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# Students' Satisfaction with the Quality of Car Driver Training at Training Centers in Ho Chi Minh City

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# ABSTRACT

This study was conducted to find out the satisfaction of learners with the quality of car driving training at training centers in Ho Chi Minh City (HCMC) based on learners' perceptions and expectations. This study will help the administrators of driving training centers to better understand the quality of training and the satisfaction of learners, thereby making reasonable adjustments to improve the training quality to attract learners. 850 students studying at the center and graduates working in enterprises were surveyed. Data were collected and analyzed using statistical tools including Cronbach's Alpha reliability assessment, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and linear structural model (SEM) with the help of SPSS and AMOS software. The results of the author's analysis have shown that learners' satisfaction with the quality of car driving training at training centers is affected by 8 potential factors, with the level of impact arranged in the following order based on learners' perceptions and expectations: Administrative staff ( $\beta$  = 0.002), Reputation of training unit ( $\beta = 0.097$ ), Training program ( $\beta = 0.013$ ), Cost of training fee ( $\beta = 0.104$ ), Teaching staff ( $\beta = 0.138$ ), Training organization and management ( $\beta =$ 0.152), Facilities ( $\beta = 0.172$ ), Support services ( $\beta = 0.212$ ). At the same time, the study also shows that the quality of training services also affects the satisfaction of learners ( $\beta = 0.286$ ).

**Keywords:** training quality, learner satisfaction, car driver training, car driving training quality, car learner satisfaction

#### **INTRODUCTION**

Currently, in Ho Chi Minh City, there are many car driver training institutions, which have long been invested and renovated in teaching equipment, content, and programs. Training is built, adjusted gradually to suit reality and uniformly applied nationwide, the quality of lectures and tests is increasingly enhanced by the introduction of electronic lectures into teaching and testing the theory on the computer installed with the software of the Directorate for Roads of Vietnam.

In recent years, in general, driver training in our country is being implemented more and more closely, in the direction of increasing responsibility, ensuring consistency, publicity and transparency, thereby improving the quality of driver training. However, in addition to the results achieved in driver training, through inspection and inspection, there are still some limitations and shortcomings in some of the following main contents: some driver training institutions vehicles and especially contract training centers have not fully implemented the program, some theoretical subjects have not been paid enough attention. In the practice of road driving, there is a load driving lesson, but the training institutions do not fully implement it, although the time for this lesson occupies a large proportion. The content and training program do not comply with the registered regulations, the number of trainees exceeds the regulations, skipping some stages in the training process, skipping exams and considering graduation. On the other hand, the quality of driving instructors and driving teaching methods are sometimes inconsistent, not forming skills for students, leading to quality. Vocational training for car drivers has not met the requirements and has not met the

standards. It is very necessary to study the learner's satisfaction with the quality of car driving training at training centers in Ho Chi Minh City.

## THEORETICAL BASIS AND RESEARCH MODEL

#### **Training Services**

# Service concept

Currently, there is no uniform definition of service; the diversity and complexity of service types makes it difficult to unify the concept of services. Kotler (2001) argues that a service is considered as a measure or benefit that one party can provide to another and is essentially imperceptible and does not lead to the appropriation of something. According to Gronroos (1990), service is an activity or a series of activities of more or less intangible nature in which there is interaction between customers and employees who approach customers. Zeithaml and Britner (2000), services are ways of doing something to satisfy the needs and wants of customers. In other words, a service is an act, process, or way of doing a certain job in order to create use value for the customer to satisfy the needs and expectations of the customer. According to Philip Kotler and Armstrong (2004), services are activities that businesses provide to customers in order to establish, strengthen and expand long-term cooperative relationships with customers.

In summary, there are many concepts of service expressed from different angles, but in general, service is "any activity in different sectors of the economy aimed at meeting the needs of consumers, users of that service". Services are considered as an activity field of the national economy, including all activities for production, business and social life.

# Training services

Training is a concept that includes various formal and informal activities aimed at fostering moral, intellectual, physical, aesthetic and skills for learners based on human cultural value systems. Cerri (2012), the nature of services in training is quite complex because training is a process and has a variety of influencing variables. According to Zhiqin et al. (2012), training services refer to the services provided by the training system to meet the specific training needs or potential needs of a certain department. The dynamic and interactive nature of training can be viewed as a system of internal and external environments; inputs, processes and outputs/products (Sahney, 2002). Eriksen (1995) believes that the input is the learner, the object that undergoes a transformation process, thereby creating the output. Meanwhile, according to Jaraiedi and Ritz (1994) training system inputs are learners, faculty and staff, funding, facilities and objectives of the training unit, and the processes involved training, teaching, learning, mentoring, consulting, tutoring and evaluation. Gupta (1993) defines learners, faculty, administrators, financial support and facilities as inputs to the training system; and activities undertaken to disseminate knowledge, conduct research and provide community services are processes of the training system. Regarding training output, there is currently little consensus among authors on the output of training (Shutler & Crawford, 1998). Freeman (1993) and Ellis (1993) argue that the product of training is the provision of learning opportunities.

Thus, it can be said that training service is a special type of service in which learners receive and consume training courses provided by training institutions and become priority customers of training activities. Learners can play multiple roles, both as a customer, as a producer, and as a product. Accordingly, training institutions, using the input of learners, lecturers and staff, and funding sources from the external environment, transmit teaching, learning, administration and research processes into the environment its inside. The output is graduates with enhanced competence and new knowledge generated by research, which will be exposed to the external environment. The quality of the incoming learners is assessed

through a screening and selection process with criteria set forth by the school's faculty and staff.

# **Quality of Training Services**

# Service Quality

Like the concept of service, there are many concepts of service quality depending on the point of view, research object and research environment Gronroos (1984) suggested two components of service quality: technical quality, which is what the customer receives, and functional quality, which describes how the service is delivered. Parasuraman et al. (1988) define service quality as the difference between consumers' expectations of a service and their perception of service outcomes. Crosby (1982) argues that service quality is the conformity to the needs. According to Feigenbaum (1991), service quality is a customer's decision based on actual experience with a product or service, measured against customer requirements, these requirements can be or unstated, conscious or simply perceived, purely subjective or professional, and always representing a dynamic target for a competitive marketplace (Lewis & Mitchell, 1990; Asubonteng, 1996; Wisniewski & Donnelly, 1996). In studies, service quality is often understood as perceived quality, which results from comparing customer service expectations with their perception of actual performance (Zeithaml et al., 1990). Zeithaml et al. (1993) divide into three types of service expectations to help consumers get a comparison standard in the process of evaluating service quality: expected service; full service; and prediction services.

