

DETERMINING THE IMPACT OF SERVICE QUALITY ON STUDENTS' SATISFACTION IN PUBLIC SECTOR UNIVERSITIES OF THAILAND: AN EMPIRICAL APPROACH

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Abstract

The present study empirically investigates the impact of service quality through administrative quality, transformative quality, physical environment quality, core educational quality, and support facilities quality on students' satisfaction. Grounded on an extensive literature review, a conceptual framework has been formulated. For testing such framework, the data was collected from different public sector universities of Thailand. 500 questionnaires were randomly distributed among bachelor students of public sector universities of Thailand. The researchers received 240 filled samples with a response rate of 48%. Statistical Package for Social Sciences (SPSS) version 21.0 for windows software was used as a main tool for data analysis. After cleaning the data, 227 valid samples were further processed. The overall reliability of instrument is 0.89 while, individuals' factor reliability is detected as adequate. The results of Pearson's correlation and multiple regression analysis show that the service quality (transformative quality, core educational quality, physical environment quality, support facilities quality, and administrative quality) have a positive and significant relationship with the students' satisfaction in Thailand. The findings of such study may be beneficial for policy makers for knowing the reasons (factors) for satisfying and encouraging the students. In addition to it, this study may contribute to the literature of developing countries especially for the Thai context for further conceptualizing the service quality and students' satisfaction.

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Keyword: *Physical Environment Quality, Transformative Quality, Core Educational Quality, Support Facilities Quality, Administrative Quality, Students' Satisfaction.*

Introduction

Nowadays, a substantial number of students are leaving the universities (institutes) due to low quality of services. In this respect, measuring students' satisfaction is very important concern for every university administration (Mathews & Mulkeen, 2002). The "satisfaction is an internal feeling of an individual which is resulted by comparing the quality of a perceived performance or a delivered good to what extend he or she expected before" (Jalali et al., 2011). According to Manzoor (2013), transportation and sports facilities are significantly and positively related with students' satisfaction. The variables related to service quality (transformative quality, core educational quality, support facilities quality, physical environment quality, and administrative quality) have a strong role in developing students' satisfaction (Teeroovengadum et al., 2016).

In the service making literature, in higher education perspective, the satisfaction of a student arises when performance satisfies expectations of the students (Mark, 2013) because it is linked with vision of pleasure derived from a delivery (service) (Oliver, 1997). Consequently, examination of students' satisfaction is a significant need of every university (institution) to encourage the students in such institutions.

The present study attempts to determine the impact of service quality through core educational quality, administrative quality, physical environment quality, transformative quality, and support facilities quality on students' satisfaction in public sector universities of Thailand. This study may help universities (institutions) for encouraging and provision of service qualities which may generate the satisfaction among students. Moreover, the findings of such study

may be beneficial for policy makers for knowing the reasons (factors) for satisfying and encouraging the students. Finally, this study may contribute in the literature of developing countries especially in the Thai context for further conceptualizing the service quality and students' satisfaction.

Literature Review

In the present days, examination of students' satisfaction from university (institution) is a major task for every state. This phenomena is totally attached with the tolerance of students. The students are tolerated, it can be viewed as satisfaction from arrangement of service quality (Smith & Hopkins, 2005) which have been provided by the institutes. The studies were conducted on satisfaction in different countries. In the current era, central focus is on the students' satisfaction aspect in universities (Ali et al., 2016). The services provided by higher educational institutions are necessary as business services (Manzoor, 2013). The present institutions are seriously trying to fulfil the needs of students for satisfying them. In Pakistani students, transportation and sports facilities have a positive and significant impact on students' satisfaction. While, there is no any relationship of accommodation facilities on students' satisfaction (Manzoor, 2013). Relating to service quality, it is a degree of satisfaction of individuals' prospects and necessity in every repetition or existence (Hung et al., 2003). The literature underlines that the development of instrument regarding service quality is basically based on two aspects. First, to identify the suitable dimension of service quality (Kang & James, 2004), and second is operationalization of the service quality concept (Brady et al., 2002; Abdullah, 2006). According to Parasuraman et al. (1988, p. 15), the service quality "as a form of attitude related but, not equivalent to satisfaction, and results from comparison of expectations with perceptions of performance". On the other hand, from higher educational context, the service quality is defined as "the difference between what a

