Factors developing Logistics skills of students at Ba Ria-Vung Tau University, Viet Nam

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Abstract: *The globalization of trade has demonstrated the importance of logistics in the world economy. Effective development of logistics services will contribute to increasing the competitiveness of the economy and the country. In recent years, logistics services have been focused on developing in Vietnam. However, one of the barriers to the development of logistics in Vietnam is the shortage of vocational skills of human resources operating in the industry.We conduct research on the qualifications of Logistics students at Ba Ria -Vung Tau University, Vietnam, resulting from the following factors: Health, Industrial behavior, business Logistics, communication skills, problem-solving skills impact on Logistics skills. Factors affecting the development of Logistics skills will help to train Logistics skills of students of Ba Ria - Vung Tau University in order to contribute to the development of logistics services in Ba Ria-Vung Tau Province.*
Key Word*: training, satisfaction, logistics, human resources, factors.*

I. Introduction

Logistics is a commercial activity organized by merchants performing one or more stages including receiving goods, transportation, warehousing, customs clearance and papers, consulting customers, packaging, delivery or other services related to goods for remuneration (National Assembly,2015) . The term Logistics has been mentioned a lot recently, especially in the field of seaports, international transportation, and freight.

Logistics is the management of the flow of goods, information and other resources, including energy and people, between the point of origin and point of consumption to meet consumer requirements. Logistics involves information integration, transportation, inventory, warehousing, material handling and packaging (Wikipedia). Logistics is the process of optimizing the activities of transporting and storing goods from production to final consumption through a series of economic activities (Van, 2003).   Logistics is a series of continuous activities, closely related to each other, mutual interaction is carried out scientifically and systematically through research, planning, organization and management steps. , carry out, inspect, control and perfect activities including jobs related to supply, transportation, production tracking, warehousing, distribution procedures, customs .... Therefore, logistics is a process that involves many different activities within the same organization, from developing a strategy to specific and specific activities to implement the strategy (Tuan. 2015). Logistics is the process of planning and coordinating activities to deliver products or services to customers around the world. Activities related to logistics may include: customer service, transportation, purchasing, inventory and warehouse management, forecasting, strategic planning, etc. The goal of these activities is to meet End customer needs. In other words, logistics activities ensure the delivery of the right product with the right quality, right condition to the right customer at the right place, at the right time at the right price (seven right in logistics, Van,2006) .

In recent decades, globalization in the economy has made the world an open market. That requires businesses to promptly meet customer needs, reduce order fulfillment time, maintain quality with reasonable costs and flexibility to achieve a competitive advantage. And the solution to this is the need for an efficient logistics system (Ronald,1987) . The importance of logistics can be summarized in several points as follows:

Logistics has a great impact on the national economy and the world: logistics facilitates the exchange in the market, provides the main labor force and is the main buyer of assets and materials in the background economy.

Logistics plays a very important role in human existence: the logistics system provides the availability of food, water, medicine and other materials necessary for human existence continuously.

Logistics has a strong impact on the quality of life: the logistics industry employs workers all over the world, providing cost-effective ways of distributing goods locally and worldwide. The more affordable the price of goods, the higher the quality of life.

The globalization of trade has demonstrated the importance of logistics in the world economy. Developing effective logistics services will contribute to increasing the competitiveness of the economy and the

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country. In recent years, logistics services have been focused on developing in Vietnam. However, one of the barriers to the development of logistics in Vietnam is the shortage of vocational skills of human resources operating in the industry. The paper provides basic issues as well as trends in logistics skills requirements in the current period.

Logistics involves many important business activities. Any business that produces or buys and sells products needs logistics experts to manage the product and information flow within the business, the region and the world. Service providers such as hospitals, restaurants or hotels also need to manage logistics operations. Figure 1 is an example of the types of businesses and organizations that a logistics staff can work.

In the study career in Logistics conducted by the Council of Supply Chain Management Professionals (Mangan and Christopher 2005; Hartnut, 2011) pointed out that there is no single career or career path for employees. logistics. Besides jobs focused on logistics and supply chain functions such as transportation management, warehousing, production planning, procurement, information systems, customer service, etc. Logistics may be affected by the size, type, geographical scope and organizational structure of businesses or organizations.

