

**EFFECTS OF SERVQUAL ON POSTGRADUATE STUDENTS'  
SATISFACTION AND THEIR WORD-OF-MOUTH**

The image shows a large, faint watermark of the Mahidol University logo in the background. The logo is circular, featuring a central emblem with a tiered umbrella and a crown, surrounded by Thai script. The text "NAIPHATSORN SAKYAPHINANT" is overlaid on the center of the logo.

**NAIPHATSORN SAKYAPHINANT**

**A THEMATIC PAPER SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR  
THE DEGREE OF MASTER OF MANAGEMENT  
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2020**

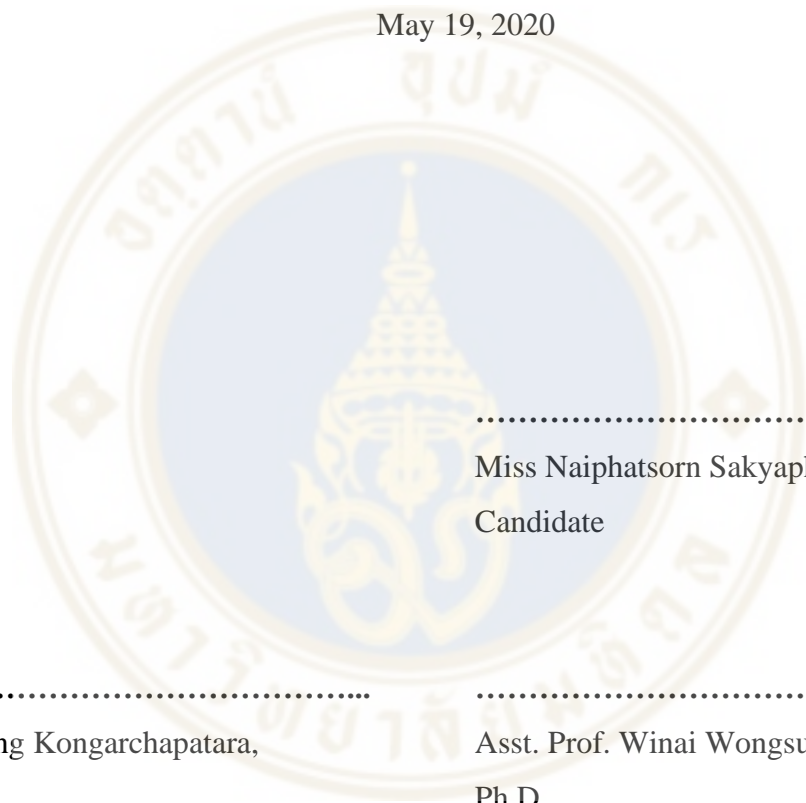
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Thematic Paper  
entitled  
**EFFECTS OF SERVQUAL ON POSTGRADUATE STUDENTS’  
SATISFACTION AND THEIR WORD-OF-MOUTH**

was submitted to the College of Management, Mahidol University  
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Naiphatsorn Sakyaphinant

EFFECTS OF SERVQUAL ON POSTGRADUATE STUDENTS' SATISFACTION  
AND THEIR WORD-OF-MOUTH

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ABSTRACT

This study “Effects of SERVQUAL on postgraduate students’ satisfaction and their word-of-mouth” were studied with the main objective to understanding the factors that influence students’ satisfaction and their WOM communication. The questionnaire was used, and the respondents were chosen by convenience sampling methodology. The online survey was conducted from December 2019 until March 2020 among 389 Thais’ nationality students who experienced at least postgraduate studies. SPSS was used to analyze the data obtained from the questionnaires.

The results suggest that only two SERVQUAL dimensions which are “responsiveness” and “empathy” and the variable “reputation” have positive impacts on students’ satisfaction. As well as, students’ satisfaction provides a strong impact on WOM sender. Lastly, gender has no significant difference for the perception of SERVQUAL dimensions between male and female.

The study will support the education management to formulate strategies or tactics to appeal to target students in an era of low enrolment.

