© IJARW | ISSN (O) - 2582-1008
June 2026 | Vol. 7 Issue. 12
www.ijarw.com

THE IMPACT OF THE QUALITY OF TRAINING SUPPORT SERVICES ON STUDENT SATISFACTION AT PUBLIC UNIVERSITIES

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ABSTRACT

The increasing autonomy of higher education institutions and the growing competition between public and private universities have highlighted the importance of enhancing training support services to improve student satisfaction. This study examines the factors influencing student satisfaction with the quality of training support services at public universities in Ho Chi Minh City. Based on SERVQUAL, SERVPERF, HEdPERF, Expectation-Confirmation Theory (ECT), and Customer Satisfaction Index (CSI) frameworks, the research proposes a model comprising eight independent factors: academic advising, administrative support, library and learning resources, financial support, information and interaction channels, extracurricular activities, facilities, and student life services. A mixed-method approach was employed, including a focus group discussion with students and a quantitative survey of 508 valid respondents from seven public universities. Data were analyzed using Cronbach's Alpha, Exploratory Factor Analysis (EFA), and multiple linear regression. The results indicate that all eight factors positively and significantly affect student satisfaction. Administrative support has the strongest influence, followed by academic advising, information and interaction channels, student life services, extracurricular activities, library and learning resources, facilities, and financial support. The proposed model explains 79.4% of the variance in student satisfaction. Based on these findings, several managerial implications are suggested to help public universities improve service quality, enhance student experiences, and strengthen their competitiveness in the higher education sector.

Keyword: Student Satisfaction; Training Support Services; Service Quality; Public Universities.

1. INTRODUCTION

In the context of promoting the socialization of education in the spirit of Decree No. 141/2013/ND-CP and the Government's university autonomy policies, higher education in Vietnam is shifting from a purely supply-oriented model to a customer-service model. At present, the rapid expansion of private universities, with modern facilities and professional learner-support services, has created intense competitive pressure on public universities. Following this new trend, students no longer choose a university solely on the basis of academic reputation or low tuition fees; instead, they increasingly prioritize environments that provide comprehensive support-service quality, from academic advising and library services to extracurricular activities.

Although public universities continue to play a core role, they are often considered less flexible and slower to improve support services than private institutions. This gap directly affects learners' psychology and level of engagement. Therefore, studying "The impact of the quality of training support services on student satisfaction at public universities" is essential. The research findings not only help administrators identify weaknesses in operations but also serve as a basis for developing strategies to retain "customers - students," ensuring the sustainable development of the public higher education system in the era of integration.

2. THEORETICAL BACKGROUND AND RESEARCH METHODOLOGY

2.1. Theoretical background

Research on service quality and customer satisfaction is one of the central topics of modern management and is built on the foundation of many classic theoretical models. The starting point is the SERVQUAL model proposed by Parasuraman and colleagues (1985, 1988), which

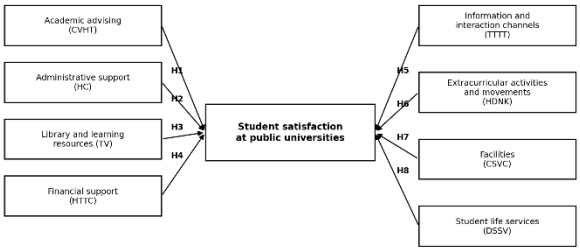
approaches service quality through the "gap" between customers' expectations before using a service and their actual perceptions after experiencing it. This model measures service quality through five core dimensions: tangibles, reliability, responsiveness, assurance, and empathy. To optimize the measurement tool, Cronin and Taylor (1992) developed the SERVPERF model. Unlike SERVQUAL, SERVPERF removes the expectation component and asserts that service quality should be assessed only on the basis of actual performance (performance-only), thereby reducing complexity and increasing the stability of the scale in empirical studies.

When applied to specific contexts such as higher education, Abdullah (2006) proposed the HEdPERF model (Higher Education Performance). This scale adjusts the components of service quality into five dimensions suitable for the academic environment, including non-academic aspects, academic aspects, reputation, program issues, and access, thereby providing a more specialized assessment tool for the education sector.

In addition to the quality aspect, the mechanism through which satisfaction is formed is clearly explained by Oliver's (1980) Expectation-Confirmation Theory (ECT). This theory indicates that customer satisfaction is the result of a comparison between initial expectations and actual outcomes. If the outcome exceeds expectations, a state of positive confirmation occurs and creates satisfaction; conversely, negative confirmation leads to disappointment. Finally, to comprehensively assess this causal relationship at the organizational or national level, the Customer Satisfaction Index (CSI) model - represented by ACSI or ECSI - was developed. CSI is a structural system that integrates both antecedents (brand image, expectations, perceived quality, and perceived value) and outcomes (loyalty and complaints), offering a multidimensional view of consumer behavior and loyalty.