Logistics skills of students are career skills after graduation: Information flow management; cargo flow management; money flow management (Council, 2017). Students 'Logistics skills are defined and measured in two aspects: (1) Employers' satisfaction with their employees; (2) Satisfying according to the components of work that employees bring to employers (Harold; Mark and Heinz, 2008). Model of research on satisfaction (Dale, 1962), working skills focus on factors: Personal qualities expressed through personality, education, health, loyalty, personality of employees dynamic. To identify models suitable to the conditions in Ba Ria-Vung Tau Province. The research team investigated students studying Logistics at Ba Ria-Vung Tau University, Vietnam and identified the following factors:

Component 1- Health : Expressed through endurance at work, labor intensity, height and weight . Including human health : Expressed through endurance at work, labor intensity, height and weight.

Component 2-Industrial behavior: Level of concentration in work, progressive spirit in work, accountability, observance of rules, time , care, accuracy in work, cooperation labor room.

Component 3-Business Logistics :Customs, warehouse, freight, Information technology, marketing. Skills in customs declaration procedures, customs laws, concepts of types of warehouses, goods, and skills to arrange goods on shelves. skills of making bill of lading for the mode of transportation and use of computer software, internet and marketing (Logistics,2017)

Component 4-Communication skills: Communication skills, teamwork skills, english skills, information technology, creative thinking skills. The participants revealed the same factors with the previous review in literature review including being confident in communication, opening their relationship, improving teamwork skills, developing creative and more flexible (Thuan and Han, 2019). Students can study other foreign languages: French, Japanese, Chinese, Korean, but the second language has more difficult factors than learning English in Logistics skills (Han,2019).

Component 5- Problem-solving skills: Completed workload, efficiency, achieved work results, unsatisfactory labor results. Employees with good work results must identify ways to solve problems and work motivation..

II. Material And Methods

With the aim of studying factors affecting the development of vocational skills of Logistics students at Ba Ria - Vung Tau University, Vietnam. Since then, helping Ba Ria - Vung Tau University train human resources to meet employers and propose solutions to train Logistics human resources in Ba Ria - Vung Tau province

Study Design: Prospective open label observational study
Study Location: This is a study at the School of Economics - Law - Logistics, Ba Ria - Vung Tau University, Viet nam.

Study Duration: October 2019 to December 2019.
Sample size: 200 students. The survey table consists of 25 observed variables so the minimum number of study elements is: 5 * 25 = 125 (Hair et al. 2006)
Sample size calculation: The sample size is estimated based on a simple ratio design. The total number of target students that we randomly selected our sample is considered to be 500. We assume that the confidence interval is 10% and the confidence is 95%. We conducted a convenient sampling to select 200 students out of 500 students (Trong and Ngoc, 2008) studying Logistics at Ba Ria - Vung Tau University, Viet Nam. The actual sample size obtained for this study was 50 students per group. We plan to include 50 students (Group I- first year students; Group II- second year students; Group III- third year students; Group IV- fourth year students , cases of 50 patients for each group).

Subjects & selection method:T he study subjects were drawn from Logistics students at the School of Economics - Law - Logistics, Ba Ria - Vung Tau University, Vietnam , each group has 50 students
The object of study is as follows:
Group I (n = 50 students istudying in year 1)
Group II (n = 50 students studying in year 2)
Group III (n = 50 students studying in year 3)
Group IV (n = 50 students studying in year 4).

Inclusion criteria:
 1.Health (H)
 2.Industrial behavior (I)
 3.Business Logistics (B)
 4.Communication skills (C)
 5. Problem-solving skills (P)
 6. Logistics skills (L)

Research questions
Question 1: Health (H): Expressed through endurance at work (H1), labor intensity (H2), height and weight (H3).
Question 2: Industrial behavior (I): Level of concentration in work (I1), progressive spirit in work (I2), accountability (I3), observance of rules (I4), time (I5), care(I6),accuracy in work (I7), cooperation labor room(I8).
Question 3: Business Logistics (B):Customs (B1), warehouse (B2), freight (B3), Information technology(B4), marketing (B5).
Question 4: Communication skills (C): Communication skills (C1), teamwork skills (C2), english skills (C3), information technology(C4), creative thinking skills (C5).
Question 5: Problem-solving skills (P): Completed workload (P1), efficiency (P2), achieved work results (P3), unsatisfactory labor results (P4).
Question 6: Logistics skill (L): Information flow management (L1); cargo flow management (L2); Money flow management (L3).