**KEYWORDS:** Service quality / Reputation / Student Satisfaction / Word-of-mouth / Higher Education

79 pages

## **CONTENTS**

	<b>Page</b>
<b>ACKNOWLEDGEMENTS</b>	<b>ii</b>
<b>ABSTRACT</b>	<b>iii</b>
<b>LIST OF TABLES</b>	<b>v</b>
<b>LIST OF FIGURES</b>	<b>vi</b>
<b>LIST OF ABBREVIATIONS</b>	<b>ix</b>
<b>CHAPTER I</b>	<b>1</b>
<b>INTRODUCTION</b>	<b>1</b>
1.1 Introduction	1
1.1.1 World population and its growth rate	1
1.1.2 The declining birthrate means to education institutions	4
1.1.3 Thailand higher education challenge	4
1.1.4 The consumer decision making	6
1.2 Objective of the study	9
1.3 Research questions	9
1.4 Significance of the research	9
1.5 Research structure	9
1.6 Design of the study	11
1.6.1 Research design	11
1.6.2 Data collection	11
1.6.3 Data analysis	11
1.6.4 Research validity and reliability	12
1.6.5 Research Ethics	12
<b>CHAPTER II</b>	<b>14</b>
<b>LITERATURE REVIEW</b>	<b>14</b>
2.1 Theories and literature review	14

## CONTENTS (cont.)

	<b>Page</b>
2.2 Related research & reference framework	21
2.3 Research question & hypotheses	24
2.4 Conceptual framework	26
<b>CHAPTER III RESEARCH METHODOLOGY</b>	<b>27</b>
3.1 Research approach	27
3.2 Research design	27
3.3 Data collection	29
3.4 Data analysis	31
3.5 Research validity and reliability	32
3.6 Research ethics	33
<b>CHAPTER IV ANALYSIS OF RESEARCH FINDINGS</b>	<b>34</b>
4.1 Reliability test	34
4.1.1 Reliability test results of SERVQUAL dimensions	35
4.1.2 Reliability test results of Satisfaction, Reputation, WOM	39
4.2 Descriptive analysis	41
4.2.1 Respondent's Profile	41
4.2.2 Service Quality Dimensions (SERVQUAL)	43
4.2.3 Satisfaction	45
4.2.4 WOM	45
4.2.5 Reputation	46
4.3 Analyse & Result	47
4.3.1 Result of analysis verification	47
4.3.2 Result of hypothesis testing	53
4.4 Summary	55

## **CONTENTS (cont.)**

	<b>Page</b>
<b>CHAPTER V</b>	<b>57</b>
<b>CONCLUSION AND DISCUSSION</b>	<b>57</b>
5.1 Research conclusion & discussion	57
5.1.1 Demographic characteristic	57
5.1.2 Factor impacts on students' satisfaction	58
5.1.3 Factor impacts on WOM	58
5.1.4 Factor impact perceived of service quality	58
5.2 Practical Implications for management.	58
5.3 Limitations and further research	61
<b>REFERENCES</b>	<b>62</b>
<b>APPENDICES</b>	<b>73</b>
APPENDIX A	74
APPENDIX B	78
<b>BIOGRAPHY</b>	<b>79</b>



## LISTS OF TABLES

<b>Table</b>	<b>Page</b>
1 Annual World Population Growth Rate (1955-2020)	2
2 Top five lowest world's fertility rate statistics (2020)	3
3 The abbreviations and definition frequency used in the study	12
4 The level of agreement towards service quality of OTAs	31
5 The Arithmetic Mean Interpretation for satisfactions or agreements in service quality dimensions toward student's satisfaction.	32
6 Cronbach's alpha score's level	33
7 Reliability test results of SERVQUAL	35
8 Reliability test results of Satisfaction, WOM, and Reputation	39
9 Respondent's Profile (N=389)	42
10 Summary for Service Quality Dimensions (SERQUAL)'s scores (N=389)	43
11 Summary for Satisfaction's scores (N=389)	45
12 Summary for WOM's scores (N=389)	46
13 Summary for reputation's scores (N=389)	46
14 Independent samples t-test between gender and perceive of service quality dimensions (SERVQUAL)	47
15 Results of Independent samples t-test between gender and perceive of each dimension of SERVQUAL	48
16 Results of Independent samples t-test between gender and overall SERVQUAL dimensions	50
17 Regression Test Results - Student's Satisfaction & WOM Sender	50
18 Pearson correlation test between each variable on Student's Satisfaction	51
19 Model summary	52
20 Results of Multiple Regression Analysis (Level of significance 5%)	52
21 Summary of Hypothesis Testing	55