student expects to receive and his/her perceptions of actual delivery” (O’Neill & Palmer, 2004, p. 42). This idea has been widely used in numerous studies pointing for gauging the service quality in higher education (Cuthbert, 1996; Tan & Kek, 2004; Arambewela & Hall, 2006; Barnes, 2007; Wong et al., 2012). In spite of its extensive acceptance and approval, operationalization of the service quality “has been under extensive criticism” (Trivellas & Dargenidou, 2009, p. 383). In the context of Thailand, four factors such as academic and education quality, financial and economic consideration, prestige and image of university have a predictive power for examining the students’ satisfaction (Ngamkamollert & Ruangkanjanases, 2015). While, there is a moderate satisfaction of Vietnamese students for environment of the campuses (Duong, 2016). Teeroovengadum et al. (2016) strongly recommended that five variables such as administrative quality, transformative quality, physical environment quality, core educational quality, and support facilities quality are determinants of service quality in higher education.

Considering importance of examination of students from service quality, the present study attempts to test students’ satisfaction through variables of service quality i.e. administrative quality, physical environment quality, transformative quality, support facilities quality and core educational quality.

Conceptual Framework and Hypotheses Development

Students’ satisfaction can be labeled as the response which is provided to students at program and campus (Gibson, 2010). The students’ satisfaction and positive emotional state depend on academic performance and practices in institutions (Vichet et al., 2010). For predicting students’ satisfaction, the researchers developed a conceptual framework on the basis of service quality predictors such as core educational quality, administrative quality, transformative quality, physical environment quality and support facilities quality. Based on such constructs, the following conceptual

model (Figure I) proposed for testing.

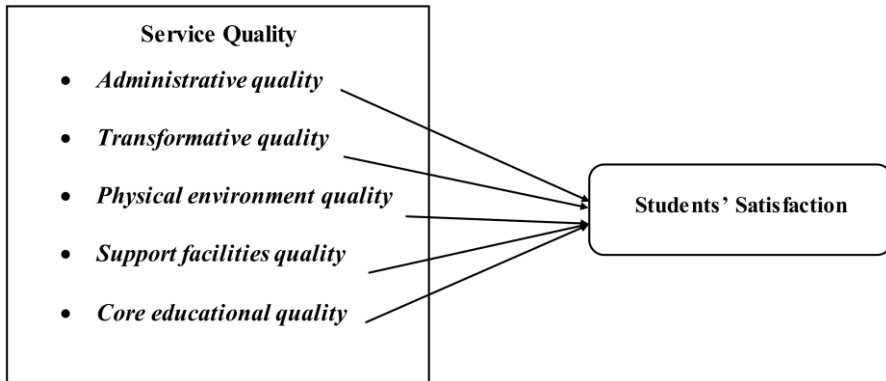


Figure 1: Conceptual model developed by the researchers

Students' satisfaction can be labeled as the response which is provided by students at program and campus (Gibson, 2010). The factors such as teachers' competency, campus environment, and extra-curricular activities are directly connected with satisfaction of students (Guosheng et al., 2010). Iacovidou et al. (2009) stated that quality (excellence) in higher education cannot be considered as a uni-dimensional notion. Indeed, it is consisted of many factors. Many research studies looking for investigating the service quality in higher education context (Cuthbert, 1996; Soutar and McNeil, 1996; Pariseau & McDaniel, 1997; Wong et al., 2012). According to Parasuraman et al. (1988) the service quality consist of five dimensions such as assurance, responsiveness, tangibles, reliability, and empathy. More recently, in a similar perspective, Teeroovengadum et al. (2016) strongly recommended that five variables such as core educational quality, transformative quality, physical environment quality, administrative quality and support facilities quality are main elements of service quality in the higher education. On the basis of literature, the researchers argue that students' satisfaction among higher education institutes can be predicted through service quality (support facilities quality, physical environment quality, core

educational quality, transformative quality, and administrative quality). Based on conceptualization, the following hypotheses were developed for confirmation among bachelor students of Thai public sector universities.

- H1:** Administrative quality has a positive and significant relationship with students' satisfaction.
- H2:** Support facilities quality has a positive and significant relationship with students' satisfaction.
- H3:** Transformative quality has a positive and significant relationship with students' satisfaction.
- H4:** Physical environment quality has a positive and significant relationship with students' satisfaction.
- H5:** Core educational quality has a positive and significant relationship with students' satisfaction.

Objectives of the Study

The main objective of the study is to examine the Impact of Service Quality on Students' Satisfaction in Public Sector Universities of Thailand. Based on such objective, following specific objective were formulated.

