many training courses are specifically designed to enhance a trainee's competency with new software and hardware. According to (Meštrović, 2017) explained that technology has even changed the way instruction is provided: from traditional live instructor-led courses to self-directed learning and individualized instruction. Distance learning using telecommunication technologies like cable television, Internet, satellites, and videotapes, is popular because it allows students from across the nation to participant in courses remote from the point of instruction. (Ibrahim, 2014) studied the pace of technological change is so fast that the average life of a computer chip is approximately 6 months. According to (Shah, 2012) studied that technology is utilized by all age groups, students are exposed to technology from birth and a new generation of technology savvy pensioners known as "*silver surfers*" have emerged. Technology will continue to evolve and impact consumer habits and expectations, organizations that ignore this will hinder their success. According to (Li, 2017) showed that many training facilities provide IT connection in only a few areas, like computer training rooms, working stations, research rooms and media centers at the university. Internet access, and local area Networks, Wide-Area Networks, Wireless fidelity provided adequate equipment rooms and conduit runs for them at the university. According to (Mayoka, 2012) analyzed computer and internet connectivity at desks, as appropriate equipping fixed desks with under-top computers to ensure adequate sightlines between trainers and trainees at the university. All educational facilities, including training facilities have high-quality indoor environments to promote learning as well as training at the university (Sackey, 2016). The world today is boiling down to the 4.0 industrial revolution, where all organizations are determined to focus all their resources on innovation to create digital convergence between technologies. Improving the operations, functions and internal processes are very important factors. This has led to the need for knowledge and skills in both the economy and information technology for enterprises to become a vital target (Hadullo, 2017).

There are a several findings of factors regarding to the concept or term training quality in the services of educations. According to (Masoumi, 2012) a great deal of effort is required to make sure that skills development systems deliver both the quantity and the quality of training needed. Factors that are critical to supporting these aims include: IT, facilities, initial training, in-service learning, and working conditions for teachers, trainers, and directors of training institutions and master crafts persons to take on apprentices; up-to-date training courses,

methods, facilities and materials; combining classroom and work-based training through formal apprenticeships and other learning ships; and, involving stakeholders in setting standards and assessing training results.

The above mentioned technology capabilities, the researchers have hypotheses 5 and 6 following:

H5   The technology capabilities had positive relation to the training quality at Lac Hong University.

H6   The technology capabilities had positive relation to the student's satisfaction at Lac Hong University.

As mentioned above, the student's satisfaction of Lac Hong University is usually affected by training quality that offered and students experienced at LHU.

H7   The training quality had positive relation to the student's satisfaction at Lac Hong University.

The below research model for factors affecting training quality and student's satisfaction. The researchers have the suggestion: Human resources has 5 observed variables, training facilities has 4 observed variables, technology capabilities have 4 observed variables, training quality has 3 observed variables and student's satisfaction has 4 observed variables.
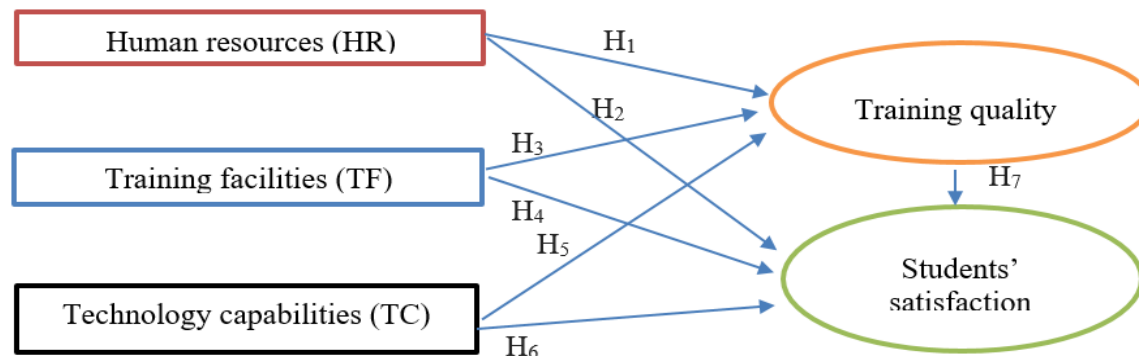

Figure 1
RESEARCH MODEL FOR FACTORS AFFECTING TRAINING QUALITY AND STUDENT'S SATISFACTION

Based on the above mentioned model (Figure 1), studies and theories. The researchers had the observation checklist and questionnaires were the main data gathering instruments while interview and document analysis were employed to enrich the data gathered through observation checklist and questionnaires. We can see the Table 1 following:

Table 1 showed that there are 20 the observed variables: Human resources (HR) has 5 observed variables, training facilities (TF) has 4 observed variables, technology capabilities (TC) has 4 observed variables, training quality (TQ) has 3 observed variables and student's satisfaction (SS) has 4 observed variables.
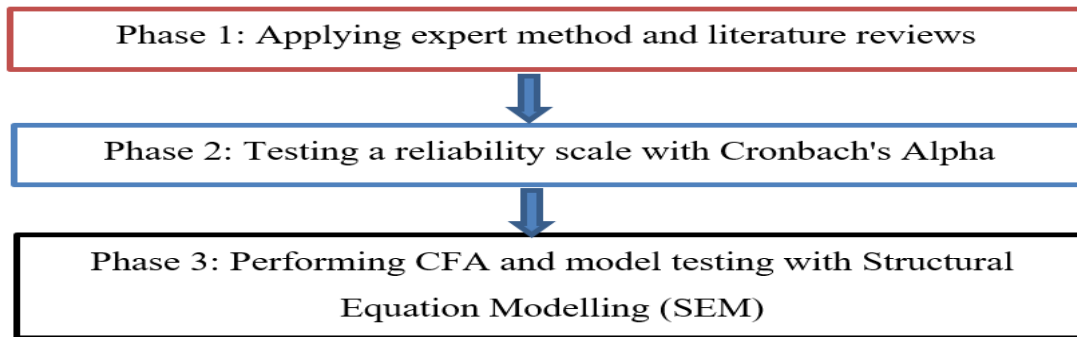
Table 1
CODING OF THE OBSERVED VARIABLES

Code	Human Resources (HR)	References
HR1	LHU' lecturers and staffs are sufficient soft skills to need for the management of the training and education.	(Brown, 2011)
HR2	LHU' lecturers and staffs are sufficient major knowledge to need for the management of the training and education.	(Hadullo, 2017)
HR3	LHU' lecturers and staffs are sufficient IT skills to need for the management of the training and education.	(Hill, 2003)
HR4	LHU' lecturers and staffs are sufficient research skills to need for the management of the training and education.	(Sackey, 2016)
HR5	LHU' lecturers and staffs are sufficient English skills to need for the management of the training and education.	(Douglas, 2006)
Code	Training Facilities (TF)	References
TF1	Large-size rooms designed for lecture-style instruction, training and auditorium equipped with partitions to create smaller training venues at LHU.	(Sackey, 2016)
TF2	Multiple purpose medium-size instruction rooms and the seating configuration, the rooms may accommodate lecture-style instruction or encourage interaction in the form of roundtable discussions and teleconferences at LHU.	(Hadullo, 2017)
TF3	Computer training rooms equipped with computer workstations and internet access for each student, staffs and lecturers at LHU.	(Gallifa, 2010)
TF4	Learning using telecommunication technologies like cable television, internet, satellites, and videotapes at LHU.	(Mtebe, 2014)
Code	Technology Capabilities (TC)	References
TC1	Many training facilities provide IT connection in only a few areas, like computer training rooms, working stations, research rooms and media centers at LHU.	(Li, 2017)
TC2	Internet access, and local area Networks, Wide-Area Networks, Wireless fidelity provided adequate equipment rooms and conduit runs for them at LHU.	(Mayoka, 2012)
TC3	Computer and internet connectivity at desks, as appropriate equipping fixed desks with under-top computers to ensure adequate sightlines between trainers and trainees at LHU.	(Sackey, 2016)
TC4	All educational facilities, including training facilities have high-quality indoor environments to promote learning as well as training at LHU.	(Masoumi, 2012)
Code	Training Quality (TQ)	References
TQ1	The human resources affecting the LHU's training quality.	(Benešová, 2017)
TQ2	The training facilities affecting the LHU's training quality.	(Abdullah, 2006)
TQ3	The technology capabilities affecting the LHU's training quality.	(Yin, 2014)
Code	Student's Satisfaction (SS)	References
SS1	The human resources affecting the student's satisfaction at LHU.	(Douglas, 2006)
SS2	The training facilities affecting the student's satisfaction at LHU.	(Ibrahim, 2014)
SS3	The technology capabilities affecting the student's satisfaction at LHU.	(Truong, 2016)
SS4	The training quality affecting the student's satisfaction at LHU.	(Douglas, 2006)

Source: The researcher's collecting and coding variables

METHODS OF RESEARCH

This research should pay attention to all these factors but much depends upon the ability and experience of the researcher. The research process for factors affecting training and student's satisfaction conducted in three phases following.

| Phase 1: Applying expert method and literature reviews |
| Phase 2: Testing a reliability scale with Cronbach's Alpha |
| Phase 3: Performing CFA and model testing with Structural Equation Modelling (SEM) |

Source: The researcher's collecting and drawing.