## LISTS OF FIGURES

<b>Figure</b>	<b>Page</b>
1 Annual World Population Growth Rate (%)	2
2 Probabilistic Projections of world’s total fertility using fertility estimates	3
3 Annual population growth rate for Thailand (1960s – 2020s)	5
4 Thailand population by broad age groups (1950s – 2100s)	5
5 Word-of-mouth campaign “Share a Coke”	7
6 Word-of-mouth campaign “TESLA’S referral program”	8
7 Structure of the Studies	10
8 A five steps in the consumer decision-making process	15
9 Proposed framework to explore the impact of service on satisfaction, WOM communication, and repurchase intention	23
10 Proposed framework to investigate the effect of service quality on student satisfaction, institutional image, and loyalty	24
11 Conceptual framework	26
12 Comparison the average score for the gender on perceived service quality dimension (SERVQUAL)	48
13 Summary of the social network in Thailand updated March 2020	60

# CHAPTER I

## INTRODUCTION

### 1.1 Introduction

The higher education institutions around the world are now facing some challenges. As SME News (2018) reported, America's colleges are facing more pressure than ever to retain existing students and attract new ones. Driven by a drop of nearly 224,000 undergraduate students, overall college enrollment declined for the sixth consecutive year this year according to data from the National Student Clearinghouse Research Center. Therefore, the institutions must work much harder to fill seats.

Similarly, the demographic trends very visible in many countries in East and Southeast Asia, some universities closed, and some are going to close their branches due to drop in a number of students and the resulting drop in university income. While in Thailand, two private universities, such as Srisophon College in Nakhon Sri Thammarat and Asian University in Chonburi, decided to shut down in 2017 due to the financial caused by low enrollment, (Bangkok Post, 2018)

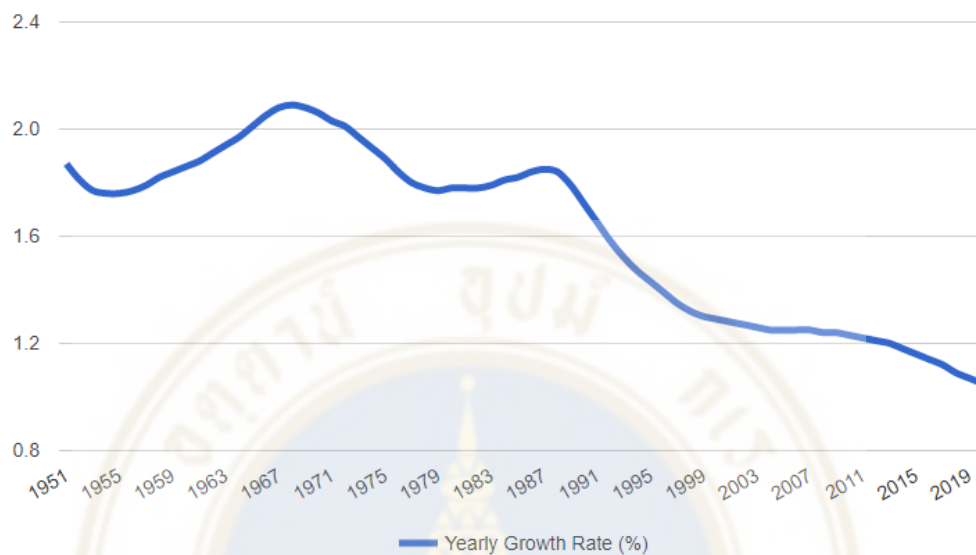
What happens to the higher education institute?