- To explore the administrative quality towards satisfaction in students of Thai universities.
- To examine the transformative quality towards satisfaction in students of Thai universities.
- To investigate the physical environment quality towards satisfaction in students of Thai universities.
- To inspect the support facilities quality towards satisfaction in students of Thai universities.

- To study the core educational quality towards satisfaction in students of Thai universities.

Research Methodology

The present study investigates the influence of service quality on students' satisfaction in public sector universities of Thailand. For this, the researchers decided to collect cross-sectional data on random basis.

Data collection instrument and sampling size

The survey questionnaire was used as a means of data collection for checking the proposed associations of the present study. 500 questionnaires were randomly distributed among bachelor students of public sector universities of Thailand. The researchers received 240 filled samples with a response rate of 48%. The survey was online as well as paper survey. According to University of Texas at Austin Center for Teaching and Learning (2007) that the response rate of online survey is always low and 30% is also considered as an average response rate. In a similar way, Watt et al. (2002) collected the responses as 32.2% through on line and 33.3% as paper survey. Such arguments assure that 48% response rate is adequate for investigating the impact of service quality on students' satisfaction. Moreover, due to screening of data, some invalid samples (missing or outliers) were excluded. A sample of 227 was chosen for the final data analysis.

Data collection practice and ethical concerns

The researchers targeted population of bachelor students of the first year to the fourth year who are pursuing education in public sector universities of the Kingdom of Thailand. The data was collected by using personal contacts of Pakistani nationals who are residing in Thailand for different purposes i-e studying, doing job and business. Before distribution of the questionnaires, participants were updated about aim and objectives of the study, voluntary contribution and

guaranteed regarding their confidentiality and secrecy about the use of collected data.

Measures

The items of respective factors were adapted from the relevant literature. The variables such as administrative quality (7 items), support facilities quality (6 items), transformative quality (8 items), physical environment quality (12 items) and core educational quality (20 items) were measured. Such items have been adapted from Teeroovengadum et al. (2016). On the other hand, students' satisfaction was measured on 5 items adapted from the study of Ijaz et al. (2011). All items were assessed by applying five-point Likert scale ranging from strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5.

Data Analysis and Results

The software Statistical Package for Social Sciences (SPSS) version 21.0 for windows was used to infer the results from collected data. Through such software, participants' demography, reliability and exploratory factor analysis (EFA) was performed. In the last, hypotheses were confirmed through Pearson's correlation and multiple regression analysis.

Demography

In addition to dependent and independent variables, the researchers added three demographic variables such as gender, age, and years of the study. The total participants were 227. A majority of participant 66% (n=150) were males while, 33% (n=77) were females. 41% (n=94) were above 24 years and 13% (n=30) were between 18-20 years of age. In a similar manner, 36% (n=83) participants were in fourth year of the degree year. Whereas, 12% (n=19) were in first year class (Table. 1).

Table 1: Demographic Characteristics of Participants (N=227)

Demographic variables	Category	Frequency (n)	%
Gender	Male	150	66.08
	Female	77	33.92
	Total	227	100
Age	18-20 years	30	13.21
	21-22 years	50	22.05
	23-24 years	53	23.34
	Above 24 years	94	41.40
	Total	227	100
Year	1 st	29	12.78
	2 nd	45	19.83
	3 rd	70	30.83
	4 th	83	36.56
	Total	227	100

Reliability Calculation

At initial stage, the researchers checked overall reliability (internal consistency) among the items through Cronbach's alpha reliability. The overall reliability of instrument was found as 0.89 which reflects a high internal consistency (Field, 2006). In the second stage, individuals' variable consistency was assured and noted in between 0.710 which is highly acceptable (Table. 2).

Table 2: Cronbach's Alpha Reliability of the Factors

Variables	α
Students' satisfaction	.890
Administrative service quality	.886
Support facilities quality	.891
Transformative quality	.877
Physical environment quality	.791
Core educational quality	.710

Note: α = Cronbach's alpha reliability

Factor Analysis

For identifying rest of the observed variables, related tests were carried out for determining whether the practice of Exploratory Factor Analysis (EFA) is suitable. To measure sampling adequacy, the researchers applied Kaiser-Meyer-Olkin (KMO) test for obtaining appropriate results of factor analysis. The KMO value was greater than 0.6 (Table. III). In addition, null hypotheses were rejected through the Barlett's test of Sphericity. The value of such test was noted as significant ($p < .005$) (Table. 3); such the results confirmed that correlation among quantity items are satisfactory and appropriate for factor analysis (Hair et al., 2006).