Figure 2
RESEARCH PROCESS FOR FACTORS AFFECTING TRAINING QUALITY AND STUDENT'S SATISFACTION

Figure 2 showed that this study conducted in three phases following:

Phase 1

We applied the expert methodology and based on 10 expert's consultation and based 10 lecturers as group discussions are to improve the scale and design of the questionnaire. The results of surveying 10 experts and 10 lecturers showed that the training quality affecting student's satisfaction. If LHU improves the training quality, student's satisfaction will increase. This study was conducted in the first phase; we created a list of possible factors gathered from the literature reviews as mentioned in the above studies.

Phase 2

We tested a reliability scale with Cronbach's Alpha coefficient and exploratory factor analysis. This phase surveys samples 30 students in order to check the content and form of questionnaire. Hard copies of the refined questionnaires were directly delivered to one-site students during their studying times. Completed questionnaires were directly collected from the surveyed students because it took them less than 15 minutes to finish the survey. There are 400 students surveyed by hard copy distributed among 7.000 students of LHU in Dong Nai province, Vietnam. All data collected from the questionnaire are coded, processed by SPSS 20.0 and AMOS. Any observational variables with a total correlation coefficient greater than 0.3 and Cronbach's Alpha coefficient greater than 0.6 would ensure reliability of the scale. This method

is based on the Eigenvalue, the appropriate factorial analysis and the observed variables in the whole which are correlated when Average Variance Extracted is>50%, the KMO coefficient is within 0.5 to 1, Sig coefficient≤5%, the loading factors of all observed variables are>0.5 In addition, the researchers testing scale reliability with Cronbach's alpha coefficient and exploratory factor analyses (EFA) were performed. The questionnaires collected from the official survey provided primary data, which were coded, screened and analysed with SPSS and AMOS software. Literally, a scale was considered reliable if its observed variables had a corrected item-total correlation greater than 0.3 and a Cronbach's alpha coefficient greater than 0.7. Besides, the criteria required in the EFA include: (1) Eigenvalue≥1; (2) total variance explained≥50%; (3) KMO≥0.5; (4) Significance (Sig.) coefficient of the KMO test≤0.05; (5) factor loadings of all observed variables are≥0.5; (6) weight difference between the loadings of two factors>0.3 (Hair, et al., 1998).

Phase 3

We performed CFA and model testing with Structural Equation Modelling (SEM) analysis. The purpose of CFA helps to clarify: (1) Unilaterality, (2) Reliability of scale, (3) Convergence value, and (4) Difference value. A research model is considered relevant to market data if Chi-quare testing is P-value>5%; CMIN / df≤2, some cases CMIN/df may be≤3 or<5 (Hair, et al., 1998) GFI, TLI, CFI≥0.9. However, according to recent researcher's opinion, GFI is still acceptable when it is greater than 0.8; RMSEA≤0.08. Apart from the above criteria, the test results must also ensure the synthetic reliability>0.6; Average Variance Extracted must be greater than 0.5 (Hair, et al., 1998).

RESEARCH RESULTS

Introduction of LHU

LHU Located in the Southern key economic zone, Lac Hong University is recognized as the first University in Dong Nai province. The University was founded in 1997. Its birth has become an indispensable trend meeting the imperative needs for technical human resources of a fast socio-economic growing province with the focus of speeding up industrial parks, industrial and services professions. As an educational establishment with interdisciplinary and multi-level training, LHU offers programs in vocational training, college, undergraduate and postgraduate education. Currently, it offers 10 faculties, 20 branches and 24 majors with an enrolment of more than 7,000 students.

LHU's Missions

LHU's vision: "*Morality - Intelligence - Creativity*".
Lac Hong University is a technology transfer, applied scientific research and training institution, meeting social needs (Figure 3). The LHU provides highly qualified human resources; cultivate competent and virtuous talents, serving the national industrialization and modernization in the context of international integration.

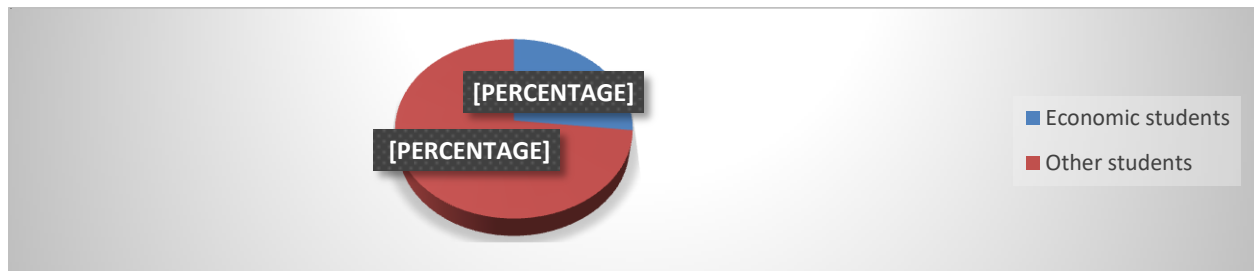Source: The researcher's collecting and LHU photo