Thus, although there are many different views, but in general, we can understand that "Service quality is the fulfillment of customers' needs and expectations, in other words service quality is the perception of customers on the degree of responsiveness between expectations and the actual service provided". In this study, the author uses the concept of service quality as perceived quality from the point of view of Parasuaraman et al. (1990).

#### **Quality Training Service**

According to Latif et al. (2017), service quality in the field of training is different from the field of tangible product production, and also different from normal services that only need to be interacted once to decide value of the service received. According to Tsinidou et al. (2010), training services are often intangible and difficult to measure because the results are reflected in the transformation of individuals in terms of their knowledge, characteristics and behaviour. Due to the unique characteristics of training services (Zejthaml et al., 1985), the quality of training services is difficult to measure objectively (Patterson and Johnson, 1993) and conventional definitions of training services quality does not apply to the training industry (Michael, 1998). According to Cheng and Tam (1997), training service quality is a rather ambiguous and controversial concept. They argue that different people may have different conceptions; some emphasize the quality of input to training systems; others prioritize process quality or output quality... There is currently no general consensus on the concept of training service quality, although its importance has been emphasized (Cheng and Tam, 1997); Becket and Brookes, 2006).

There are many ways to define quality in training depending on stakeholders such as learners, parents, local communities, society, and government (Harvey & Green, 1993). Crosby (1979) defined quality as the conformity of the training output to the planned objectives, specifications and requirements. Parasuraman et al. (1985) argue that quality is the meeting or exceeding the customer's expectations for training. Harvey and Green (1993) pointed out that training quality can be grouped into five groups of quality perspectives as follows: (1) quality is excellence, (2) quality is perfection, (3) quality is fit for purpose, (4) quality is value for money and (5) quality is transformation. Parri (2006) said that training quality, can be grouped into the following quality perspectives: (1) Quality is excellence,

excellence; (2) Quality is faultless; (3) Quality is fit for purpose; (4) Quality is transformation, reshaping; (5) Quality is the standard threshold; (6) Quality is enhancement or improvement; (7) Quality is value for money. The quality of training services is the exclusivity of the experiences that learners participate in as part of their entire human development (Roland, 2008). Chen et al. (2007) based on the definition of UNESCO (1998), on the basis of which the authors give the definition of training quality as follows: training quality is a multi-directional concept that includes the following functions: and activities such as curriculum, faculty quality, government, facilities, learner characteristics, management and administration, and interaction systems.

So, the quality of training service is the perception of learners about the quality of service that the school provides related to all aspects such as lecturers, administrative staff, infrastructure, services support, extracurricular activities, school reputation, appropriate training costs, equity.

# **Satisfaction with Training Quality**

#### Satisfaction concept

There are many different evaluation points of satisfaction. Satisfaction is their response to the perceived difference between known experiences and expectations (Parasuraman et al., 1988; Spreng et al., 1996). That is, the customer's known experience of using a service and the results after the service is provided. Kotler (2001) states that satisfaction is the level of a person's feeling state that results from comparing the results obtained from the product/service with the person's expectations. Expectations here are considered human wishes or expectations. Meanwhile, according to Zeithaml (2000), customer satisfaction is the consideration of whether a service or product satisfies their needs and expectations. Jamal and Kamal (2002) describe customer satisfaction as a customer's feeling or attitude towards a product or service after using them. In the process of studying customer satisfaction with service quality, Parasuraman et al. (1988) said that customer satisfaction with service quality and quality achieved. It can be seen that satisfaction refers to the comparison between perceptions and expectations (Alves & Raposo, 2009). Customers will evaluate which item offers the highest value within their budget given their level of knowledge, ability, motivation and income.

Thus, customer satisfaction represents a perceived state in which the customer's demand for the value of the products and services provided is lower/equal to or above the customer's expectations and leads to customer loyalty. At the same time, the level of satisfaction is a function of the difference between the results received and the expectations. Customers may experience one of three levels of satisfaction: If the performance is worse than expected, the customer will not be satisfied. If the performance results match the expectations, the customer will be satisfied. If the actual results exceed the expectations, the customer is very satisfied and delighted.

# Satisfaction with training activities

The concept of satisfaction has also been extended recently to the context of training. Literature analysis reveals a lack of consensus on the concept and measure of satisfaction with services in general (Radomir et al., 2012; Souca, 201; Tăchiciu et al., 2011) and with services training in particular (Navarro et al., 2005; Yildiz & Kara, 2009). The number of studies is still limited showing that learner satisfaction is a complex concept, including many measures (Marzo-Navarro et al., 2005; Richardson, 2005). Learner satisfaction is an increasingly important indicator of the quality of teaching performance and can also be seen as a measure of the outcome of the educational process (Ramsden, 1991).

Some studies believe that learners' satisfaction is related to their perceptions and experiences with learning at school (Alves & Raposo, 2009; Gruber et al., 2010; Zineldin et

al., 2011). Elliott and Shin (2002) describe learner satisfaction as the support of a subjective assessment of learners with diverse training-related outcomes and experiences. Learner satisfaction is continuously being shaped by repeated experiences in learners' lives.

Student satisfaction can be seen as a comprehensive assessment of the training activities provided by the school, meeting the learners' expectations. With this in mind, education managers should understand that ensuring a high level of satisfaction by providing quality educational services is a must to retain learners (Li-Wei, 2005) because many Research shows that learners' satisfaction is the most influential factor on student loyalty (Helgesen & Nesset, 2007; Brown & Mazzarol, 2009), affecting learners' active participation in the learning process training programs (Finney & Finney, 2010), the continued pursuit of training programs and the referral of the educational institution to others (DeShields et al., 2005).

In summary, student satisfaction used in the thesis is the level of student satisfaction with the decision to attend the school, the school experience and the overall satisfaction with that school.