#### 1.1.1 World population and its growth rate

Annual world population growth rate reached its peak around 1960s when it was at around 2%, and then continuing to decline in the coming years. As shown in figure 1; a source from Worldometers (2020)

According to the data from Worldometers (2020) as show in table 1 that illustrates how world population has changed throughout history in yearly. The population will continue to grow but at a much slower rate compared to the recent past. For the fertility rate, the report estimates the average births per woman over their lifetime (total fertility rate) in 2020 at 2.47%, there are continue falling from the past decades. Supporting by data from the UN projections (2020) has been predicted the fertility rate trend as shown as figure 2.

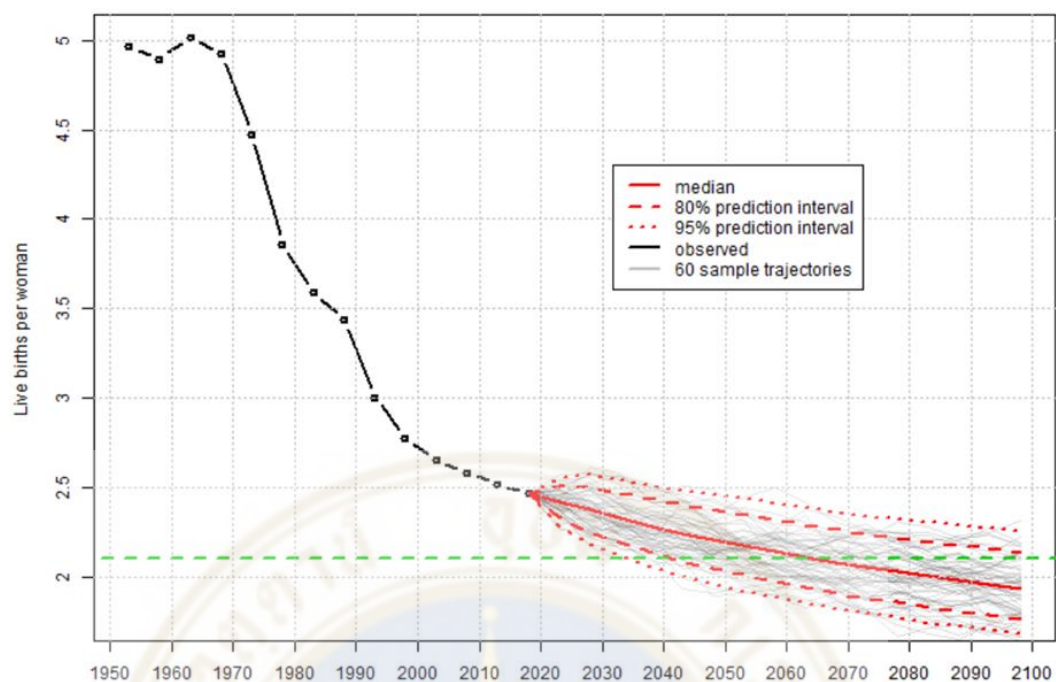
Demographers indicate that the countries need fertility rates around 2 children per woman for replacing the parents and maintain a stable population. Therefore, the declining in the birth rate is significantly reflected in population development to affect economic growth.



**Figure 1** Annual World Population Growth Rate (%)

**Table 1** Annual World Population Growth Rate (1955-2020)

Year	Population	Yearly % Change	Yearly Change	Median Age	Fertility Rate
2020	7,794,798,739	1.05 %	81,330,639	30.9	2.47
2015	7,383,008,820	1.19%	84,967,932	30	2.52
2005	6,542,159,383	1.26%	79,430,479	27	2.63
1995	5,751,474,416	1.53%	84,106,191	25	3.02
1985	4,873,781,796	1.80%	83,074,052	23	3.6
1975	4,079,087,198	1.97%	75,701,910	22	4.46
1965	3,339,592,688	1.94%	61,276,032	23	4.96
1955	2,772,242,535	1.80%	47,193,563	23	4.96



**Figure 2** Probabilistic Projections of world's total fertility using fertility estimates

The below statistics; table 2; from (Worldometers, 2020), South Korea has the lowest fertility rate in the world at 1.1%, closely followed by Taiwan (1.2%) and Singapore (1.2%), while Thailand is at 1.5% and ranking at No.21, whereas, on average fertility rate is around 2%.

