Perceived Quality of Service for International Students
at Tongren City, China

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Abstract

The objectives of this paper were to investigate the factors influencing international students' satisfaction level including positive word of mouth to others and retaining for further study, and what factors influencing the satisfaction level of international students. Due to the breakout of COVID-19, a survey questionnaire online was used to collect data from 225 international students and retrieved 220 complete questionnaires and a quantitative method via SPSS version 22.0 was used to analyze the variables and test hypothesis. The results revealed that the factors from HESQUAL model have definite influence on satisfaction level for international students.

Key Words: International Students, Perceived Service, Service quality, Satisfaction Level

Introduction

As the process of globalization and internalization is all over the world, service quality is becoming more and more important in the context of business as well as the context of education field as the process of globalization and internalization. However, Hamzaha and Abdullahb (2017) found that there was little research on the relationship between the service quality and international students' satisfaction in public universities in Malaya. Many researchers (such as Dinh, et. Al., 2021 & Fuchs, et. Al., 2021) studied service quality in education institutions in Eastern Asia, Europe, USA, UK, and other developed countries, but no study has been conducted on the service quality in China education institution, especially on the service quality in public universities (Ilias et al., 2008) .

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The research investigated and found out the service quality of public universities in China using Tongren city's universities (including Tongren university, Tongren Polytechnic College, and Tongren Preschool Education College) as a case. The study was to investigate the factors concerning the 'gap' between expectations and perceptions of international students at Tongren city. The research was conducted to investigate the level of service quality from the public universities in international students' perceptions, and find out the factors influencing service quality provided by Tongren city.

Based on the objectives of the paper, the researcher presented the following questions to investigate the factors affected the perceived service quality of students and how the factors affected the perceived service quality.

1) How did factors impact on the service quality provided by Tongren city's Universities?

2) What were the factors that made international students satisfied with service quality they received from Tongren city's Universities?

The research was conducted to find the "gap" between service quality and perceived quality as fro the satisfaction of international students at Tongren city, in order to help the stakeholders for the universities to adjust the admission policies for attracting more international students at Tongren city (Zhang, 2018). The paper is organized as follows: Part one is to introduce the research back- ground and the significance. Part two is the review for the literature and the re- search gap as well as the way to fill the gap. Part three is the tool and method to conduct the research. Part four is the research result and discussion, and part five is the conclusion, the research limitations and the future research.

Literature Review

Based on literature review of many articles and the rankings of universities evaluated and assessed by (Quacquarelli Symonds, 2019). After the researcher's investigation and analysis, the researcher found that the private universities of the world are ranked on the top list of ranking both in the USA and Europe. Service quality has been done by many researchers during the past decades in the education sector (Adamu, 2017; AyatPouzesh et al., 2016; Marimon, Mas-Machuca and Berbegal-Mirabent, 2018). Moreover, perceptions of service quality is closely related with customer satisfaction, and in the context of higher education,

the satisfied international students would use positive word of mouth to advertise and recommend the host universities to others (Alves and Raposo, 2010).

Parasuraman et al., (1985) introduced a model named SERVQUAL to measure the gap between customers' 'expectations' and 'perceptions'. The gap between expectations and perceptions is to indicate what the stakeholders should do to improve the service in the information era (Parasuraman, Zeithaml, and Malhotra, 2005, p. 5). The characteristics of the service quality increase the difficulty for researchers to evaluate the results from customers and researchers have to modify SERVQUAL's measurement elements to the real needs of research based on actual cases (Yoon and Suh, 2004, p. 342).

Quality as defined for higher education has been identified by Harvey and Knight (1996). They suggested that quality reflects exceptional, consistency, fitness for purpose, value for money, and transformative. Consequently, akin to business organizations that are under the stringent obligation to constantly satisfy their customers to thrive , universities need to satisfy their students. While there is competition in outcomes such as research and innovation, universities are also expected to deliver high service quality. Therefore, the assessment of the service quality in higher education can provide an important contribution and inputs which will be useful for management and staff to continue improving the quality of education (Teeroovengadum, 2016).

Higher education has been increasingly recognized as a service industry, and this puts a greater emphasis on meeting the expectations and needs of its participating customers who are the students (Malaysian Qualifications Register (MQR)). In education, students are customers who come to contact with service providers of an educational institution for the purpose of acquiring goods or services. Higher education has become a global business and universities have to continuously explore options for exporting higher education services.

The quality of higher education as a service is also fundamental to a country's development because universities prepare the professional who will work as managers in companies and manage public and private resources and care for the health and education of new generations.

Table 1 & Table 2 showed the factors in HESQUAL model and five dimensions in HESQUAL model， based on the foregoing literature review.