2.2. Research model and hypotheses

Based on the foundational theories above and selective inheritance from previous theoretical frameworks and studies, the author proposes a research model consisting of eight independent variables and one dependent variable as follows:



From the proposed research model, the author proposes the following research hypotheses:

H1: The academic advising team has a positive effect on student satisfaction with the quality of training support services at universities.

The academic advising team factor includes: attitude, readiness, deep understanding of training programs and academic regulations, and timely and accurate responsiveness. The competence of academic advisors has been discussed in previous studies by Nguyen Thanh Vu and Bui Quang Tam (2020).

H2: Administrative support has a positive effect on student satisfaction with the quality of training support services at universities.

This factor includes: implementation of administrative procedures as committed, prompt support, sincere concern, and publicly disclosed service processes. The study by Nguyen Tan Luong and Nguyen Ngoc Thong (2021) shows the positive effect of this factor on student satisfaction.

H3: Library and learning resources have a positive effect on student satisfaction with the quality of training support services at universities.

Library and learning resources (TV) include: reference materials, electronic library systems, library space, and library staff and employees; according to Nguyen Tan Luong and Nguyen Ngoc Thong (2021).

H4: Financial support has a positive effect on student satisfaction with the quality of training support services at universities.

Financial support (HTTC) is related to: scholarship and reward policies, procedures for tuition reduction and loan consideration, tuition levels, and service fees. Nguyen Tan Luong and

Nguyen Ngoc Thong (2021) also included this factor in their research model.

H5: Information and interaction channels have a positive effect on student satisfaction with the quality of training support services at universities.

Information and interaction channels and student support (TTTT) include: the university website and fanpage, important announcements sent to students quickly, and effective responses through both online and direct channels; according to Ha Nam Khanh Giao and Nguyen Pham Hanh Phuc (2015), and Nguyen Thanh Vu and Bui Quang Tam (2020).

H6: Extracurricular activities and movements have a positive effect on student satisfaction with the quality of training support services at universities.

Extracurricular activities and movements (HDNK) include: diverse academic and skills clubs that attract students, regular company visits organized by the university, early fieldwork and internship activities at enterprises, and soft-skills training programs that meet students' future career requirements; according to Ha Nam Khanh Giao and Nguyen Pham Hanh Phuc (2015), Nguyen Thanh Vu and Bui Quang Tam (2020), and Nguyen Tan Luong and Nguyen Ngoc Thong (2021).

H7: Facilities have a positive effect on student satisfaction with the quality of training support services at universities.

Facilities and learning equipment include: equipment such as air conditioners, projectors, Wi-Fi, the campus, sports fields and sports equipment, and equipment for practice and experiments such as computers and laboratories; according to Ha Nam Khanh Giao and Nguyen Pham Hanh Phuc (2015), and Nguyen Thanh Vu and Bui Quang Tam (2020).

H8: Student life services have a positive effect on student satisfaction with the quality of training support services at universities.

Student life services (DSSV) include: canteen services, dormitory living conditions, and convenient transportation systems to the university; according to Nguyen Tan Luong and Nguyen Ngoc Thong (2021).

2.3. Research methodology

The research process was implemented in two stages. First, a qualitative study was conducted through a focus-group discussion with 12 students to examine the suitability of the scale and its fit with the characteristics of students studying at public universities in Ho Chi Minh City. Next, the quantitative study was conducted using a survey questionnaire with a five-point Likert scale. Data were collected through convenience sampling via Google Forms from March to April 2026. A total of 600 questionnaires were distributed, 536 were returned, and 508 valid responses were obtained. The survey scope focused on public universities in Ho Chi Minh City. The data were processed using SPSS 26.0 through the following testing steps: scale reliability assessment using Cronbach's Alpha, exploratory factor analysis (EFA), and multiple linear regression analysis.

3. RESULTS AND DISCUSSION

3.1. Descriptive statistics

The survey results show that, in terms of gender, 289 female students (56.9%) and 219 male students (43.1%) participated in the survey. Regarding the structure of training units, the Branch Campus of Thuyloi University had the highest proportion, with 124 students (24.4%); Thu Dau Mot University had 87 students (17.1%); the University of Economics Ho Chi Minh City had 83 students (16.3%); Ho Chi Minh City University of Law had 75 students (14.7%); the Campus of the University of Transport and Communications had 72 students (14.2%); and, finally, Pham Ngoc Thach University of Medicine had 67 students (13.2%). Regarding participation in university clubs, 176 students participated in clubs at their universities (34.6%), while the remaining students did not. Regarding year of study, second-year students accounted for 38% (193 students), third-year students accounted for 42.1% (214 students), fourth-year students accounted for 16.7% (85 students), and fifth-year students accounted for 3.1% (16 students). Regarding accommodation, students renting accommodation outside the university accounted for the majority, with 415 students (81.7%), while 93 students (18.3%) lived in dormitories.