Figure 3
LAC HONG UNIVERSITY
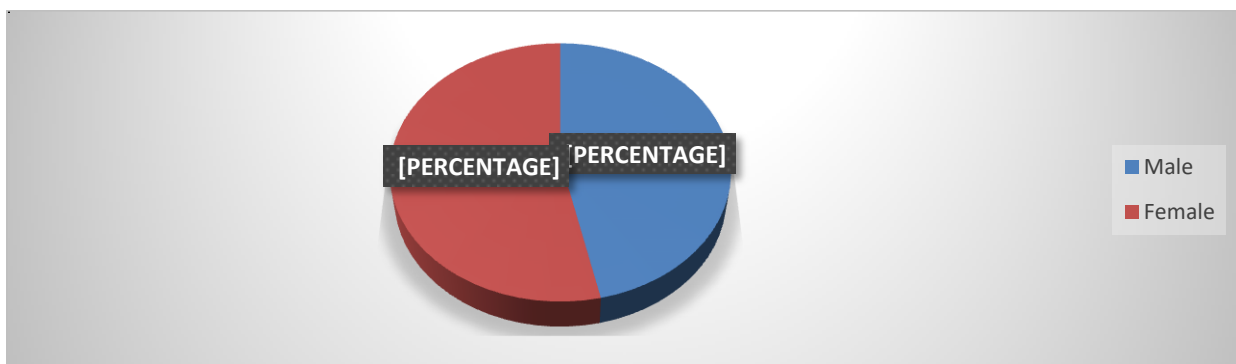
Source: The researcher's collecting data and Excel

Figure 4
THE FREQUENCY RESULTS OF GENDER

Figure 4 showed that there are 400 students surveyed by hard copy distributed among 7.000 students of LHU in Dong Nai province but only 389 students processed. The frequency results of genders showed 181 males with 47% and 208 females with 53%.

Figure 5 showed that there are 400 students surveyed by hard copy distributed among 7.000 students of LHU in Dong Nai province but only 389 students processed. The frequency results of genders showed 104 economic students with 27% and other students with 73%.

Source: The researcher's collecting data and Excel

Figure 5
THE FREQUENCY RESULTS OF STUDYING MAJOR

Source: The researcher's collecting data and Excel

Figure 6
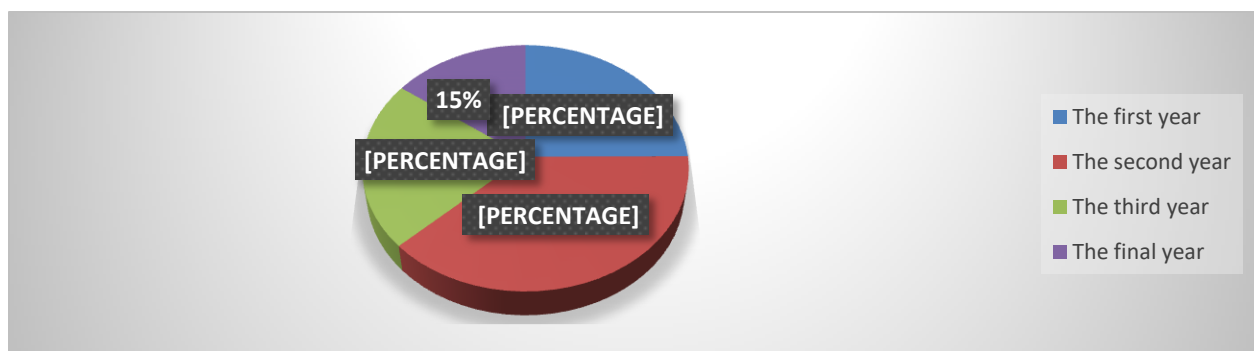**THE FREQUENCY RESULTS OF STUDYING YEARS**

Figure 6 showed that there are 400 students surveyed by hard copy distributed among 7.000 students of LHU in Dong Nai province but only 389 students processed. The frequency results of genders showed studying year of students is from 25% for the first year, 38% for the second year, 22% for the third year and the final year has 58 students with 15%.