## The relationship between service quality and customer satisfaction

The relationship between service quality and customer satisfaction is a topic that has been continuously discussed by researchers over the past decades. Through many studies, service quality and customer satisfaction are two distinguishing concepts. Parasuraman et al. (1993) said that between service quality and customer satisfaction, there are some differences, the main difference being the "cause and effect" issue. Zeithalm and Bitner (2000) argue that customer satisfaction is affected by many factors such as product quality, service quality, price, situational factors, and personal factors. Service quality and satisfaction are two different concepts but closely related in service research (Parasuraman et al., 1988). Previous studies have shown that service quality is the cause of satisfaction (Cronin & Taylor, 1992; Spreng & Taylor, 1996). The reason is that service quality is related to service delivery, while satisfaction can only be assessed after using the service.

Customer satisfaction as an outcome, service quality as a cause, satisfaction is predictive and expected; Service quality is an ideal standard Customer satisfaction is a general concept, expressing their satisfaction when consuming a service. Meanwhile, service quality focuses only on specific components of the service (Zeithaml & Bitner, 2000). Although there is a relationship between service quality and satisfaction, there are few studies that focus on testing the explanatory level of service quality components for satisfaction, especially for each customer specific service industries (Lassar et al., 2000). Cronin and Taylor tested this relationship and concluded that perceived service quality leads to customer satisfaction. Studies have concluded that service quality is an antecedent of satisfaction (Cronin & Taylor, 1992; Spereng, 1996) and a major factor affecting satisfaction (Ruyter, Bloemer, 1997).

Thus, service quality is a factor that greatly affects customer satisfaction. If a service provider provides customers with quality products that satisfy their needs, that carrier has initially made customers happy. Therefore, to improve customer satisfaction, service providers must improve service quality. In other words, service quality and customer satisfaction are closely related, in which service quality is the first thing that determines customer satisfaction.

#### **Research Models**

# The quality of training services affects learners' satisfaction

In training activities, many scholars have studied the impact of different aspects of training service quality on learner satisfaction. Browne et al. (1998) and Guolla (1999) indicate that the quality of training services is an antecedent of learner satisfaction. Positive

perception of training service quality can lead to student satisfaction and then satisfied learners can attract new learners through positive word of mouth to inform acquaintances and friends, and they may return to the institution to take other courses (Marzo-Navarro et al., 2005; Wiers-Jenssen et al., 2002; Mavondo et al., 2004; Schertzer & Schertzer, 2004).

Winsted (2000); Zeithaml et al. (1990) confirm that service providers will only be able to enter service competitions to satisfy customers if they know what their customers want. Oldfield and Baron (2000) also suggest that there is a tendency to view the quality of training services at the institution from the perception of an organization. They suggest that training institutions pay more attention to what learners want, rather than collecting data based on what the school perceives learners. Ham and Hayduk (2003) confirmed that there is a positive correlation between perception of training service quality and learner satisfaction. Learner satisfaction plays an important role in the success of a training institution and can serve as an essential tool in enhancing its perceived service quality (Firdaus, 2006a). Browne et al. (1998) and Guolla (1999) show that learners' perception of training service quality is a prerequisite for learner satisfaction. Instructors' teaching skills and their interactions with learners can also lead to student satisfaction (Bitner & Zeithaml, 1996). This is supported by Kuh and Hu (2001), who suggested that learner satisfaction is significantly influenced by effective interactions between learners and instructors. Similarly, Kara and De Shields (2004) state that the determinants of learner satisfaction include service quality aspects such as faculty performance, counselor performance, and classes.

# Research model of learner satisfaction with the quality of car driving training at training centers in Ho Chi Minh City

There are many approaches and concepts of "training service quality" and "student satisfaction". The approach of Parasuraman et al. (1988) or Cronin and Taylor (1992) is an approach that is recognized and applied by many studies to measure service quality in most industries, but According to Firdaus (2005), when applying, from the basic measurement framework, we often have to ask to modify the scale to fit the specific situation and often have additional factors. Firdaus (2005) proposed the HEdPERF model to measure the quality in education and training and a number of subsequent studies have shown that the HEdPERF model is an effective tool to measure the quality of training services (Brochado, 2009; Sultan and Wong, 2010). However, in order to get a more general view of using the HEdPERF scale to measure perceived service quality from the perspective of training learners worldwide, Silva et al. (2017) reviewed studies using this scale and found that HEdPERF was not really widely available, as only eleven papers were published between 2005 and 2016.

In the context of the driving training environment in Vietnam in general and in Ho Chi Minh City in particular, along with an overview of models for measuring training service quality and learner satisfaction, in the study In this study, the author uses a combination of 3 models to measure the quality of car driver training services in Ho Chi Minh City: (1) HedPERF model of Firdaus (2005); model of Gamage et al. (2008) and (3) model of Jain et al. (2013). These research models have been carried out in the training sector in Malaysia (Firdaus, 2005), Thailand (Gamage et al., 2008), India (Jain et al., 2013). In these studies, the common variables to measure the quality of training services that affect the satisfaction of car driving learners are: Quality of teachers, quality of training programs, facilities, quality of administrative staff, support services, training organization and management, facilities, reputation of training institution and training costs (Joseph & Joseph, 1997; LeBanc & Nguyen, 1997; Abdullah, 2006; Gamage et al., 2008; Jain et al., 2013).

First of all, teacher quality is a factor mentioned in many studies on training service quality and in the study of Firdaus (2005) and Gamage et al. (2008). In his research, the author suggested that teacher quality is the first factor affecting student satisfaction, and facilities are also mentioned in many factors. Research, in which Gamage et al. (2008)

suggest this factor is the synthesis of facilities and equipment, Firdaus (2005) and Jain et al. (2013). In this study, the author proposed physical facilities, including equipment for learning such as classrooms, practice facilities...For non-academic aspects, many factors are mentioned such as administrative staff (Firdaus, 2005), financial support and tuition fees (Gamage et al., 2008). This is also an aspect that the author focuses on in this study. In addition, the reputation of the training institution is concerned. Especially in the study of Firdaus (2005) and Gamage et al. (2008), it shows the society's evaluation of the training unit and also contributes to the set of criteria for assessing the quality of training services of the trainees learn. Satisfaction is considered the perception or perception of learners about the values provided by the school's training services, how perceived learning outcomes are assessed is a direct factor that creates learner satisfaction. Here is the author's proposed model:



Figure 1: Model of learner satisfaction with the quality of driver training at training centers in Ho Chi Minh City

Source: Synthetic pseudo-group

# **RESEARCH METHODS**

#### Variables and Scales of the Study

From the research model in Figure 1, on the basis of inheriting the scale of previous studies by Firdaus (2005), Gamage et al. (2008), Firdaus (2005), Gamage et al. (2008), Jain et al. (2013), Jain et al. (2013), Gamage et al. (2008), LeBlanc and Nguyen (1999), Jain et al. (2013), Ali et al. (2016), the author conducted qualitative research of 15 people, including 10 experts in vocational training of car drivers and 5 lecturers with seniority and high qualifications at car driving training centers in Ho Chi Minh City. The purpose of the study is to determine the factors affecting the service quality and satisfaction of learners at driving training centers in Ho Chi Minh City. Through the research results, the

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author identified factors and developed 54 observations (questions) including: 8 observed variables for the scale "Teachers"; 6 observed variables for the scale "Training program"; 7 observed variables for the scale "Administrative staff"; 6 observed variables for the scale "Supporting services"; 6 observed variables for the scale "Training organization and management"; 5 observed variables for the scale "Facilities"; 4 observed variables for the scale "Training costs"; 5 observed variables for the scale "Training quality"; 4 observed variables for the scale of "Students satisfaction". The survey questionnaire was completed by the authors after conducting a preliminary study of 200 students and teachers at driving training centers in Ho Chi Minh City (The purpose of the study is to review the statements that ensure consistency, clarity, and not cause confusion for passengers, and at the same time, this study also evaluates the reliability of observed variables to eliminate inappropriate variables).

STT	<b>Observable factors/variables</b>	Observable variable
		encoding
	Teachers	CLGV
1	Teachers ensure that they meet the standard pedagogical qualifications and driving skills as prescribed	CLGV <sub>1</sub>
2	Professional knowledge of teachers to meet the requirements of teaching work	CLGV <sub>2</sub>
3	Teachers teach according to the content of the course program and training plan	CLGV <sub>3</sub>
4	Teachers are dedicated, enthusiastic, and carefully help in teaching	CLGV <sub>4</sub>
5	When I have a problem in my study, the teacher always cares sincerely to solve it	CLGV <sub>5</sub>
6	Teachers have a friendly and approachable attitude towards students	CLGV <sub>6</sub>
7	Teachers communicate well with students in the classroom	CLGV <sub>7</sub>
8	Teachers always provide feedback on my progress	CLGV <sub>8</sub>
	Education program	CTDT
9	The content of the training program is appropriate, helping me develop practical skills	$CTDT_1$
10	The training period from the beginning of the course to the reasonable driving test	$CTDT_2$
11	The volume and structure of the program between theory and practice are appropriate	CTDT <sub>3</sub>
12	Training objectives are clearly defined, specific and publicly announced at the beginning of the course	CTDT <sub>4</sub>
13	The curriculum content is updated and compiled in accordance with current regulations	CTDT <sub>5</sub>
14	The knowledge and skills gained in the courses help me do my job well	CTDT <sub>6</sub>
	Administrative staff	CLNV
15	Administrative staff have better service attitude and respect	CLNV <sub>1</sub>
16	Administrative staffs communicate well with learners	CLNV <sub>2</sub>
17	Ki has problems in his studies, administrative staff are very interested in solving them	CLNV <sub>3</sub>
18	Effective coordination of the departments related to driver training	CLNV <sub>4</sub>
19	Learners' records are carefully stored by administrative staff and easily	CLNV <sub>5</sub>

# Table 1: Expression and coding of component scales

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	retrieved	
	Administrative staff with good knowledge of systems and/or	
20	procedures related to learners	CLNV <sub>6</sub>
	Learners' requests and complaints are handled quickly and	
21	enthusiastically by administrative staff	CLNV7
	Support services	DVHT
22	Provide complete information about training programs, training plans	DUUT
22	of the driving course	$DVHI_1$
23	Provide necessary learning materials and services to learners	DVHT <sub>2</sub>
24	There is a hotline to serve students' feedback	DVHT <sub>3</sub>
25	Center leaders are always interested in quality management in the entire course	DVHT <sub>4</sub>
26	The center is equipped with places to eat and rest for learners	DVHT <sub>5</sub>
27	The center has a learning support department to listen and help learners	DVHT <sub>6</sub>
	Training organization and management	TCOL
• •	The process of organizing the study plan of the subjects according to	
28	the prescribed order	TCQL <sub>1</sub>
20	Decentralization of management, clear functions for departments,	TCOL
29	teachers	TCQL <sub>2</sub>
30	Effective coordination of the departments related to driver training	TCQL <sub>3</sub>
31	The system of books to track the learning process of students is complete	TCQL <sub>4</sub>
32	Create conditions for students who already know how to drive less to participate in learning	TCQL <sub>5</sub>
33	Evaluate learning results seriously, objectively and in accordance with training methods	TCQL <sub>6</sub>
	Infrastructure	CSVC
34	The system of theoretical and practical classrooms ensures standards and quality	CSVC <sub>1</sub>
35	New and safe vehicle for learning to drive	CSVC <sub>2</sub>
36	There is a full driving range and a dedicated road for training	CSVC <sub>3</sub>
37	There are full internal rules and regulations on occupational safety and health, fire prevention and fighting, equipment is arranged neatly and reasonably.	CSVC <sub>4</sub>
38	The center provides full equipment (projector, microphone) to support for	CSVC <sub>5</sub>
	Reputation of the training unit	DTTT
39	Implement measures to prevent negative phenomena in learning assessment tests	$DTTT_1$
40	Student evaluation is done seriously, fairly and objectively	DTTT <sub>2</sub>
41	The media often has articles praising the center	DTTT <sub>3</sub>
42	Implement the recruitment work fairly, objectively and fully publicize the information	DTTT <sub>4</sub>
	Training costs	CPDT
43	Develop competitive tuition fees and other revenues among training institutions	CPDT <sub>1</sub>
44	There is a flexible policy to support tuition fee payment for learners	CPDT <sub>2</sub>
45	Tuition fees are public and transparent for learners	CPDT <sub>3</sub>
	Education quality	CLDT