Answer: Interview responses using a 5-level Likert scale (Likert R.A., 1932) give the following scores:
>   1- Absolutely not good;
>   2- Not good;
>   3- Average;
>   4- Good;
>   5- Very good
 The bigger the score, the higher the agreement level

Statistical analysis
We used IBM SPSS (Statistical Package for Social Science) version 20 to calculate the reliability of the questionnnaires before analyzing the results.
        The finding was found that the number of Cronbach Alpha was > 0.7. Moreover, each question in the survery had the number bigger than 0.7.
 Test KMO and Bartlett's Test, 0.5 <KMO <1, discovering factor analysis is suitable for real data.
 Regression coefficients to determine the coefficient of the influencing factors Use the Spearman test to determine the absolute value of standardized residuals.
   The level $\alpha < 0.05$ was considered as the cutoff value or significance.

III. Result

Step 1 Factor analysis
In the province of Ba Ria-Vung Tau, the research team determined the main factors affecting students' Logistics skills. We studied 5 scales representing the influencing factors (25 observed variables) and 1 scale representing students' Logistics skills (with 3 observed variables). Through Cronbach Alpha test, we get the following results:

Table no 1   Typical variables and good quality scales

The scale	Variable	Cronbach Alpha of the scale
H	H1, H2,H3	0,905
I	I1,I2,I3, I4, I5, I6, I7, I8	0,931
B	B1, B2,B3,B4,B5	0,946
C	C1,C2,C3,C4,C5	0,922
P	P1,P2,P3,P4	0,935
L	L1, L2, L3	0,833

After 3 months of follow upmit was found that table no 1 Shows the scales have the required reliability because it is greater than 0.7, of which the lowest is the Logistics skill scale of students with $\alpha = 0.833$, and the highest is the logistics business scale of students with $\alpha = 0.946$.

Testing the suitability of EFA

Table no 2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,784
Bartlett's Test of Sphericity	Approx. Chi-Square	3.911,643
	Df	200
	Sig.	0,000

Table no 2 Shows KMO = 0.784, satisfying the condition: 0.5 <KMO <1, discovering factor analysis is suitable for real data.

The tests for the quality of the scales and the EFA model tests, identify 5 scales representing the factors affecting students 'Logistics skills and 1 scale representing students' Logistics skills with 28 characteristic variables

Step 2 Multivariate regression

To identify factors affecting Logistics skills of students studying Logistics at Ba Ria-Vung Tau University, Vietnam, the overall correlation model has linear regression form $L = \beta_0 + \beta_1 F_1 + \beta_2 F_2 + \beta_3 F_3 + \beta_4 F_4 + \beta_5 F_5 + e_i$. In which: β_1, β_2…. , β_k are the coefficients to be determined using the correlation between students' Logistics skills and the influencing factors. The variables included in the regression analysis are determined by scoring the factors

Testing Regression coefficients

Factors affecting Logistics skills of students are important to propose solutions and adjust skills training for students. The testing results are as follows:

Table no 3 Coefficients[a]

Model	Unstandardized Coefficients B	T	Sig.
(Constan)	0,000	,000	1,000
F1- H	,155	2,046	,043
F2- I	,157	2,068	,041
F3- B	,242	3,191	,002
F4- C	,156	2,049	,042
F5- P	,360	4,748	,000

Table no 3 Shows :

- Health variables (F1), industrial style (F2) and communication skills (F4). <0.05, so industrial wind behavior is significantly correlated with students' Logistics skills with 95% confidence.
- Business Logistics variable (F3) and problem solving skills (F5) have significant Sig. <0.01, so the Logistics business variable significantly correlates with the Logistics skills of students with 99% confidence.
 From the results of the above table test, we have the regression function of Logistics skills of Logistics major students at Ba Ria - Vung Tau University, Vietnam:

L (Y) = 0,000 + 0,157 (F1) +0,242 (F2) + 0,360 (F3) + 0,156(F4) + 0,155(F5)

The regression function can see, among 5 test factors are positively associated with students' Logistics skills. In which, business Logistics with regression coefficient $\beta_3 = 0.360$ (Sig = 0,000) has a high significance, strongly affecting Logistics skills of Logistics students at Ba Ria - Vung Tau University, Vietnam.