3.2. Scale and model analysis

Cronbach's Alpha reliability analysis

The Cronbach's Alpha test results show that all scales achieved reliability, with coefficients ranging from 0.852 to 0.911 (>0.6), and all observed variables had item-total correlation coefficients greater than 0.3. Thus, the scales met reliability requirements, and all observations were meaningful for continuing with EFA.

Exploratory factor analysis (EFA)

For the independent variables, the KMO coefficient reached 0.941 (0.5 < KMO < 1), and Bartlett's test was statistically significant (Sig. = 0.000), indicating that the data were suitable for factor analysis. The results extracted eight factors with a cumulative explained variance of 77.577%, meaning that these eight factors explained 77.577% of the variation in the data.

For the dependent variable, the KMO coefficient reached 0.731 (0.5 < KMO < 1), and Bartlett's test was statistically significant (Sig. = 0.000), showing that the data were fully appropriate. One factor extracted for the dependent variable explained 76.860% of the variation in the data.

Model and hypothesis testing

The ANOVA test results show that F = 245.225 with a significance level of Sig. = 0.000, indicating that the regression model was fully appropriate. The adjusted R^2 reached 0.794, showing that the independent variables in the model were able to explain 79.4% of the variation in student satisfaction with the quality of training support services at universities.

The model was statistically meaningful because the variance inflation factor (VIF) values of all variables were below 2, indicating that no serious multicollinearity occurred. In addition, the Durbin-Watson coefficient was 1.981 (within the range of 1.5-2.5), confirming that the model had no first-order autocorrelation.

The results in Table 4 (Appendix) show that all eight factors had positive and statistically significant effects (Sig. < 0.05). Based on standardized Beta coefficients, the order of impact from strongest to weakest was: Administrative support (0.244); Academic advising (0.234); Information and interaction channels (0.234); Student life services (0.222); Extracurricular activities (0.207); Library and learning resources (0.207); Facilities (0.204); and Financial support (0.192).

The standardized linear regression equation of the model is as follows:

HL = -2.496 + 0.234*CVHT + 0.244*HC + 0.207*TV + 0.192*HTTC + 0.234*TTTT + 0.207*HDNK + 0.204*CSVC + 0.222*DSSV

4. CONCLUSION AND MANAGERIAL IMPLICATIONS

4.1. Conclusion

The research results show that all eight factors have positive and statistically significant effects on student satisfaction with the quality of training support services at universities. Among them, administrative support has the strongest effect, while financial support has the weakest effect.

4.2. Managerial implications

Based on the research results, the author proposes several managerial implications as follows:

Administrative support: The university needs to make transparent the processes and administrative procedures that support students during their study. Staff and employees need to be more professional in delivering support and advisory services to students, thereby improving the service experience at the university.

Academic advising: In the process of supporting and advising students, one of the most important aspects is that academic advisors need to have a deep understanding of training programs and a clear grasp of academic regulations so that they can advise students accurately and quickly, while also supporting students' career orientation. This can help students understand their programs more clearly and develop better learning orientations.

Information and interaction channels: Speed and convenience are core factors in effective interaction with students. The university needs to improve the effectiveness of interactions with students not only through direct channels (offline) but also through online channels quickly and effectively. Staff and employees should be assigned to regularly monitor official channels to improve effectiveness, thereby increasing student satisfaction.

Student life services: The university should focus on improving the dormitory system, ensuring safety, and diversifying food services in the canteen.

Extracurricular activities: The quality of academic and skills clubs should be enhanced, and competitions, workshops, and related events should be organized to create greater motivation for student participation, thereby helping students improve their career competencies and gain better employment opportunities.

Library and learning resources: The university needs to fully provide and update textbooks and reference materials to meet students' learning needs. In particular, online reference materials should be regularly updated, with guidance and favorable conditions provided for their use.

Facilities: The university should invest in and upgrade facilities and equipment serving students' learning process, such as upgrading computers and maintaining the network regularly.

Financial support: Scholarship consideration policies and procedures, as well as financial support policies, need to be transparent and fair to students.

Limitations and future research directions

Although the study provides many practical values, it still has several limitations. The research sample included only seven public universities in Ho Chi Minh City. The research model explains 79.4% of the effect of the eight factors on student satisfaction, meaning that the remaining 21.6% is explained by other factors not identified by the model. Therefore, future studies should expand the research scope, increase the sample size, compare students in Northern and Southern Vietnam, and compare students at public and private universities to further clarify the factors affecting student satisfaction with training support services.