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46	I am satisfied with the learning results assessed at the center	$CLDT_1$			
47	The knowledge and skills gained from the course will help me do my job well	CLDT <sub>2</sub>			
48	Learning results are evaluated seriously, objectively and in accordance with training methods	CLDT <sub>3</sub>			
49	Decentralization of management, clear functions for departments, teachers	CLDT <sub>4</sub>			
50	50 There is a change in methods and improvement of teaching quality when there is feedback from learners				
	Student satisfaction	SHL			
51	I feel satisfied when I register to study at the Center	$SHL_1$			
53	I think my choice when studying at this center is right	$SHL_2$			
54	I will recommend the center to others who have a need to learn to drive a car.	SHL <sub>3</sub>			
54	I feel that my experiences with this center have been very enjoyable	SHL <sub>4</sub>			
	Source: Author's compilation from qualitative research results				

## **Questionnaire Size and Design**

The optimal sample size depends on the expected reliability, while the optimal sample size depends on the expected reliability, the data analysis method, the estimation method used in the study, and the methods used in the study parameters to be estimated. According to Tabachnick and Fidell (1996), to perform the best regression analysis, sample size n > 8m + 50 (m is the number of independent variables in the model). According to Aprimer, n > 104 + m. The number of observed variables in this study is 54 for 9 groups of factors, so the minimum sample size:  $n \ge 54 \times 5 = 240$  samples or n > 104 + 54 = 158 samples. Therefore, this study chose a minimum sample of 240 to ensure satisfaction for both views of the above researchers. However, to ensure statistics and avoid errors in the research process, the author decided to survey 850 questionnaires.

The survey was conducted with 850 questionnaires preprinted by the author. The survey questionnaire is designed in 2 parts, the first part includes questions related to sociology on age, gender, and occupation, the purpose of learning to drive a car. In the second part, the survey subjects are students studying at the center, graduates who are working in enterprises. When distributing the questionnaire, the author has detailed instructions so that survey takers can fully understand and answer the questions in the questionnaire, avoiding misunderstandings or omitting questions. Through 54 attribute variables related to the quality of driver training at training centers in Ho Chi Minh City according to their perceptions and expectations based on the Likert scale from 1-5 points (1 - Totally disagree, 2 - Disagree, 3 - No opinion, 4 - Agree, 5 - Totally agree).

# **Tools and Techniques Used**

After collecting the data, the author group will check and filter it again with valid data criteria: the survey form must have all the customer's answer items, the answer items must be objective. Data were processed using SPSS 22.0 software. To evaluate the reliability of the scale by Cronbach's Alpha coefficient, calculate the mean value, correlation between observed variables, exploratory factor analysis (EFA), then conduct confirmatory factor analysis (CFA), analyze the linear structure model (SEM) through AMOS 22.0 software. From there, determine the degree of influence of factors on the quality of car driver training at training centers in Ho Chi Minh City based on learners' perceptions and expectations. On the other hand, through data analysis to test the appropriateness of the built model.

# **RESEARCH RESULTS AND DISCUSSION**

# **Summary of Research Sample**

A survey of 850 questionnaires was conducted, with 783 questionnaires being obtained, reaching the rate of 92.12%. Results of checking and filtering votes, including 33 invalid votes. After removing the invalid votes, remaining 750 valid survey votes, the author will proceed to enter the data into the SPSS program for data analysis.

	Sample Description	Criteria	Frequency Ratio (%)
Say	Male	531	70.8
Sex	Female	219	29.2
	Total	750	100
	18 - 30 years old	110	14.7
1 22	30 - 40 years old	314	41.9
Age	40 - 50 years old	230	30.7
	Over 50 years old	96	12.8
	Total	750	100
	Student	143	19.1
Toh	Officers, employees, teachers, lecturers	278	37.1
JOD	Unskilled labor, housewives	242	32.3
	Other	87	11.6
	Total	750	100
	From the media	282	37.6
Know the	From friends and relatives	229	30.5
center	From the training association	149	19.9
	Other	90	12.0
	Total	750	100
	Learn to prepare for a career	265	35.3
Looming	Learn for yourself and your family	217	28.9
Durpose	Learning according to social trends	173	23.1
ruipose	Other	95	12.7
	Total	750	100

#### **Table 2: Description of the study sample**

Source: Data analysis results of the author's team

## **Evaluate the Reliability of the Scale**

This is a method used to evaluate the reliability of the scale in the research, Cronbach's Alpha coefficient is a statistical test of how closely the items in the scale correlate with each other. Cronbach's Alpha coefficient is too large (greater than 0.95), showing that there are many observed variables in the scale that do not differ from each other, this phenomenon is called duplication in measurement. Therefore, a scale has good reliability when it varies in the range [0.75; 0.95], if Cronbach's Alpha is greater than 0.6, the scale is acceptable in terms of reliability (Hair et al., 1998).

Table 5. Summary of Crombach 5 Alpha test results of the searces								
STT	Symbol	Observed variables	Number of variables	Cronbach's Alpha	Correlation coefficient of variable - minimum sum			
1	CLGV	Teachers	8	0.915	0.672			
2	CTDT	Education program	5	0.865	0.630			
3	CLNV	Administrative staff	6	0.880	0.596			
4	DVHT	Support services	6	0.874	0.642			
5	TCQL	Training organization and management	4	0.854	0.688			
6	CSVC	Infrastructure	5	0.816	0.651			
7	DTTT	Reputation of the training unit	4	0.838	0.583			
8	CPDT	Training costs	3	0.840	0.691			
9	CLDV	Quality training service	5	0.852	0.644			
10	SHL	Student satisfaction	4	0.802	0.598			

Table 3: Summary of Cronbach's Alpha test results of the scales

Source: Data analysis results of the author's team

The results of Cronbach's Alpha excluded variables  $CTDT_1$ ,  $CLNV_6$ ,  $TCQL_1$ ,  $TCQL_2$  because they did not meet the requirements. Remaining Cronbach's Alpha coefficients of the scales > 0.6, the correlation coefficients of the total variables of the observed variables in the scale are all greater than 0.3 and there is no case to remove any observed variables makes Cronbach's Alpha of this scale larger (Table 3).