**Table 2** Top five lowest world's fertility rate statistics (2020)

No.	Country	Population Year 2020	Yearly Change	Fert. Rate	Med. Age
1	South Korea	51,269,185	0.09%	1.1	44
2	Taiwan	23,816,775	0.18%	1.2	42
3	Singapore	5,850,342	0.79%	1.2	42
4	Puerto Rico	2,860,853	-2.47%	1.2	44
5	Macao	649,335	1.39%	1.2	39
21	Thailand	69,799,978	0.25 %	1.5	40

### **1.1.2 The declining birthrate means to education institutions**

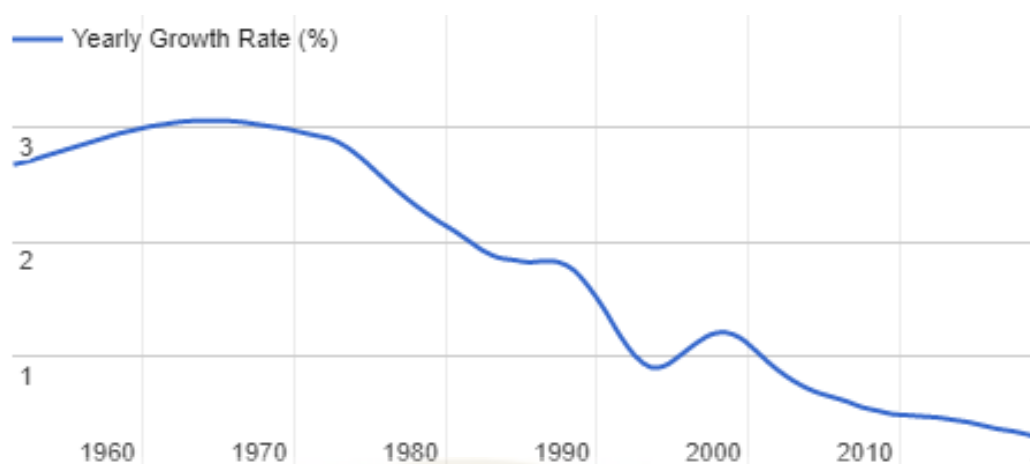
One of the most significant changes in the global higher education landscape is the changing of demographics that resulted in a decline in the number of high school graduates then affect undergraduate schools and graduate schools, respectively.

However, the demographic change is not the only factor that impacts higher education institutions. A globalized world is a reality facing every human being which no one can predict its likely future, but many would agree that globalization is an irreversible reality, which despite full opportunities it provides for the improvement, also brings with it many adverse impacts to human life. Therefore, an increase of globalization means more competition, not just with other institutions in the same city or the same region but it is also meaning that no longer limited by national boundaries. Altbach et al. (2009) published his research shown that higher education has become a competitive enterprise in the early 21st century. In many countries' students must compete for scarce places in universities and all countries admission to the top institutions has become more difficult. Universities compete for status and ranking, and generally for funding from governmental or private sources. While competition has always been a force the institutions and can help produce excellence.

