

# **The role of service quality in student academic success: a case study in the public universities library**

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Date of Submission: 06-02-2023

Date of Acceptance: 18-02-2023

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## **I. Introduction**

Higher education is increasingly valued and considered as a top important policy for the development and intellectual strength of a country. Following that trend, Vietnam has been giving a lot of priority and investment to modernize education. In addition to constantly improving the quality of the teaching staff, the investment in facilities is also getting more and more attention. This is reflected in the facilities of the school, in which the library is the place that shows the strongest investment they make for both students and lecturers. Technology development has penetrated every corner of life, including education, creating better conditions for learning and teaching, helping lecturers and students to update their knowledge easily and fast. Furthermore, the library system at universities is equally important in providing an abundant source of reference materials as well as a professional study space for students to help them constantly enhance their knowledge. However, there are many reasons why many students do not really realize the need to go to the library. It can stem from students' subjective factors such as laziness or lack of understanding of the importance of libraries, but it can also stem from their dissatisfaction with library services such as reliability, responsiveness, empathy.

Although many studies around the world have explored the role of library service quality on student satisfaction. (Zineldin, 2007; Jurkowitsch, Vignali& Kaufmann, 2006;). Lounsbury, Saudargas, Gibson, y Leong, 2005). However, the differences in the learning environment of each educational institution, as well as the differences in demographic characteristics, will affect the behavioral intentions of students (Tram, 2021; Tram & Quyen, 2022) in having a choice of the library service. Besides, it also lacks consistency among research results, especially the influence of factors on student satisfaction, thereby affecting their learning results. Students are considered as indispensable customers of each educational institution. Their satisfaction not only helps the school get more students (Oliveira & Ferreira, 2009) but also helps the school build a positive image and achieve its educational goals (El Ansari & Oskrochi, 2006) and strengthen competitiveness (Jiewanto, Laurens & Nelloh, 2012). Therefore, it is necessary to have more studies done in different contexts to get a better overview and add deeper knowledge to the theoretical background about library service quality, student satisfaction, and learning outcomes. Based on the theoretical foundation of the SERVQUAL scale, the present study was carried out in the context of public universities in Danang to fill this gap.

## **II. Literature Review**

Libraries play an important role in supporting scientific research, teaching, and learning. The library not only helps to store textbooks and reference materials, but also a place to update new knowledge derived from quality sources in the world through the digital library. Therefore, it has become one of the most effective knowledge providers for lecturers and students. In addition, university libraries provide an ideal space for students to improve their self-study and self-study abilities. At the same time, it also shows the size and training quality of an educational institution. However, to exploit the benefits that library services bring to students, it is essential to assess its true quality in terms of student satisfaction and learning outcomes.

Satisfaction is considered an evaluative process (Calder et al. 2013) or reflective outcome of psychological state (Calder et al. 2013). Some previous studies (Gustaffson, Johnson, and Roos 2005; Johnson and Fornell 1991) also defined that satisfaction as "a customer's overall evaluation of the performance of an offering to-date". Fornell (1992) suggested that satisfaction depends upon the perceived results when comparing between the expectation of repurchase to overall buying and utilization of the target service and products over time. Besides, relationship marketing theory views customer satisfaction as the key antecedents of long-term

relationships and is emotional reaction stemmed from any specific transaction (Olive, 1981). Before that, Oliver (1997, 1999) stated that when the consumer feels using service and products fulfills some purposes, their wishes, requirements, etc. it leads to interesting completion, that is, customer satisfaction is the pleasurable fulfillment that the customer obtains in the utilization. Therefore, satisfaction is an overall assessment based on the total amount of purchases and consumption for a good or service over time” (Anderson, Fornell and Lehmann 1994).