Table 1 HESQUAL model

Author (s)	Model	Factor (s)/Findings
Teeroovengadum et al., (2016).	HESQUAL	Administrative Quality, Physical Environment Quality, Core Educational Quality, Support Facilities Quality, Transformative Quality.

Table 2 The Literature Sources of Five Dimensions in HESQUAL Model

Dimensions identified	Literature Source	Sample Statements from Interviews/Focus Groups
Administrative Quality	Kwek et al. (2010), Sultan and Wong (2011), Narang (2012).	"Administrative staffs should always be willing to help students out"; "Administrative staff should be good to students.
Physical Environment Quality	Wong et al. (2012).	"Having a peaceful environment"; "The campus should have good looking infrastructure"; "Physical resources like library";
Core Educational Quality	Narang (2012).	"A culture of sharing and collaboration"; "Faculty members are willing to help"; "Having lot of interaction with

Dimensions identified	Literature Source	Sample Statements from Interviews/Focus Groups
		students";
		"Research work of academics";
Support Facilities Quality	Sultan and Wong (2011).	"Good transport facilities"; "Opportunities for extracurricular activities";
Transformative Quality	Lomas (2007),	"Developing critical thinking"; "Acquiring job-related skills and knowledge";

Based on the foregoing literature, the proposed conceptual framework as the following in Figure 1.

Based on the proposed conceptual framework, there were hypotheses as follows:

H1: There is a significant relationship between administrative quality (AQ) and remaining for further study (RFS).

H2: There is a significant relationship between physical educational quality (PEQ) and remaining for further study (RFS).

H3: There is a significant relationship between core educational quality (CEQ) and remaining for further study (RFS).

H4: There is a significant relationship between support facilities quality (SFQ) and remaining for further study (RFS).

H5: There is a significant relationship between transformative quality (TQ) and remaining for further study (RFS).

H6: There is a significant relationship between administrative quality (AQ) and positive of word mouth (PWM).

H7: There is a significant relationship between physical educational quality (PEQ) and positive of word mouth (PWM).

H8: There is a significant relationship between core educational quality (CEQ) and positive of word mouth (PWM).

H9: There is a significant relationship between support facilities quality (SFQ) and positive of word mouth (PWM).

H10: There is a significant relationship between transformative quality (TQ) and positive of word mouth (PWM).
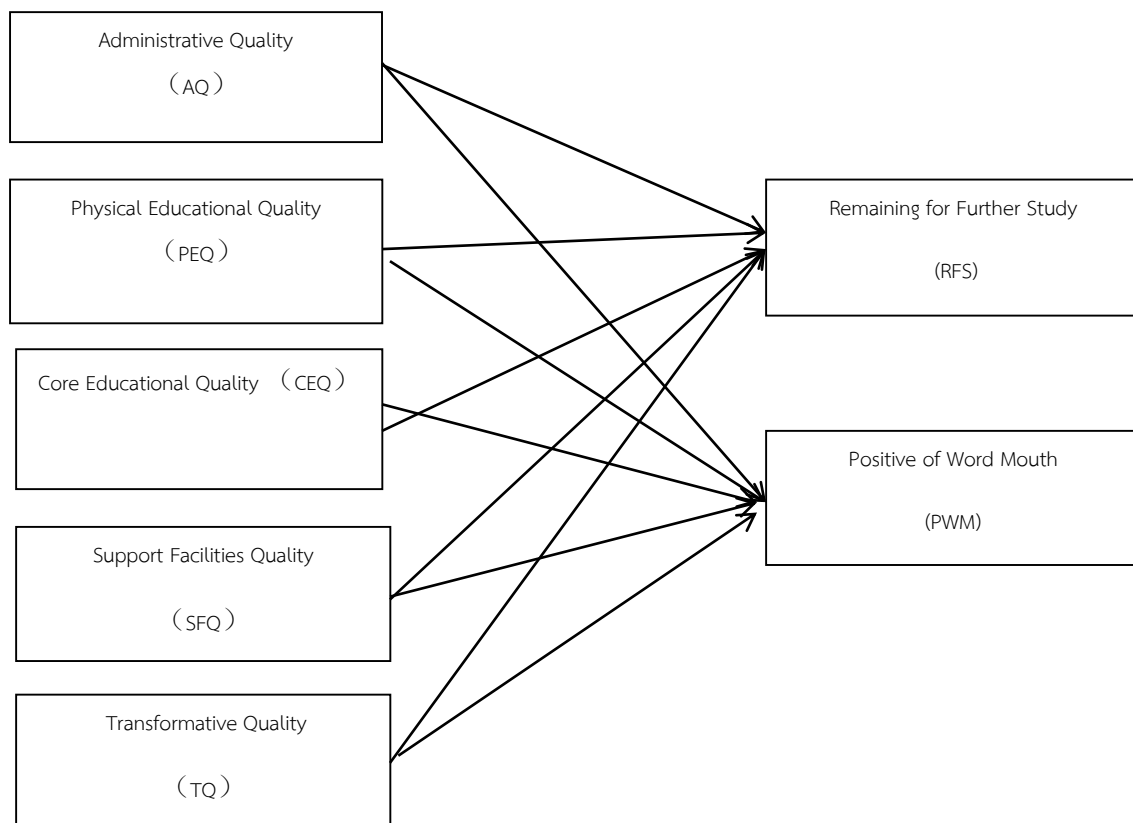