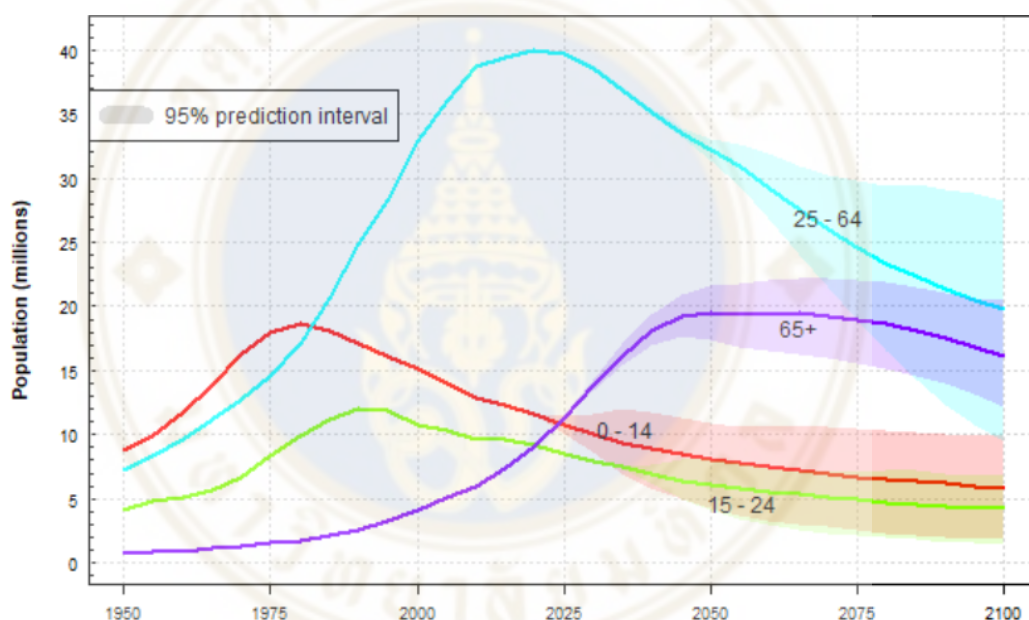
### **1.1.3 Thailand higher education challenge**

Thailand has a big demographic issue and the number of college-aged students is projected to decline sharply. It has been from the country's low birth rate due to earlier national policies that sought to reduce fertility rates, the population growth rate in Thailand has fallen from around 3% in the 1960s to lower than 1 in May 2020 as shown in figure 3 from (Worldometers, 2020). Moreover, in figure 4 from the UN (2020), the demographic shift from younger to older population age in the upcoming decade. The population's structure in Thailand will dramatically increase in the size of the older population (aged 60+). It is a result of past high fertility levels (baby boomers' period, born between 1946s and 1965s) and substantial declines of mortality.





**Figure 3** Annual population growth rate for Thailand (1960s – 2020s)



**Figure 4** Thailand population by broad age groups (1950s – 2100s)

According to official data from Office of the Higher Education Commission (2020), the number of higher education institutions have grown-up strongly over the previous decades from just a few universities in the late 1980s to more than 150 officially recognized higher education institutions that operating in 2020 including 84 public universities and 71 private universities. The Bangkok Post NEWS described in their special report section that there are around 4,100 academic programmes that currently offer to postgraduate students. Most of the expansion in the Thai system in recent decades has come through the establishment of private universities and many are

struggling to fill places on their courses due to the decline in college-aged students. (The Bangkok Post, 2018)

Deputy Education Minister Udom Kachintorn, who oversees the policy of higher education in Thailand, recently warned Thai universities that if they do not adapt to the changes quickly, they will be left behind. He also predicted that several Thai universities would close or be merged with others soon (The Bangkok Post, 2019). Hence, Thailand's government has been implementing Thailand 4.0 strategy since 2017 for the propose of pushing Thailand to the high-income range. The government allows the foreign universities and colleges to operate in Thailand which aims to significantly improve human capital (The PIE News, 2017). Therefore, the arrival of foreign universities, for example, the universities are being invited to operate their campuses in Thailand or lots of leading universities around the world are offering an online degree, as a consequence, higher education is also certain to increase the competition in Thailand's domestic education market.

To get the advantage over the competition, education administrators must find a way to efficiently meet student demands and factors that will affect students' decision making for their higher education choice.