Table 2 **THE SCALE RELIABILITY TESTS FOR FACTORS AFFECTING THE TRAINING QUALITY AND STUDENT'S SATISFACTION**				
Items	**Scale Mean if Item Deleted**	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
HR1	13.7584	10.344	0.838	0.884
HR2	13.6735	10.447	0.772	0.898
HR3	13.7763	10.700	0.710	0.911
HR4	13.8201	10.277	0.837	0.884
HR5	13.8663	10.755	0.758	0.900

Table 2
THE SCALE RELIABILITY TESTS FOR FACTORS AFFECTING THE TRAINING QUALITY AND STUDENT'S SATISFACTION

Cronbach's Alpha for human resources (HR)				**0.915**
TF1	9.4936	8.044	0.848	0.941
TF2	9.5707	7.694	0.888	0.928
TF3	9.6710	7.582	0.835	0.946
TF4	9.5861	7.460	0.935	0.914
Cronbach's Alpha for training facilities (TF)				**0.948**
TC1	8.9332	3.815	0.786	0.814
TC2	8.0925	3.352	0.745	0.817
TC3	8.8483	3.593	0.699	0.836
TC4	8.1131	3.281	0.678	0.851
Cronbach's Alpha for technology capabilities (TC)				**0.866**
TQ1	6.2262	3.444	0.889	0.877
TQ2	6.2365	3.444	0.853	0.906
TQ3	6.2365	3.599	0.837	0.918
Cronbach's Alpha for training quality (TQ)				**0.932**
SS1	10.2468	6.094	0.644	0.824
SS2	10.2082	6.083	0.670	0.814
SS3	10.0720	5.593	0.783	0.766
SS4	10.3008	5.510	0.660	0.822
Cronbach's Alpha for student's satisfaction (SS)				**0.848**

Source: The researcher's collecting data and SPSS

Table 2 showed that all of 20 variables surveyed Corrected Item-Total Correlation greater than 0.3 and Cronbach's Alpha if Item deleted greater than 0.6 and Cronbach's Alpha is very reliability. Such observations make it eligible for the survey variables after testing scale. This showed that data was suitable and reliability for researching.

Table 3
KMO AND BARTLETT'S TEST FOR FACTORS OF THE TRAINING QUALITY AND STUDENT'S SATISFACTION

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.829	
Bartlett's Test of Sphericity	Approx. Chi-Square	4726.286	
	df	78	
	Sig.	0.000	
% of Variance		72.411	
Code	Factor		
	1	2	3
HR4	0.901		
HR1	0.869		
HR5	0.864		
HR2	0.768		
HR3	0.734		

Table 3
KMO AND BARTLETT'S TEST FOR FACTORS OF THE TRAINING QUALITY AND STUDENT'S SATISFACTION

TF4		0.992	
TF2		0.923	
TF3		0.868	
TF1		0.850	
TC2			0.860
TC4			0.794
TC1			0.783
TC3			0.697
KMO and Bartlett's test for the training quality			
	Sig.		0.000
	% of Variance		82.101
KMO and Bartlett's test for student's satisfaction			
	Sig.		0.000
	% of Variance		69.627

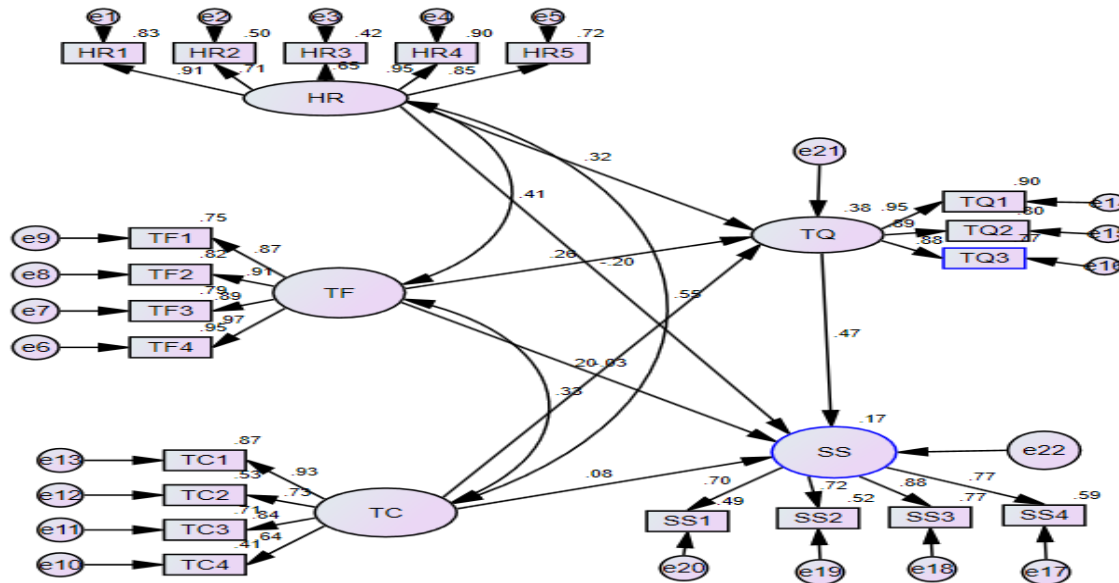Source: The researcher's collecting data and SPSS