# **Exploratory Factor Analysis**

Exploratory factor analysis, called EFA for short, is used to reduce a set of observed variables into a more meaningful set of factors. With the reliability test of the scale by Cronbach's Alpha, it only evaluates the relationship between variables in the same factor, but has not considered the relationship between all observed variables in other factors. Whereas EFA analysis will look at the relationship between variables in all different groups (factors) to detect observed variables loaded with multiple factors or observed variables with factor difference from the beginning.

KMO coefficient (Kaiser-Meyer-Olkin) is an index used to consider the appropriateness of factor analysis. The value of KMO must reach a value of 0.5 or more (0.5  $\leq$  KMO  $\leq$  1) which is a sufficient condition for factor analysis to be appropriate. Bartlett's test of sphericity is used to see whether observed variables in the same factor are correlated or not. Bartlett's test has statistical significance when sig (Bartlett's Test) < 0.05, showing that observed variables are correlated with each other in the factor. Eigenvalue is a commonly used criterion to determine the number of factors in EFA analysis. With this criterion, only factors with Eigenvalue  $\geq$  1 will be kept in the analytical model. Total Variance Explained  $\geq$  50% indicates that the extracted factors represent the data well. Factor Loading, also known as factor weight, represents the correlation relationship between the observed variable and the factor. Factor loading coefficient > 0.5, the observed variable has good statistical significance (Hair et al., 1998).

The results of the first EFA analysis excluded variables  $CLNV_7$  and  $DTTT_1$  because they did not meet the requirements. Conducting EFA analysis for the second time gave the results with the coefficient KMO = 0.921 > 0.5, so factor analysis is appropriate, and at the same time, Sig (Bartlett's Test) = 0.000 (sig. < 0.05) proves the variables observations are

correlated with each other in the population. Total variance extracted = 66.255% > 50%, showing that 66.255% of the variation of the data is explained by 10 factors (Table 4).

Total Variance Explained											
Com pone	Ini	tial Eigenva	lues	Extract	tion Sums of Loadings	Rotation Sums of Squared Loadings <sup>a</sup>					
ш	Total	% of Variance	Cumul ative %	Total	% of Variance	Cumula tive %	Total				
1	10.255	21.365	21.365	10.255	21.365	21.365	6.190				
2	5.692	11.858	33.223	5.692	11.858	33.223	6.093				
3	3.971	8.272	41.495	3.971	8.272	41.495	4.742				
4	2.206	4.595	46.091	2.206	4.595	46.091	5.770				
5	2.025	4.219	50.309	2.025	4.219	50.309	5.640				
6	1.870	3.895	54.204	1.870	3.895	54.204	4.368				
7	1.689	3.519	57.723	1.689	3.519	57.723	7.124				
8	1.631	3.398	61.121	1.631	3.398	61.121	5.791				
9	1.320	2.749	63.870	1.320	2.749	63.870	3.255				
10	1.144	2.384	66.255	1.144	2.384	66.255	3.488				
11	0.964	2.009	68.263								

# **Table 4: Total Variance Explained**

Source: Data analysis results of the author's team

The component matrix after rotation (Pattern Matrix) with the factor loading coefficient (Factor Loading) represents the correlation relationship between the observed variable and the factor greater than 0.5, and no variables are present in many different factors, it should show that the observed variable is statistically significant (Table 5).

		Component								
	1	2	3	4	5	6	7	8	9	10
CLGV <sub>4</sub>	0.871									
CLGV <sub>3</sub>	0.827									
CLGV1	0.801									
CLGV <sub>2</sub>	0.790									
CLGV5	0.785									
CLGV <sub>8</sub>	0.743									
CLGV <sub>6</sub>	0.737									
CLGV7	0.735									
DVHT <sub>6</sub>		0.807								
DVHT <sub>4</sub>		0.807								
DVHT <sub>5</sub>		0.804								
DVHT <sub>3</sub>		0.769								
DVHT <sub>1</sub>		0.735								
DVHT <sub>2</sub>		0.722								
CSVC <sub>5</sub>			0.830							

# **Table 5: Pattern Matrix**

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CSVC <sub>4</sub>	0.808							
CSVC <sub>1</sub>	0.800							
CSVC <sub>3</sub>	0.768							
CSVC <sub>2</sub>	0.758							
CLNV <sub>2</sub>		0.869						
CLNV <sub>4</sub>		0.829						
CLNV5		0.822						
CLNV <sub>3</sub>		0.752						
CLNV <sub>1</sub>		0.741						
CTDT <sub>4</sub>			0.862					
CTDT <sub>3</sub>			0.825					
CTDT <sub>6</sub>			0.776					
CTDT <sub>2</sub>			0.773					
CTDT <sub>5</sub>			0.748					
TCQL <sub>4</sub>				0.834				
TCQL <sub>3</sub>				0.828				
TCQL <sub>6</sub>				0.826				
TCQL <sub>5</sub>				0.826				
CLDV <sub>1</sub>					0.809			
CLDV <sub>4</sub>					0.781			
CLDV <sub>2</sub>					0.755			
CLDV <sub>5</sub>					0.751			
CLDV <sub>3</sub>					0.695			
SHL <sub>1</sub>						0.797		
SHL <sub>2</sub>						0.790		
SHL <sub>4</sub>						0.765		
SHL <sub>3</sub>						0.722		
CPDT <sub>1</sub>							0.866	
CPDT <sub>2</sub>							0.857	
CPDT <sub>3</sub>							0.855	
DTTT <sub>2</sub>								0.864
DTTT <sub>3</sub>								0.860
DTTT <sub>4</sub>								0.853

Source: Data analysis results of the author's team

# **Confirmatory Factor Analysis**

Confirmatory factor analysis (CFA) to test the model's fit with market data. One model gets the following values: GFI, TLI, CFI  $\ge 0.9$  (up (Hair et al., 1998); CMIN/df  $\le 2$ , in some cases CMIN/df can be  $\le 3$  (Bentler & Bonett, 1980); RMSEA  $\le 0.08$ , the case RMSEA  $\le 0.05$  is considered very good (Hair et al., 1998); the model is considered to be in good agreement with the survey data.

The results of the CFA factor test showed that the coefficient Chi-square/df = 1.634 < 2; GFI = 0.906 > 0.9; CFI = 0.963 > 0.9; RMSEA = 0.029 < 0.05, so it can be said that the model fits the survey data. (Figure 2).