In the education context, students are considered as the crucial consumers (Sultan & Wong, 2013). When students’ learning outcomes accumulate via process, their satisfaction can be considered “cumulative satisfaction” instead of “transaction-specific satisfaction” (Olsen and Johnson 2003). So, it can be a robust predictor of positive outcomes of students. This is thought to be because students who are satisfied with the library service are the students who regularly participate in learning at the library. They believe that the learning environment at the library is professional because of the fresh air and quiet space and team spirit. More importantly, students who regularly study and research at the library are often those having high self-study ability and having a high ability to use the materials available at the library. So they are easy to achieve positive learning outcomes. Besides, satisfied students with education institutions, they will bring benefits for these ones such as the less dropout rate (Tinto, 1993); less poor grades (Bean, 1985); more engagement (Tram, 2021; Tram & Quyen, 2022); and more like to introduce positive WOM about the institutions contributing to attracting potential students (Alves & Raposo, 2009; Tram, 2021; Trang et al., 2021).

However, whether a student is satisfied with library services depends not only on the available materials and the learning environment of the library but also on the quality of the service such as tangibility, reliability, responsiveness (Parasuraman et al., 1988). These elements have been suggested in many different studies, but the results have not yet reached a consensus, which may be due to differences in culture and gender.

Along with other constructs like loyalty and engagement, service quality is also considered a crucial element of achieving competitive capability (Ali *et al.*, 2012). Scholars and managers have recognized that this topic has become an important issue due to its significant effects on customers’ satisfaction and organizational values (Ali & Zhou, 2013; Sureshchandaret *al.*, 2003). Therefore, the relationship between service quality and customer satisfaction has been explored in different marketing contexts.

In during past time, there are several studies have conducted exploring service quality concepts. Kasper et al. (1999) proposed that service quality is the level of satisfaction with the needs of service recipients related to services and procedures provided with the organization. In a similar vein, other scholars suggested that service quality is related to perceptions and expectations (Parasuraman et al., 1985 and Gronroos, 2007), while other researchers (Teas, 1993) argued that it is stemmed from evaluating service performance based on predetermined principles. Therefore, it can be considered as a stimulus construct resulting in the development of behavioral intention. Service quality is also viewed as a multi-dimension construct (Brady & Cronin, 2001). However, SERVQUAL is one of the most widely applied models in service marketing that measures service quality based on the perception gap between perception and expectation of customers about the services provided (Ali et al., 2012). This model was firstly developed by Parasuraman et al (1985, 1988) with first proposed 10 determinants including Communication, Access, Tangibility, Reliability, Credibility, Competence, Responsiveness, Courtesy, Security, and understanding the consumer. Later these dimensions were reduced to five and which are: (1) Tangibles, (2) Responsiveness, (3) Empathy, (4) Assurance, and (5) Reliability (Mai, 2005, Zeshan, Afridi, and Khan, 2010). These authors claimed that all of the above five determinants were included in the SERVQUAL construct and developed further to measure and explain customers’ perception of service quality.

Although many have attempted to evaluate the relationships among the marketing constructs, the interrelationships among those constructs still not clear (Tram & Tran, 2022; Brady and Robertson, 2001). Specifically, perceived value and service quality are frequently investigated as antecedents of customer satisfaction and loyalty. However, several researchers have proven that service quality has a significant effect on customer satisfaction with different effect levels (Khatab, Esmaeel, & Othman, 2019), directly effects on the success of firms also, especially in the service industry (Tram, 2021; Tram & Quyen, 2022; Shekarchizadeh, Rasli, & Hon-Tat 2011).

In the education context, it is clear from the available literature that students’ positive perceptions of service quality of higher educational institutions have been found out to have a significant impact on student satisfaction (Kundi et al., 2014; Abdullah, 2005, Alves & Raposo, 2010). Ayoubi and Ustwani (2014) proposed that student satisfaction as well as a short-term perspective and obtained from the evaluation of services stemmed from educational institutions. In contrast, Barnett (2011) investigated the relationships among service quality and overall satisfaction and behavioral intentions, resulting in that is service quality as the key determinant of these two constructs. At the same time, other researchers (Sultan & Wong, 2012; Bigne, Moliner & Sanchez, 2003) manifested that students’ perception of service quality will boost assessment about what they received like satisfaction. In the mobile service industry, Wang et al. (2000) and Turel and Serenko (2006) also proposed that the service quality will impact satisfaction. When customers are willing to pay for higher quality products, it is likely to result in a behavioral intention such as satisfaction (Hollebeek and Chen