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APPENDIX

Table 1: Cronbach's Alpha analysis results

Factor	Observed variable	Mean	Standard deviation	Item-total correlation	Cronbach's Alpha if item deleted
Academic advising CVHT	CVHT1	10,16	7,209	0,774	0,869
	CVHT2	10,18	7,064	0,786	0,865
	CVHT3	10,18	7,386	0,767	0,872
	CVHT4	10,19	6,936	0,771	0,871
Cronbach's Alpha coefficient for the factor: 0,899					
Administrative support HC	HC1	10,12	7,509	0,700	0,884
	HC2	10,10	7,426	0,799	0,884
	HC3	10,15	7,395	0,803	0,883
	HC4	10,08	7,442	0,789	0,888
Cronbach's Alpha coefficient for the factor: 0,911					
Library and learning resources TV	TV1	10,03	6,786	0,763	0,864
	TV2	10,03	7,007	0,762	0,864
	TV3	10,03	6,817	0,762	0,864
	TV4	9,98	6,828	0,773	0,860
Cronbach's Alpha coefficient for the factor: 0,894					
Financial support HTTC	HTTC1	6,68	3,003	0,754	0,800
	HTTC2	6,75	3,279	0,733	0,818
	HTTC3	6,72	3,206	0,742	0,810
Cronbach's Alpha coefficient for the factor: 0,864					
Information and interaction channels TTTT	TTTT1	6,75	3,344	0,757	0,832
	TTTT2	6,74	3,329	0,777	0,824
	TTTT3	6,77	3,304	0,756	0,833
Cronbach's Alpha coefficient for the factor: 0,877					
Extracurricular activities HDNK	HDNK1	6,70	2,995	0,739	0,777
	HDNK2	6,73	2,811	0,725	0,791
	HDNK3	6,68	3,055	0,703	0,810
Cronbach's Alpha coefficient for the factor: 0,852					
Facilities CSVC	CSVC1	10,03	6,863	0,776	0,856
	CSVC2	9,99	7,089	0,757	0,863
	CSVC3	10,00	6,775	0,756	0,864
	CSVC4	10,05	6,889	0,759	0,862
Cronbach's Alpha coefficient for the factor: 0,892					
Student life services DSSV	DSSV1	10,15	7,143	0,759	0,859
	DSSV2	10,7	7,239	0,765	0,857
	DSSV3	10,14	7,280	0,749	0,863
	DSSV4	10,18	7,018	0,764	0,857
Cronbach's Alpha coefficient for the factor: 0,890					

Source: Author's analysis results

Table 2: EFA analysis results for independent variables

Observed variable	Factor								
Observed variable	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
HC3	0,878								**Administrative support**
HC1	0,874								
HC2	0,872								
HC4	0,865								
CVHT2		0,878							**Academic advising**
CVHT1		0,861							
CVHT3		0,858							
CVHT4		0,846							
TV4			0,863						**Library and learning resources**
TV2			0,862						
TV1			0,854						
TV3			0,847						
CSVC1				0,861					**Facilities**
CSVC3				0,858					
CSVC4				0,837					
CSVC2				0,835					
DSSV2					0,867				**Student life services**
DSSV4					0,862				
DSSV1					0,862				
DSSV3					0,840				
TTTT2						0,885			**Information and interaction channels**
TTTT1						0,884			
TTTT3						0,881			
HTTC3							0,878		**Financial support**
HTTC1							0,876		
HTTC2							0,867		
HDNK1								0,877	**Extracurricular activities**
HDNK2								0,854	
HDNK3								0,844	
Eigenvalue	6,008	2,862	2,805	2,569	2,304	2,099	2,045	1,805	
Variance extracted %	77,577								

Source: Author's analysis results

Table 3: EFA analysis results for the dependent variable

	Factor
	1
HL1	0,884
HL2	0,874
HL3	0,872
Eigenvalue	2,306

Variance extracted %	76,860

Source: Author's analysis results

Table 4: Regression analysis results

Model		**Unstandardized coefficients**		**Standardized coefficients**	**t**	**Sig.**	**Collinearity statistics**	
Model	**Variable**	**B**	**Std. Error**	**Beta**	**t**	**Sig.**	**Tolerance**	**VIF**
1	Constant	-2,496	0,135		-18,494	0,000		
	CVHT	0,232	0,21	0,234	10,967	0,000	0,891	1,122
	HC	0,237	0,21	0,244	11,367	0,000	0,880	1,137
	TV	0,210	0,22	0,207	9,740	0,000	0,896	1,115
	HTTC	0,194	0,21	0,192	9,165	0,000	0,925	1,081
	TTTT	0,230	0,21	0,234	11,156	0,000	0,924	1,082
	HDNK	0,217	0,22	0,207	9,670	0,000	0,883	1,133
	CSVC	0,206	0,22	0,204	9,351	0,000	0,853	1,173
	DSSV	0,220	0,21	0,222	10,607	0,000	0,926	1,080

Source: Author's analysis results