Figure 1 The Proposed Conceptual Framework

The past research mainly concerned more theoretical than empirical research, and the sample size was small. Especially in western part of China, like Tongren city, Guizhou province, fewer researchers have conducted research concerning the perceived service quality on

international students. The researcher conducted the kind of research was to find the factors influencing the satisfaction level of international students. Hence, the stakeholders of the universities at Tongren city would adjust the admission policies for attracting more international students to learn at Tongren city (Zhang, 2018).

Methodology

Due to the breakout of COVID-19, this study is a structured quantitative research design using an online survey questionnaire to collect data from the international students in a public university named Tongren city's universities. The research will deliver the questionnaire to international students in a self-administered way to collect data and information and the study is a cross-sectional research from October 10 to October 25, 2021.

Population

Population in the current study was 225 international students studying presently in Tongren city's Universities from Association of Southeast Asian Nations (Association of Southeast Asian Nations), mainly from Thailand, Laos, and Cambodia ranking the first three, respectively (www.gztrc.edu.cn).

Sample size

The number of international students was 225, so based on the known sample size, the research was to use the Taro Yamane sample formula to determine the sample size as below:

$n = N / (1 + Ne^2)$

Where

n= corrected sample size,

N = population size, and

e = Margin of error (MOE), e = 0.05.

However, during the research conducted, most of international students were in their own countries, and there were not any international students on campus. The researcher collected data from 225 samples online, and obtained 220 complete questionnaires to analyze the data.

Quantitative Method

The researcher conducted a quantitative research method and distributed 225 questionnaires to collect data and analyze the data. Then 220 completed questionnaires were returned to the researcher, and the return rate was about 98 percent.

Sampling

Due to the research respondents were confined to the international students in Tongren city's Universities, so the researcher used the purposive sampling to collect data and information from the research respondents in Tongren city's Universities.

Data Collecting

Because this research was a quantitative research design, the feedback data concerning perceived quality from the sample (international students) was collected through self-administrated survey questionnaire to collect data and information in a cross-sectional study from October 10 to October 25, 2021.

The questions in the survey questionnaire are developed from the information based on the independent variables, and the relationships between independent variables and variables in the study.

Questionnaire Design

The researcher designed a structured quantitative questionnaire with closed-ended questions and one open-ended question named suggestions in the format of a typical five-level Likert scale as below:

Strongly disagree, Disagree, Neutral, Agree, strongly agree, using the number from 1 to 5 indicating Strongly disagree to Strongly agree, respectively. The questions in the questionnaire were designed according to the concepts and theories of service quality. The author read concepts and theories also the journal articles and use the information obtained from books and journals to design the questions.

Data Analysis

After the researcher collected the data from the samples, the data will be analyzed as followings: For quantitative data, descriptive analysis was used to analyze demographic data of the samples and the results from the analysis. The data was mainly from the choices reflected in the questions of the survey questionnaire, and the choices concerned the ideas and opinions of the respondents. Thus, the researcher used inferential statistics including One-

way ANOVA and Multiple regression to test variables and to test the two hypotheses in the research. For the Mean Scores of questions in five-point Likert scale, there is a criterion table to evaluate and assess the questions' scale as below Table 3 width of class interval.

Results and Discussion

The research identified the independent variables into 2 groups, which were demographic factors (age, gender, and educational level), and factors in HESQUAL (administrative quality, physical environment quality, core educational quality, support facilities quality, and transformative quality), meanwhile the dependent variables were positive of word mouth for the international students' perceived service quality at Tongren city's Universities. Tables 4-7 in the following showcase the descriptive statistics including participants' gender, age, and country origin, respectively.

Tables 4-9 in the following showed the descriptive statistics of participants, reliability analysis, factors analysis of the items in the questionnaire, respectively.