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.880
Bartlett's Test of Sphericity	Approx. Chi-Square
	9289.356
	Df
	227
	Sig.
	.000

In addition to KMO and Bartlett's test, the communalities and factor loadings were done to compute the variance. "A variable that has no specific variance (or random variance) have a communality of 1 and a variable that shares nothing with all other variables would have a

communality of 0" (Field (2006, p.630). In the present study, communalities were noted above acceptable range (Table. IV). after that, factor loading (FA) was conducted for observing the amount of items and fundamental structure about variables in analysis (Tabachnick & Fidell, 2007, p.26). In the beginning, total 58 items were applied for factor loading. Consequently, 29 items were loaded above the factor loadings values of 0.6 and communalities of above 0.5. Whereas, 29 items such as students' satisfaction (1 item), administrative quality (4 items), transformative quality (3 items), physical environment quality (8 items) and core educational quality (14 items) were omitted (excluded) due to their values lower than 0.6 and 0.5 respectively (Hair et al., 2006; (Pallant, 2007). Although, all the items (6) of support facilities quality variable were loaded above recommended values of communalities and rotated matrix (Table. 4). The left over 29 items were put-on for the further analysis.

Table 4: Communalities and Factor Loading

Variable	Code	Item description	Communality	Factor loading
Students' satisfaction	SS4	Loyalty	.722	.881
	SS1	Retention	.710	.876
	SS2	Increased learning	.671	.854
	SS3	Reputation, word of mouth	.610	.842
Physical environment quality	PEQ1	Availability of adequate cafeteria infrastructure	.690	.822
	PEQ3	Availability of adequate library infrastructure	.644	.815
	PEQ4	Availability of adequate recreational infrastructure	.768	.760
	PEQ2	Availability of adequate sports infrastructure	.727	.750
Administrative quality	AQ1	Willingness of administrative staff members to help students	.760	.872
	AQ4	Ability of administrative staff members to solve students' problems	.738	.866

	AQ3	Politeness of administrative staffs	.756	.845
	AQ2	Behaviour of administrative staff members	.737	.844
Support facilities qualities	SFQ6	Reasonable pricing and quality of food and refreshments on campus	.738	.842
	SFQ3	Availability of adequate IT facilities	.806	.835
	SFQ2	Availability and adequacy of photocopy and printing facilities	.819	.815
	SFQ4	Availability of transport facilities	.786	.769
	SFQ1	Amount of opportunity for sports and recreational facilities	.637	.710
	SFQ5	Availability and adequacy of extracurricular activities including those through clubs and societies	.620	.691
Transformative quality	TQ3	Enabling students to be emotionally stable	.747	.819
	TQ1	Increase in self-confidence of students	.602	.791
	TQ5	Development in students' critical thinking	.774	.747
	TQ3	Increase in self-awareness of students	.706	.863
	TQ4	Increase in knowledge, abilities and skills of students	.743	.847
Core educational quality	CEQ3	Lecturers understanding students' needs	.651	.812
	CEQ1	Lectures giving personal culture attention to students	.620	.803
	CEQ2	Availability of lecturers to guide and advise students	.698	.801
	CEQ4	Prevalence of a of sharing and collaboration among lecturers	.614	.792
	CEQ6	Lecturers appearing to have students' best interest at heart	.688	.771
	CEQ5	Behaviour of lecturers instilling confidence in students	.601	.702

Hypotheses testing

For testing the associations between students' satisfaction and service quality (transformative quality, support facilities quality, administrative quality, physical environment quality, and core educational quality), the researchers applied two techniques such as Pearson's correlation and multiple regression analysis.

For the first hypothesis (H1), the results showed that there is a positive and significant correlation between administrative quality and students' satisfaction ($r = .283^{**}$; $\beta = .158$; $t = 3.293$; $p < 0.001$) (Table V & VI). Thus; hypothesis H1 was accepted.

The correlational and regression weights for hypothesis H2 ($r = .368^{**}$; $\beta = .439$; $t = 7.380$; $p < 0.001$) (Table. 5 & 6) underlined a positive and significant impact of support facilities quality on students' satisfaction. Therefore, hypothesis H2 was supported.

With a regard to hypothesis (H3), the scores of Pearson's correlation and regression highlighted a positive and significant association between transformative quality and students' satisfaction ($r = .300^{**}$; $\beta = .373$; $t = 4.374$; $p < 0.001$) (Table. 5 & 6). Hence, H3 was supported.