Figure 2: Analysis results in normalized diagram form Source: Data analysis results of the author's team

In CFA analysis, it is important to examine the relationship between factors. Where the convergent value represents the internal consistency of all observed variables in a factor (Campbell and Fiske, 1959). In order for the factors to be reliable, the CR (Composite Reliability) of the factors must be > 0.7, the model achieves the convergence value when CR > AVE (Average Variance Extracted) and AVE > 0.5, The discriminant value of the factors must satisfy 2 conditions MSV (Maximum Shared Variance) < AVE, ASV (Average Shared Variance) < AVE, and the correlation coefficients between the concepts on the overall scale are different compared with 1, there is statistical significance  $p \le 0.05$  (Hair et al., 1998).

	CR	AVE	MSV	CLGV	DVHT	CSVC	CLNV	CTDT	CLDV	TCQL	SHL	CPDT	DTTT
CLGV	0.915	0.576	0.170	0.759									
DVHT	0.874	0.538	0.265	0.275	0.733								
CSVC	0.861	0.554	0.215	0.043	0.023	0.744							
CLNV	0.875	0.584	0.321	0.262	0.515	0.017	0.764						
CTDT	0.866	0.563	0.321	0.283	0.484	0.042	0.566	0.751					
CLDV	0.852	0.535	0.437	0.413	0.460	0.463	0.398	0.394	0.732				
TCQL	0.855	0.595	0.235	0.046	0.040	0.442	0.098	0.089	0.485	0.771			
SHL	0.802	0.504	0.437	0.197	0.453	0.431	0.426	0.388	0.661	0.399	0.710		
CPDT	0.840	0.636	0.128	0.001	0.013	0.293	-0.012	-0.006	0.339	0.280	0.317	0.797	
DTTT	0.832	0.622	0.152	0.019	0.027	0.375	0.056	0.070	0.390	0.328	0.276	0.357	0.789

 Table 6: Results of analysis of reliability, convergence value and discriminant value of factors

Source: Data analysis results of the author's team

CR values are both greater than 0.7 and AVE is greater than 0.5, so the scales are all convergent. The square root of AVE (bold diagonal) is larger than the correlations between latent variables (correlation coefficient is located below the bold diagonal), MSV value is smaller than AVE, so discriminant warranted in the study.

#### **Testing the Research Model**

The SEM linear structural model is used to reflect the causal relationship between the research concepts through the weighted expression of the observed variables, the characteristics of the causal relationships are considered based on the results into unnormalized regression weights (Hair et al., 1998).

The estimated results of the research model show that this model has the indicators Chisquare/df = 1.697 < 2; GFI = 0.903 > 0.9; CFI = 0.959 > 0.9; RMSEA = 0.031 < 0.05 are satisfactory, showing that the construction model is consistent with the research data. 0.011 < 0.08 are satisfactory, showing that the construction model is consistent with the research data.



Figure 3: Result of normalized SEM linear model structure Source: Data analysis results of the author's team

In the analysis, if the concepts have significance level p (p-value) < 0.05 corresponding to 95% confidence level, that relationship is statistically significant, and based on the sign of the estimates, not standardized to assess the nature of the effect is positive or negative of the effect (Hair et al., 1998).

The analysis results show that all variables are significant in the research model, none of which have a significance level of p < 0.05 (in AMOS, a sig or p-value of approximately 0.000 will be denoted \*\*\*). Estimate value is the magnitude of the regression coefficient, this coefficient is positive, proving that the variable has the same direction.

Table 7. Desmassion Weights

	Table 7: Regression weights								
	Impa	nct	Estimate	S.E.	C.R.	Р	Label		
CLDV	<	CLGV	0.138	0.018	7.626	***			
CLDV	<	CTDT	0.077	0.031	2.490	0.013			
CLDV	<	CLNV	0.086	0.028	3.139	0.002			
CLDV	<	DVHT	0.212	0.029	7.300	***			
CLDV	<	TCQL	0.152	0.022	6.998	***			
CLDV	<	CSVC	0.172	0.025	6.785	***			
CLDV	<	DTTT	0.097	0.025	3.799	***			
CLDV	<	CPDT	0.104	0.022	4.729	***			
SHL	<	CLDV	0.286	0.049	14.026	***			

Source: Data analysis results of the author's team

The order of the normalized regression coefficients shows the order of effects of the independent variables on the dependent variable. The larger the absolute value of the coefficient, the stronger the effect (Hair et al., 2010).

	Estimate		
CLDV	<	CLGV	0.239
CLDV	<	CTDT	0.097
CLDV	<	CLNV	0.124
CLDV	<	DVHT	0.285
CLDV	<	TCQL	0.255
CLDV	<	CSVC	0.250
CLDV	<	DTTT	0.133
CLDV	<	CPDT	0.159
SHL	<	CLDV	0.704

#### Table 8: Standardized Regression Weights

Source: Data analysis results of the author's team

Regression analysis with the result that the R2 value of the dependent variable CLDV (Quality of training services) is 0.644. Thus, the independent variables have statistical significance explaining 64.4% of the variation of the CLDV variable. At the same time, the R2 value with the regression of the dependent variable SHL is 0.541. Thus, the independent variables have statistical significance explaining 54.1% of the variation of the SHL variable.

## CONCLUSIONS AND SOLUTION IMPLICATIONS

#### Conclusions

The objective of the study is to clarify the theoretical basis related to vocational training activities and the quality of vocational training for car drivers. Scientific arguments related to: Services, training services, quality of training services, student satisfaction. Determining the factors affecting the quality of car driving training on student satisfaction. From there, a research model, research hypothesis on the quality of car driving training to the satisfaction of students at training centers in Ho Chi Minh City is based on perceptions and experiences, learners' expectations. To this end, data was collected through questionnaire survey and data analysis was performed through suitable statistical methods.

The research results of the authors are similar to the previous studies by Firdaus (2005), Gamage et al. (2008), Jain et al. (2013), LeBlanc and Nguyen (1999), Ali et al. (2016). It shows the following factors: Teaching staff, Training program, administrative staff, Support services, Training organization and management, Facilities, Reputation of training units, Conformity training costs, Training service quality, Learner satisfaction affects learners' satisfaction with the quality of car driver training at training centers with the degree of influence different in each study.