Table 10 & Table 11 in the following showcase the results of the hypothesis

Table 3 Width of class interval

Mean Scores	Five-Point Likert Scale
4.21-5.00	1-Strongly Agree
3.41-4.20	2-Agree
2.61-3.40	3-Neutral
1.81-2.60	4-Disagree
1.00-1.80	5-Strongly Disagree

Table 4 Descriptive statistics of participants

Statistics				
		Gender	Age	Origin of Country
N	Valid	220	220	220
	Missing	0	0	0

Table 5 Gender of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	105	47.7	47.7	47.7
	Female	115	52.3	52.3	100.0
	Total	220	100.0	100.0	

Gender

Table 6 Age of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-20	86	39.1	39.1	39.1
	21-25	70	31.8	31.8	70.9
	26-30	28	12.7	12.7	83.6
	31-35	36	16.4	16.4	100.0
	Total	220	100.0	100.0	

Age

Table 7 Country origin of participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ASEAN (Association of Southeast Asian Nationas)	79	35.9	35.9	35.9
	Russia	28	12.7	12.7	48.6
	Morocco	31	14.1	14.1	62.7
	Columbia	27	12.3	12.3	75.0
	Pakistan	26	11.8	11.8	86.8
	Kazakhstan	6	2.7	2.7	89.5
	Tajikistan	23	10.5	10.5	100.0
	Total	220	100.0	100.0	

Origin of Country

Table 8 Reliability statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.961	.963	7

Table 9 Descriptive statistics of variables

Item	Variable	Mean	S.D.
AQ	The administrative staff is kind and helpful.	3.32	.75
AQ	The administrative staff is will to solve your problems.	3.60	.80
AQ	The administrative staff is to take advice good for your staying.	3.60	.69
AQ	The administrative staff is willing to improve living conditions.	3.60	.80
PEQ	Adequate learning infrastructure is available.	2.00	.68
PEQ	Adequate dormitory infrastructure is available.	3.91	.97
PEQ	Adequate recreational infrastructure is available.	2.02	.84
PEQ	Adequate sports infrastructure is available.	2.10	.73
CEQ	Curricular is appropriate for students to study.	2.23	.64
CEQ	Lecturers to guide and advise students is available.	1.97	.66
CEQ	Lecturers have the behavior of instilling confidence in students.	1.98	.77
CEQ	There are adequate extracurricular activities.	3.14	.92
SF	There are adequate opportunities for sports and recreational activities	1.90	.74
SF	There are adequate sports equipment.	2.10	.43
SF	There are adequate IT facilities.	1.78	.64
SF	There are reasonable pricing and foods on campus.	2.15	.53
TQ	Students increase in knowledge, abilities and skills.	2.25	.66
TQ	Students increase in self-confidence.	2.32	.74
TQ	Students increase in self-awareness.	2.11	.47
TQ	Students have developed in critical thinking.	2.23	.64
RFS	You are willing to remain at Tongren University for further study.	2.24	.81
PWM	You are willing to speak positive of word mouth	2.17	.69

Table 10 The Result of the Research

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig
Between People		264.839	104	2.547		
Within People	Between Items	164.088	6	27.348	273.426	.000
	Residual	62.412	624	.100		
	Total	226.500	630	.360		
Total		491.339	734	.669		
Grand Mean = 2.4364						

Table 11 The Results of Hypothesis

Hypothesis	Results
H1: There is a significant relationship between administrative quality (AQ) and remaining for further study (RFS).	Accepted
H2: There is a significant relationship between physical educational quality (PEQ) and remaining for further study (RFS).	Accepted
H3: There is a significant relationship between core educational quality (CEQ) and remaining for further study (RFS).	Accepted

H4: There is a significant relationship between support facilities quality (SFQ) and remaining for further study (RFS).	
H5: There is a significant relationship between transformative quality (TQ) and remaining for further study (RFS).	Accepted
H6: There is a significant relationship between administrative quality (AQ) and positive of word mouth (PWM).	
H7: There is a significant relationship between physical educational quality (PEQ) and positive of word mouth (PWM).	Accepted
H8: There is a significant relationship between core educational quality (CEQ) and positive of word mouth (PWM).	Accepted
H9: There is a significant relationship between support facilities quality (SFQ) and positive of word mouth (PWM).	
H10: There is a significant relationship between transformative quality (TQ) and positive of word mouth (PWM).	Accepted
	Accepted
	Accepted
	Accepted

Conclusion

The results from descriptive analysis were used to analyze factors influencing on international students' perceptions of service quality of one public university included administrative quality, physical environment quality, core educational quality, support facilities quality, and transformative quality. The results found that the international students were satisfied with the learning choice. The university's tuition and fees influenced on their selection decision and the staff's willingness to help was another factor to attract and retain the students. The results revealed that international students were satisfied with overall services provided by the university. The results revealed that the relationship among stakeholders in the research, and the results also revealed that international students were satisfied with the guide and help from the staff. Finally, the results revealed that the recreational dormitory infrastructure was a major factor influencing when international students had positive word of mouth to others and recommended the university to others, followed by factors such as recreational places and equipment, reasonable pricing and foods on campus, increase in self-awareness, and increase self- confidence, respectively.

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