2014; Tram, 2021; Tram &Quyen, 2022).This means that student satisfaction is influenced by the quality of services provided. In the context of libraries, service quality includes the above five elements that affect student satisfaction. When students do not receive empathy and trust, or their needs are not met or guaranteed, they will be dissatisfied. This can lead to absence at the library, unexpected academic results, and may negative recommended words about the institution to others. Therefore, to create a positive relationship with students, educational institutions should provide students what they want. Referring to it, we form the following hypotheses:

- H<sub>1</sub> Tangibility has a positive influence on student satisfaction
- H<sub>2</sub> Assurance has a positive influence on student satisfaction
- H<sub>3</sub> Empathy has a positive influence on student satisfaction
- H<sub>4</sub> Responsiveness has a positive influence on student satisfaction
- H<sub>5</sub> Reliability has a positive influence on student satisfaction
- H<sub>6</sub> Student satisfaction has a positive influence on their learning outcomes

Hence, based on the above discussion, the conceptual framework was shown in Figure 1.

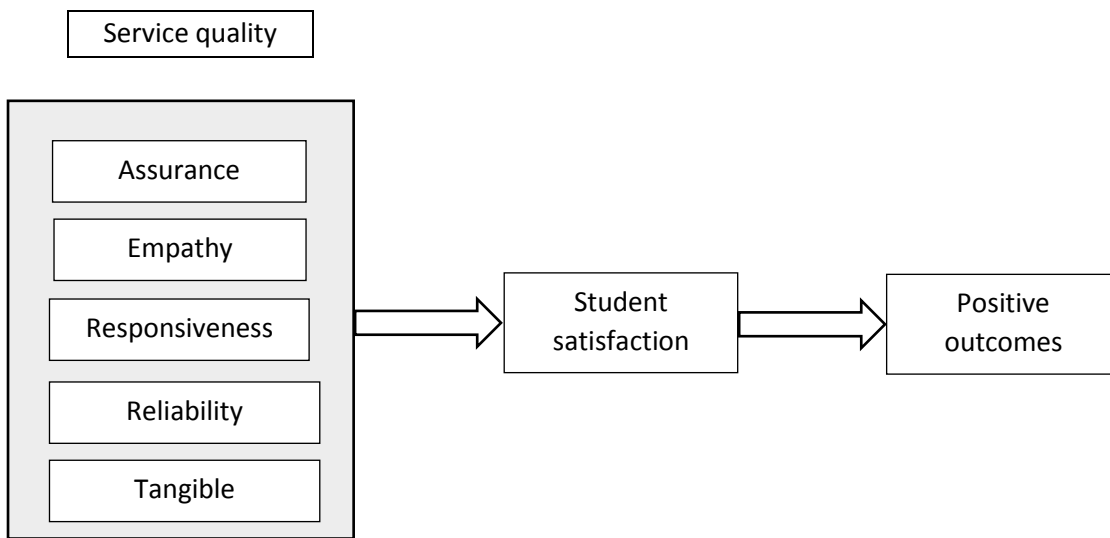


Figure 1: Proposed conceptual framework

### III. Methodology

To assess the impact of library service quality on student satisfaction, many research methods have been applied including qualitative and quantitative methods. However, in this study, the quantitative method is considered appropriate to investigate this relationship based on the survey method through questionnaires.

#### 3.1 sample and procedure

Students from a public university in Danang were selected as the sample for this study. The questionnaire was distributed to students in August 2022. The questions in the questionnaire are pre-tested to ensure clarity and understanding. As suggested by Mavondo et al. (2004), second-year students and above were selected as the sample because they experienced library services before.