Table 3 showed that KMO coefficient is 0.829 and the level of significance (Sig) is 0.000. Exploratory Factor Analysis (EFA) is consistent with survey data of 400 students surveyed by hard copy distributed among 7.000 students of LHU in Dong Nai province but only 389 students processed by SPSS 20.0. Besides, Table 3 showed that three factors affecting the training quality included: human resource (HR), Training facilities (TF), technology capabilities (TC) (Figure 7). Besides, KMO coefficient of the training quality is 0.756 and the level of significance (Sig) is 0.000. Finally, KMO coefficient of student's satisfaction is 0.720 and the level of significance (Sig) is 0.000.

Table 4
CONFIRMATORY FACTOR ANALYSIS

Term	Scale	No. of observed variables	Reliability Test		Average Variance Extracted
			Cronbach's Alpha	Composite	
Factors affecting the training quality and student's satisfaction at LHU	Human resources (HR)	5	0.915	0.898	0.643
	Training facilities (TF)	4	0.948	0.904	0.808
	Technology capabilities (TC)	4	0.866	0.927	0.766
Training quality (TQ)		3	0.932	0.932	0.821
Student's satisfaction (SS)		4	0.848	0.853	0.595

Source: The researcher's collecting data and SPSS

Table 4 showed that column "Cronbach's Alpha">0.6 with significance level 0.01 and column "Composite and Average Variance Extracted">0.5 with significance level 0.01 in the confirmatory factor analysis.

Chi-square=499.491; df=150; p=0.000; Chi-square/df=3.330; GFI=0.890; TLI=0.934; CFI=0.948; RMSEA=0.077

Source: The researcher's collecting data and AMOS

Figure 7
**THE STRUCTURAL MODEL SHOWING THE STRUCTURAL LINKAGE
BETWEEN HR, TF, TC, TQ AND SS**

Table 5 COEFFICIENTS FROM THE SEM MODEL								
Relationships			**Coefficient**	**Standardized Coefficient**	**S.E.**	**C.R.**	**P**	**Conclusion**
TQ	<---	HR	0.393	0.378	0.055	7.131	***	H1: Supported
TQ	<---	TF	0.265	0.257	0.050	5.279	***	H3: Supported
TQ	<---	TC	0.270	0.157	0.075	3.601	***	H5: Supported
SS	<---	TQ	0.409	0.467	0.063	6.481	***	H7: Supported
SS	<---	HR	-0.158	-0.173	0.064	-2.478	0.013	H2: Rejected
SS	<---	TF	-0.036	-0.040	0.055	-0.655	0.512	H4: Rejected
SS	<---	TC	0.131	0.087	0.078	1.675	0.094	H6: Rejected

Note: ***Significant at 1% (All t-tests are one-tailed)
Source: The researcher's collecting data and SPSS

Table 5 showed that column "P"<0.01 with significance level 0.01 and column "*Conclusion*" H1: supported, H3: supported, H5: supported and H7: supported. This showed that three factors of human resources (HR), training facilities (TF) and technology capabilities (TC) affecting the training quality with significance level 0.01. Besides, the training quality affecting student's satisfaction with significance level 0.01. However, H2: rejected, H4: rejected and H6: rejected with significance level 0.01. This showed that three factors of human resources (HR), training facilities (TF) and technology capabilities (TC) did not affect the student's satisfaction with significance level 0.01.

CONCLUSIONS

This study found that three factors of human resources (β=0.378), training facilities (β=0.257) and technology capabilities (β=0.157) affected the training quality with significance level 0.01. Besides, the training quality (β=0.467) affected student's satisfaction with significance level 0.01. In addition, three factors of human resources (β=-0.173), training facilities (β=-0.040) and technology capabilities (β=0.087) did not affect the student's satisfaction with significance level 0.01.