Test the suitability of the model
- Level of explanation of the model: Logistics skills of students studying Logistics at Ba Ria - Vung Tau University are explained by the factors (health-H, industry style -I, Business Logistics-B, communication skills - C, problem solving skills-P) Test results on IBM SPSS 20 software are as follows:

Table no 4 Model summary

R	R Square	Adjusted R Square	Change Statistics Sig. F Change	Durbi-Watson
0,513ᵃ	0,263	0,229	0,000	0,775

Table no 4 Shows the overall correlation coefficient is R = 0.513, which shows that the Logistics skills relationship of students with other factors tested is relatively close. With 5 factors of verification explained 26.3% (R2 = 0.263) changes in students' Logitics skills. Thus, changes in Logistics skills of students studying Logistics at Ba Ria - Vung Tau University are explained by independent variables: .Health-H, industry style-I, Business Logistics-B, communication skills-C, problem solving skills-P.
- Relevance: Analysis of variance with Sig. <0.01, it can be concluded that the given model is consistent with the actual data. In other words, the independent variables are linearly correlated with the dependent variables with 99% confidence.

Test of constant residual variance
Use the Spearman test. Determine the absolute value of the standardized balance. We put the ABSRES variables, and the independent variables have passed meaningful guarantee tests (F1, F2, F3, F4, F5) into Spearman test, we get Spearman test results of variables F1, F2, F3, F4 and F5 have significance levels (Sig.) Greater than 0.05. Through the regression model tests, the variables have statistical significance including: F1, F2, F3, F4 and F5.

Discuss regression results
The non-standardized regression coefficient determines the location of the effects of the independent variables as follows: Business Logistics variable contributes 33.64%, industrial style change contributes 22.62%, health contributes 14.67%, communication skill variable 14.58%, problem solving skill contributed 14.49%. Thus, the order affecting Logistics skills of students studying Logistics at Ba Ria - Vung Tau University, Vietnam is business Logistics, industrial behavior, health, communication skills, turn problem solving skills on.

IV. Discussion
The sample we surveyed is 200 students (Hair et al. 2006) who are studying Logistics at Ba Ria-Vung Tau University, Vietnam for 3 months (From October 2019 to November 2019). The total number of students studying Logistics is 500, so the number of samples (N = 200) accounts for 40% of the total number of students studying Logistics. We divide the survey of students from Year 1 to Year 4 each of our 50 survey groups. Each student only surveyed 5 groups of criteria (25 observed variables) and 1 scale representing students' Logistics skills (with 3 observed variables): health-H, industrial behavior -I, Business Logistics -B, communication skills-C, problem-solving skills-P. For groups health criteria we conduct from 1 to 5 points for each criterion to evaluate the actual student performance of performance through endurance at work; labor intensity, height weight. Each evaluation criterion was assigned a job to 200 students by the research team to compare the evaluation of the score from 1 point to 5 points.
Data were processed by IBM SPSS (Statistical Package for Social Science) version 20 using Cronbach Alpha test methods, KMO and Bartlett's Test tests, Coefficientsa, and Spearman tests. From the testing methods, we prove that Logistics skills of students have influences on Logistics business factors, industrial behavior, health, communication and problem solving skills.
5 groups of factors affecting logistics skills of students of Ba Ria - Vung Tau University, Vietnam, the group of business logistics factors including customs declaration procedure skills, management practice, and arrangement warehouse, freight transport by means of transport (road and air transport, sea), Practical skills of information technology applications in Logistics and Marketing.

V. Conclusion
Ba Ria-Vung Tau Province is a logistics service center of the country and the region, as a "future port city", the development of Logistics human resources is very important. In this article, I have pointed out the impact of a skilled business logistics workforce on logistics performance. The paper also outlines the skills requirements required to work in logistics business. After 3 months of studying the factors affecting Logistics skills of students studying Logistics at Ba Ria-Vung Tau University, these variables include: Business Logistics

variable contributes 33.64%, industrial style changes. 22.62%, health variables 14.67%, communication skills 14,58%, problem solving skills 14.49%.

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