To reduce the “frustration level” of the respondents, and improve the quality of the answers, the 5-point Likert scale of Babakus and Mangold (1992) was applied in this study.435 questionnaires were distributed to students of target universities. After finishing the survey process, 95,2% of questionnaires were collected and after removing incomplete ones, 393 complete questionnaires were selected.

#### 3.2 Measures

To measure customers’ perception of SQ, Items of this construct is derived fromfive determinants in SERVQUAL construct of Parasuraman et al. (1988) and Zeshan, Afridi, and Khan (2010),including (1) Reliability, (2) Responsiveness, (3) Assurance (4) Empathy, and (5) Tangibles. A sample item is: “facilities in this school are excellent”. 5 items of student satisfaction construct have adopted from Atheeyaman (1997) with slight modifications. An example of item is: “I did the right thing when I choose to study with this school”

Finally, the “outcomes” include 5 items have adopted from Piedmont (1989) và Hermans(1970). A sample item of measuring student outcome is: “Go to the library to clarify questions raised in class”(Piedmont, 1989, p.868).

**IV. DATA ANALYSIS AND RESULTS**

**Table 1:** Characteristics of study sample

		Frequency	%
Gender	Male	168	42.75
	Female	225	57.25
Age	Below 21	89	22.65
	21-25	258	65.65
	26-30	46	11.7
Semesters of study	3 <sup>rd</sup>	80	20.36
	4 <sup>th</sup>	65	16.54
	5 <sup>th</sup>	84	21.37
	6 <sup>th</sup>	89	22.65
	7 <sup>th</sup>	35	8.91
	8 <sup>th</sup>	40	10.18

As shown in table 1, the study analyzed 393 demographic information of respondents. The respondents consist of 57.25% female followed by 42.75% male. With regards to students’ age, 91.4% of students belong to the age of 21 to 25 years of old. In terms of students’ semesters, almost all respondents (89.92%) were reported to study between the 3rd semester and 6th semester. Only 8.91% of the sample students are comprised of the 7th semester, and 10.18% are comprised of the 8th one.

**Reliability Test**

In measures of internal consistency were computed and items contain low reliability were deleted or modified respectively. We removed 3 items across the six factors to boost the respective coefficient alphas. The result suits the suggestion of Nunnally (1978) that the questionnaire is reliable and the reliability in the consistent range for all variables with a minimum threshold of 0.70. Table 2 shows that the Cronbach’s Alpha of each factor show a high reliability level ranging from 0.614 to 0.912.

**Table 2.** Variables Measurement Model

Variables	items	Loading	Composite Reliability	Cronbach’s alpha	AVE
Reliability	RL1		0.863		0.896
	RL2				
	RL3				
	RL4				
	RL5				
Assurance	AS1		0.614		0.888
	AS2				
	AS3				
	AS4				
	AS5				
Empathy	EM1		0.862		0.556
	EM2				
	EM3				
	EM4				
	EM5				
Tangibles	TA1		0.891		0.672
	TA2				
	TA3				
	TA4				
	TA5				
Responsiveness	RE1		0.912		0.674
	RE2				

	RE3				
	RE4				
	RE5				
Satisfaction	SAT1		0.885		0.605
	SAT2				
	SAT3				
	SAT4				
	SAT5				
Outcome	OU1		0.820		0.535
	OU2				
	OU3				
	OU4				
	OU5				

**Table 2:** Discriminant Validity of Latent Constructs

	Responsiveness	Assurance	Empathy	Tangibles	Reliability	Satisfaction	Outcome
Responsiveness	<b>0.821</b>						
Assurance	0.443***	<b>0.783</b>					
Empathy	0.467***	0.548***	<b>0.746</b>				
Tangibles	0.461***	0.512***	0.510***	<b>0.820</b>			
Reliability	0.531***	0.545***	0.512***	0.474***	<b>0.827</b>		
Satisfaction	0.627***	0.633***	0.545***	0.669***	0.655***	<b>0.780</b>	
Outcome	0.403***	0.461***	0.633***	0.461***	0.475***	0.532***	<b>0.731</b>

Note: SAT= student satisfaction; TA= Tangibles AS= Assurance; REA= Reliability; EM= Empathy; RE= Responsiveness.