This study is to find out the training quality (β=0.467) affected student's satisfaction with significance level 0.01 at LHU. The researchers surveyed 400 students (389 processed) studying full time at LHU and answered 20 questions. Data collected from July 2017 to March 2018 at LHU. The paper Cronbach's Alpha, had been analyzed KMO test and the result of KMO analysis which used for SEM. student's responses measured through an adapted questionnaire on a 5-point Likert scale (Conventions: 1: Completely disagree, 2: Disagree, 3: Normal; 4: Agree; 5: completely agree). The researchers had managerial implications policymaker of LHU continued to improve the training quality. The 4.0 Industrial Revolution is a combination of the achievements of the previous three industrial revolutions in the digital world. LHU can easily get information and learn the way they want. This revolution will change the LHU in the future.

Managerial Implications

Human resources (β=0.378) have the strongest impact on the training quality:

1. LHU continues to improve the professional qualifications of faculty lectures constantly improve to meet the requirements of international integration. This helps lecturers of LHU have actively participated in training and research and application of science and technology and be an opportunity to improve the quality of education and training.
2. LHU continues to improve teaching lecturers and always involved in scientific research and guidance for students. In order to develop the knowledge economy and actively integrate into the world, scientific research activities are always paid attention to by LHU. Along with teaching activities, scientific research activities are considered one of the two most important tasks of the lecturers.
3. LHU continues to improve international cooperation in improving the quality of lecturers promoted in depth. International co-operation is an opportunity for LHU to build in-depth teaching and research specialists in the field of training, which is an opportunity for faculty lecturers to exchange academic and research experiences with their international universities.
4. LHU continues to improve informatics and foreign language skills for lecturers, especially young lecturers, initially meet the requirements of international integration. The 21st century is seen as a century of global

citizenship, so to educate global citizens who understand and initially practice the demands of global citizens. One of the basic requirements is to have computer skills, foreign languages to integrate in global training.

5. LHU continues to improve to attach importance to raising the level of political theory and applied IT for teaching students in the development of lecturers. LHU continues building up a contingent of lecturers with higher IT theoretical qualifications is always considered as an important task, contributing to the success of the LHU's sustainable development goals.

Training facilities (β=0.257) have the second impact on the training quality:

1. LHU continues to improve the learning environment for students, meeting the requirements of innovation and improving the quality of training, in recent years, LHU continues to focus on perfecting the system of material facilities, teaching and learning equipment, meeting the requirements of training renewal in the direction of developing the capacity and quality of learners. LHU continues to build the projects not only create a new face for higher education in the central studying for students, but also promote and motivate the LHU to continue their efforts to improve the quality of training, meeting the increasing demand of human resources of society.

2. LHU continues to invest and to improve the Website that is a place to provide and exchange information publicly on the Internet. A website can include many pages, including a home page, which is the first page displayed when a website is opened. Information on websites is transmitted by multimedia techniques: text, audio, voice, graphics, charts, images, video, and live television. Information can be accessed through other hyperlinks.

3. In addition to the emphasis on improving the quality of training with highly qualified trainers and standardized training programs. LHU continues to invest modern facilities for training and researching. This helps students improve the promotion of physical facilities is one of the factors contributing to the success of the LHU training quality. With the desire to create an exciting learning environment that brings creativity in students, LHU will create a great place with modern facilities in Dong Nai province, Vietnam and together with research and training tasks.

4. LHU should build a laboratory system, laboratories equipped with modern machinery and equipment for each sector or field of study. Besides, LHU should build modern facilities, advanced equipment with new generation high-end computer system, presentation room is equipped with big screen, soundproof, silver swallow studio that is committed to providing the highest level of customer satisfaction through the use of advanced techniques, techniques and software, such as Pro Tools, 3DS Max, 3D Maya, Zbrush, etc.

Technology capabilities (β=0.157) have the less impact on the training quality:

1. LHU continues to improve information on scientific research and technology transfer, trial production and consultancy. LHU list of projects or titles of scientific and technological tasks in the most important tasks or from the time of establishment to newly established tertiary education establishments, the lecturer presiding over and the members joining in domestic and international partners and LHU funds for implementation, product summary of the project or research and practical application.

2. LHU has scientific conferences and seminars in educational and training activities: the name of the conference topic, the scientific workshop, the purpose of the workshop, expected results after the workshop, time and place of organization, number of attendees and full year records, presentation of the workshop. LHU continues to improve scientific research works including the full re-posting of articles published in the proceedings of scientific seminars, scientific and technological journals in and outside the country by IT. Information on scientific research activities of students.

3. LHU continues to improve information on educational technology, e-learning and organize e-learning online for students to refer, support self-study. Besides, LHU continues organizing online training services for all forms of training such as regular training, distance education and training. LHU continues to exchange of experience in applying information technology in teaching and learning.

4. LHU continues to improve to have organization of virtual meeting rooms and classes via the web and to have meetings between educational institutions and other organizations at home and abroad. LHU

continues to improve Online teaching between places directly under higher education institutions, with domestic and international partners; LHU continues to improve the organization participates in the council to protect theses and dissertations online for remote members by information pages in foreign languages and information on international cooperation.