The results for the forth hypothesis (H4) revealed that ($r = .200^{**}$; $\beta = .249$; $t = 3.989$; $p < 0.001$) (Table. 5 & 6). Therefore, H4 was accepted.

In the same way, Pearson's correlation and regression results for the final hypothesis (H5) ($r = .340^{**}$; $\beta = .329$; $t = 4.001$; $p < 0.001$) (Table. 5 & 6) confirmed a significant and positive association between core educational quality and students' satisfaction. As a result, H5 was also supported by the data.

Table 5: Pearson's Correlation

	Variables	M	SD	1	2	3	4	5	6
1	Students' satisfaction	3.38	1.4312	---					
2	Administrative Quality	3.20	1.254	.283**	---				
3	Support Facilities Quality	3.59	1.0352	.368**	.310**	---			
4	Transformative Quality	3.29	1.0023	.300**	.420**	.177*	---		
5	Physical Environmental Quality	2.93	1.3482	.206**	.349**	.219**	.269**	---	
6	Core Educational Quality	3.45	1.0012	.340**	.224**	.340**	.402**	.389**	---

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Note: M=Mean, SD=Standard Deviation

Table 6: Multiple Regression Analysis

Variables	Dependent variable <i>Students' satisfaction</i>		
	β	t-value	p-value
Administrative quality	.158	3.293	.000
Support facilities quality	.439	7.380	.000
Transformative quality	.373	4.374	.000
Physical environment quality	.249	3.989	.000
Core educational quality	.320	4.00	.000
R ²		0.479	
Adjusted R ²		0.492	
F value		25.905	

Discussion and Conclusion

The present study empirically investigates the impact of service quality through administrative quality, transformative quality, physical environment quality, core educational quality, and support facilities quality on students' satisfaction. On the basis of an extensive literature review, a conceptual framework was formulated. For testing such framework, the data was collected from different public

sector universities of Kingdom of Thailand. 500 questionnaires were randomly distributed. The researchers received 240 filled samples with a response rate of 48%. The SPSS version 21.0 for windows software was used for data analysis. After cleaning the data, 227 valid samples were further processed. The overall reliability of instrument is 0.89 while, individuals' factor reliability was detected as adequate.

Regarding demography, the researchers added three demographic variables such as gender, age, and years of the study. 66 percent were males while, 33 percent were females. 41 percent were above 24 years of age. Regarding factor loading, 29 items were loaded above the factor loadings values of 0.6 and communalities of above 0.5. Whereas, 29 items such as students' satisfaction (1 item), administrative quality (4 items), transformative quality (3 items), physical environment quality (8 items) and core educational quality (14 items) were omitted (excluded) due to their values less than 0.6 and 0.5 respectively. In contrast, the all items (6) of support facilities quality variable were loaded above the recommended values of communalities and rotated matrix.

For testing the associations between dependent variable (students' satisfaction) and service quality (support facilities quality, transformative quality, physical environment quality, core educational quality, and administrative quality), the researchers applied two techniques such as Pearson's correlation and multiple regression analysis. As a result, all hypotheses (H1, H2, H3, H4 and H5) were supported by the data. Such results are accorded with various scholars such as Manzoor (2013); Ngamkamollert & Ruangkanjanases (2015); Teeroovengadum et al. (2016); (Duong, 2016).

In conclusion, results highlight that the service quality (support facilities quality, transformative quality, physical environment quality, core educational quality, and administrative quality) have a significant and positive relationship with the students' satisfaction in

Kingdom of Thailand. Such positive results underline that there are various facilities available in public sector universities of Thailand which may fulfill basic needs of students. These facilities may create satisfaction among the students of Thailand. Our positive findings strongly highlighted that the development of Thai students' satisfaction is based on physical environment, quality of service in core educational facilities, compassionate facilities provided by the universities and the administrative co-operation and facility. Such positive results may occurred because the universities of Thailand are seriously trying to fulfil the needs of students for satisfying them. The transportation, sports facilities accommodation facilities may enhanced the level of satisfaction among the students. The reasons of positive results may be higher educational institutes of Thailand. Such institutes may be active in perspectives of perceptions of actual delivery to student in forms of different facilities such as an academic and education quality, financial and economic consideration and prestige and image.

The findings of such study may be beneficial for policy makers for knowing the reasons (factors) for satisfying and encouraging the students. In addition to it, this study may contribute in the literature of developing countries especially for the Thai context for further conceptualizing the service quality and students' satisfaction.

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