### 4.3 Hypothesis Testing

The results of testing hypotheses shown that four in five determinants including Reliability, tangibles, responsiveness, assurance, and empathy influence student satisfaction which in turn also affects learning outcomes. In particular, responsiveness has the greatest effect on student satisfaction compared to any other factors of library service quality supplied in public universities. That means student satisfaction in the public university context will increase when responsiveness rises by 0.302. Analogously, reliability also strongly affects student satisfaction, where a 0.249 increase in reliability will result in a direct rise in student satisfaction. As expected, tangible and assurance were also significantly related to student satisfaction, in which assurance has the smallest on student satisfaction. Therefore, almost all hypotheses are supported. In contrast to the proposed hypotheses, the finding indicates that hypothesis H3 was found to be insignificant, which means empathy does not influence on satisfaction of students. Finally, students' satisfaction has a powerful effect on their learning outcomes. Therefore, this study provides more empirical evidence to support previous studies by Sultan & Wong (2012) and Hollebeek and Chen (2014).

**Table 3:** Hypothesis testing results

Hypothesis	Path coefficient	Estimate	S.E	C.R	P-value
H <sub>1</sub>	TA -> SAT	0.228	0.038	4.781	***
H <sub>2</sub>	AS -> SAT	0.198	0.053	3.782	***
H <sub>3</sub>	EM -> SAT	0.098	0.051	1.949	0.051
H <sub>4</sub>	RE -> SAT	0.302	0.044	6.002	***
H <sub>5</sub>	REA -> SAT	0.249	0.043	4.943	***
H <sub>6</sub>	SAT -> OUT	0.569	0.07	8.58	***

## V. Conclusion

From the research results, once again empirical studies have proved that service quality is an important construct in the formation and reinforcement of customer satisfaction. Especially, in the context of higher education, this result confirmed that student satisfaction with library service quality can promote their positive learning outcomes. Therefore, this study has achieved the original goal of reinforcing the theories related to student satisfaction by using related constructs.

Besides, this model may serve as a theoretical fundamental designing measurement instrument for managers (Parasuraman et al. (1988). Because there was no consistency between the authors in exploring the influence of these constructs on student satisfaction in the public university library context in Vietnam, specifically there is no study that suggests an intensive model explore the interaction among satisfaction with its antecedents (Tangibles, Assurance, Reliability, Empathy, and Responsiveness) and with learning outcomes, this research, therefore, handles a gap in current student satisfaction literature.

In addition, Student satisfaction is a mediating factor in explaining their learning outcomes in the learning context at the public school library. When a student is satisfied with the services provided at the library, they are more likely to invest time and effort in their studies, which in turn results in more academic success,

that is, satisfaction have created value for themselves (Tram, 2021). Furthermore, when a student realizes that a school's library can fully meet their needs and satisfy them, they will be proud and confident in that school (Brodie et al., 2011) so they will become more engaged (Tram, 2021; Tram & Quyen, 2022). Especially, in today's information technology boom, the use of digital libraries to cultivate knowledge is increasingly popular, students will interact more with the document search tools at the library. Therefore, how easy it is for students to use these tools also affects their satisfaction (Tram, 2021). The results of the analysis have provided an implication for educational administrators that the quality of library services will not only affect student learning outcomes but also have the ability to promote other behaviors of students as engagement, word of mouth.

The limitation which should be taken into consideration is the study was conducted with students in Danang. Future research should concentrate on a larger sample size also all universities in the Vietnam public and private sector. Furthermore, it will enhance the explanatory power of the model if the studies evaluate the role of some demographic characteristics (Chin et al. 2003). Thus, further researches should be conducted to examine the multi-group impacts of age, income, and gender on satisfaction and outcomes of students.

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Nguyen Le Ngoc Tram. "The role of service quality in student academic success: a case study in the public universities library." *International Journal of Engineering and Science*, vol. 13, no. 2, 2023, pp. 85-91.