Despite the highlighted contributions of this research, some limitations have to be taken into research results, thereby serving as proposals for future research. First of all, our model is tested on a sample of other universities in Vietnam, so that the level of representativeness of the sample can be affected. This situation is addressed using the SEM, although the success is dependent on the accuracy of the selection made by the students at LHU. Secondly, despite the high explanatory power of the model, it could be reinforced by adding control variables, such as the personal characteristics of students, lecturer quality, science research quality... On the other hand, given that the study explores a situation that groups together all possible study online contexts, it could be of interest for research to specify online studying situations for different purposes based the internet. Thirdly, future research is to explore the dimensionality of the quality of the website at LHU in function of the different situations of getting the information and the different supports or screens used by students is an interesting line of online research. Finally, the analysis of the longitudinal databases available to students should allow them to make comparisons over time as a result of eventual changes in the variables.

REFERENCES

Abdullah, F. (2006). Measuring service quality in higher education: HEdPERF versus SERVPERF. *Marketing Intelligence & Planning, 24*(1), 31-47.

Benešová, A. (2017). Requirements for education and qualification of people in industry. *Procedia Manufacturing*, *27*, 2019-2022.

Brown, S. (2011). Bringing about positive change in the higher education student experience: A case study. *Quality Assurance in Education, 19*(3), 195-207.

Debnath, R.M. (2012). Improving service quality in technical education: Use of interpretive structural modeling. *Quality Assurance in Education, 20*(4), 387-407.

Douglas, J.D. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education, 14*(3), 251-267.

Gallifa, J. (2010). Student perceptions of service quality in a multi-campus higher education system in Spain. *Quality Assurance in Education, 18*(2), 156-170.

Hadullo, K. (2017). A model for evaluating e-learning systems quality in higher education in developing countries. *International Journal of Education and Development using Information and Communication Technology, 13*(2), 185-204.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate Data Analysis with Readings (Fifth Edition).* US: Prentice-Hall: Upper Saddle River, NJ, USA.

Hill, Y.L. (2003). Student's perceptions of quality in higher education. *Quality Assurance in Education, 11*(1), 15-20.

Ibrahim, M.Z. (2014). Determining Factors of student's satisfaction with malaysian skills training institutes. *International Education Studies, 7*(6), 9-24.

Lagrosen, S.S.H. (2004). Examination of the dimensions of quality in higher education. *Quality Assurance in Education, 12*(2), 61-69.

Lien, P.T. (2017). Training service quality and its effects on student satisfaction: Case of a vietnam university. *International Journal of Academic Research in Business and Social Sciences , 7*(4), 99-102.

Masoumi, D. (2012). Quality in e-learning: a framework for promoting and assuring quality in virtual institutions. *Journal of Computer Assisted Learning, 28*(1), 27-41.

Mayoka, K. (2012). An analysis of elearning information system adoption in ugandan universities: Case of makerere university business school. *Information Technology Research Journal, 2*(1), 1-7.

Meštrović, D. (2017). Service quality, student's satisfaction and behavioural intentions in stem and ic higher education institutions. *Interdisciplinary Description of Complex Systems, 15*(1), 66-77.

Mtebe, J.A. (2014). A model for assessing learning management system, success in higher education in sub-saharan countries. *The Electronic Journal of Information Systems in Developing Countries, 61*(7), 1-17.

Parpala, A.S.Y. (2011). Student's conceptions of good teaching. *Assessment & Evaluation in Higher Education, 36*(5), 549-563.

Sackey, S. (2016). Industrial engineering curriculum in industry 4.0 in a south african context . *South African Journal of Industrial Engineering, 27*(4), 101-114.

Shah, M. (2012). Ten years of external quality audit in Australia: evaluating its effectiveness and training quality. *Assessment and Evaluation in Higher Education, 37*(6), 761-772.

Truong, H.V. (2016). Service quality and students level of satisfaction in private colleges in Vietnam. *International Journal of Financial Research, 7*(3), 121-128.

Widaryanti. (2016). The students satisfaction oriented: academic service improvement strategy, department of aquatic resources management, bogor agricultural university, Indonesia . *Journal of Education and e-Learning Research , 3*(3), 98-105.

Yin, H.A. (2015). Assessing and improving the quality of undergraduate teaching in. *Assessment and Evaluation in Higher Education, 40*(8), 1032-1049.

Yin, H.L. (2014). Unmasking the teaching quality of higher education: student's satisfaction. *Assessment and Evaluation in Higher Education, 39*(8), 949-970.