Unlike previous studies, the researchers only measured the perceived importance of learners about the overall satisfaction of the quality of training services. In this study, the learner's satisfaction with the quality of car driver training services at the centers is assessed by the author on the basis of learners' perceptions and expectations. The collected questionnaire data has high accuracy, besides determining the influencing factors, through factor analysis, the author also shows the learner's satisfaction with the quality of driver training cars at training centers in the city. Ho Chi Minh City is affected by 8 potential

factors, with the level of impact arranged in descending order based on the perceptions and expectations of passengers: Administrative staff ( $\beta = 0.002$ ), Reputation of training unit ( $\beta = 0.097$ ), Training program ( $\beta = 0.013$ ), Training cost ( $\beta = 0.104$ ), Teaching staff ( $\beta = 0.138$ ), Training organization and management ( $\beta = 0.152$ ), Facilities ( $\beta = 0.172$ ), Support services ( $\beta = 0.212$ ). At the same time, the study also shows that the quality of training services also affects the satisfaction of learners ( $\beta = 0.286$ ).

#### **Management Implications**

Based on the results of data analysis, administrators can determine which attributes of public passenger service quality need to be specifically improved. In this study, there are 48 observations of 9 factors used to assess passenger satisfaction with the quality of bus public transport services in Ho Chi Minh City. Therefore, administrators cannot improve all attributes at the same time, based on analysis results, administrators will prioritize to improve certain attributes related to service quality transportation service. Through the analysis results, the authors propose a number of implications for improving passenger satisfaction with the quality of bus public transport services in Ho Chi Minh City. HCM is as follows:

Input support for learners: Training centers need to develop and issue management documents, set out scientific and reasonable working processes and methods, creating favorable conditions for all members of the group. The training center does its job well. Respect for students is shown in knowing how to behave fairly and equally among students, listening to students' feedback, knowing how to overcome them, behaving skillfully, flexibly and satisfying students; know how to use language that is easy to understand, have culture, dress neatly, welcome customers with a smiling, welcoming, enthusiastic, friendly and sincere attitude. Enhance training to improve the knowledge and professional qualifications of employees, train employees to work quickly and professionally. Building the culture of centers requires specific measures. Building a system of regulations of the centers, including: Legitimacy, self-control, job analysis, requirements. Strengthening the promotion and introduction of the center's courses and exams: Through the internet, leaflets and media, the center needs to provide timely and accurate information about courses and courses. exam as well as to business, society and learners. Building and developing services for learners in order to meet legitimate requirements, interests and needs, and bring into play the potential abilities of learners for training institutions.

For training activities: When enrolling, centers need to make a dossier of learners, at the same time specify the time, grade level and send a list to the City Department of Transport. Every class must have attendance, the learning content must be divided by topic, and there must be a post to receive the results of the learners themselves. Conduct testing and inspection of learners to get objective results. Centers must master the training objectives, contents and plans of the training institution in order to take appropriate measures to direct the training process and test and evaluate effectively. Manage classroom teaching and teacher practice according to state legal documents, rules and regulations of training institutions on teaching activities of teachers and students. Review teaching plans, use teaching aids, equipment and practice materials. In order to ensure the output quality of students learning to drive a car is good, the stage of testing and evaluating the quality of training through the graduation exam is very important. Assessing the quality of teachers through such forms as: attending classes, lectures, organizing to collect comments from colleagues about the teacher's teaching activities, and comparing the following students' learning results.

About training programs and curricula: Using active, student-centered teaching methods, increasing the use of scientifically designed learning models, convenient for the implementation and acquisition of training programs students' lectures in the most effective way. Centers need to research, prepare lesson plans and teaching content according to the

new car driver training curriculum, especially focusing on teaching to raise the awareness of law observance of traffic participants and professional ethics of car drivers. Teachers use the driving technique textbook, refer to more documents to prepare lesson plans, pay attention to teach students to understand the operating principles and methods of controlling both manual and automatic transmission cars to ensure safety drive safe.

*Improving the quality of teaching staff:* The selection of theory and practice teachers needs to follow the scientific order specified in the regulations of the centers, with all the criteria on professional capacity, teaching experience, ethical qualities, political awareness. Evaluating teachers through activities: attendance, class visits, lecture conferences, professional tests, seminars, periodically collecting students' opinions on the teaching quality of each teacher to help teachers see strengths and weaknesses to strive for teaching. Teachers need advanced training in 4 topics: Legal documents on vocational training, driver training; Pedagogical communication; Application of information technology and modern teaching equipment in training; Integrated teaching and active teaching methods. Annually organize a city-level good driving teachers' association to replicate examples to improve teaching skills for teachers. At the same time, there is a mechanism to divide salaries and bonuses commensurate with the qualifications of teachers.

Building facilities and training equipment: Investment in hybrid training facilities must come from the development requirements of the centers. Focusing on investing in training vehicles to improve the competitiveness of the centers, especially the quality of driving training vehicles, must be ensured. In addition to the computer system being used for teaching, centers need to invest in more computer systems so that students can increase the time to review the theory part. It is necessary to renovate and upgrade some existing classrooms and continue to build new and additional theoretical classrooms towards high quality, improve teaching and learning conditions of teachers and students, this classroom system fully equipped with modern teaching facilities such as sound system, projector, screen... Must have a plan to repair means and equipment at the Testing Center without affecting the plan review, graduation exams and tests of centers as well as other car driving training units. Do a good job of preserving vehicles and equipment, striving to use all available means and equipment to their full capacity, ensuring absolute safety during preparation, graduation exams and tests.

#### **Future Research Directions**

This study was conducted based on learners' perceptions and expectations about the learner's satisfaction with the quality of car driving training at training centers. Although the research has accomplished its objectives, however, certain limitations cannot be avoided: (1) This study only surveyed training centers in Ho Chi Minh City. In Ho Chi Minh City, we have not studied all the training centers in other provinces, so the quality of driver training is not reflected, (2) The number of survey samples is still small (850 samples) along with the selection method. Because the sample is convenient, the representativeness of the sample is not high, (3) The perception and expectation of training quality for individuals on demographic factors (age, gender, occupation, purpose learning to drive a car) was not included in the analysis. That is also the suggested direction for future research.

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