#### **1.1.4 The consumer decision making**

Consumers are met with daily uncertainty of decision making. There are so many factors that influence their decision making. While sometimes a consumer might make a quick and easy decisions based on their knowledge and experiences regarding a product or service, at other times, the process may be time-consuming and may require some or a lot of preliminary research before choosing between various options. The level of involvement is an important factor deciding how important a product or service is for them and how much information they need to have before making a purchase decision. In an environment in which there has been a reduction in consumer trust of both organizations and advertising, as well as a decrease in television advertising, oral communication, or called word-of-mouth (WOM) offers a way to obtain a significant competitive advantage (International Conference on Word-of-Mouth Marketing, 2005). Along with the study by Neilson that conducted "Global Trust in Advertising" surveying more than 30,000 people in 60 countries, more than 80% of consumer said



they believe the recommendations from friends and family over all forms of advertising and similar study earlier founded that more than 90% of people polled believe the recommendations from other people even strangers and around 20-50% of all purchases significant effected by word-of-mouth marketing (Forbes.com, 2018).

Word-of-mouth has a big part to play in the success in many marketing campaigns, as shown by following sample campaign

#### 1.1.4.1 “Share a Coke” campaign

This campaign began in Australia in 2011, and the campaign saw massive success with the consumption increased and sales increased for the first time in a decade. The campaign started with wrapped the names of many people in its cans and bottles. This tactic encourages consumers to “Share a Coke” to their friends or family of that name and delighted to took photos or talked about these things on their social media then impact their branding and sales, which the impact of word-of-mouth marketing. Reported by WSJ (The Wall Street Journal, 2014)



**Figure 5** Word-of-mouth campaign “Share a Coke”

#### 1.1.4.2 “TESLA’S referral program” campaign

This company does not pay for marketing costs. It uses current Tesla owners as a brand ambassador and rewards them for qualified referrals. The campaign will benefit both the referrers and those they refer to. Referrer rewards the discount of products or services they usually use for their Tesla also get a chance of winning the new Tesla. Those who get a referral will also get many benefits too. The Tesla company also get more customer without marketing cost and achieved 40x ROI.

Reported by Growsurf (Growsurf.com, 2019)



**Figure 6** Word-of-mouth campaign “TESLA’S referral program”

This form of communication seems to have a greater influence on people’s choices than do other forms of communication (Bansal & Voyer, 2000); (Murray, 1991); (Day, 1971) also plays an important role in the consumer’s decision-making process (Ganesh, Arnold, & Reynolds, 2000). As said by (Schiffman & Kanuk, 1997) in Consumer Behavior 6<sup>th</sup> Edition, through product-related discussions, First, the interpersonal sources may provide “new-product or new-usage information. Secondly, they reduce perceived risk by receiving firsthand knowledge from a user about a specific product or brand. Third, they reduce the search time entailed in the identification of a needed product or service. For the reasons listed above, people often look to friends, neighbours, and other acquaintances for product information.

Therefore, higher education is a service that students are expected to fund for themselves at great expense, it has become an increasingly competitive market (Angell, Heffernan, & Megicks, 2008). So, successful completion and enhancement of students’ education are the major reasons for the higher educational institution’s survival. This positive development in higher education shows the importance of educational institutions understanding student satisfaction in a competitive environment (Yusoff, McLeay, & Woodruffe-Burton, 2015).

## **1.2 Objective of the study**

The purpose of this research is to be understanding the factors which will influence students' satisfaction in order to generate WOM communication from students to others.

Therefore, this research going to explores the effect of service quality dimensions (SERVQUAL) on postgraduate students' satisfaction and their WOM. Also, considering these variables (1) gender, (2) reputation of academic programme/ university, (3) WOM receiver, to find out the effect that will be supported this study.

Therefore, the research question will be present as the following section.

## **1.3 Research questions**

(1) How do the service quality dimensions (SERVQUAL) have impact on students' satisfaction in order to generate WOM communication to others?

(2) How do academic programme/university reputation and WOM receiver impact on students' satisfaction?

(3) Are there any differences in perception of service quality between gender?

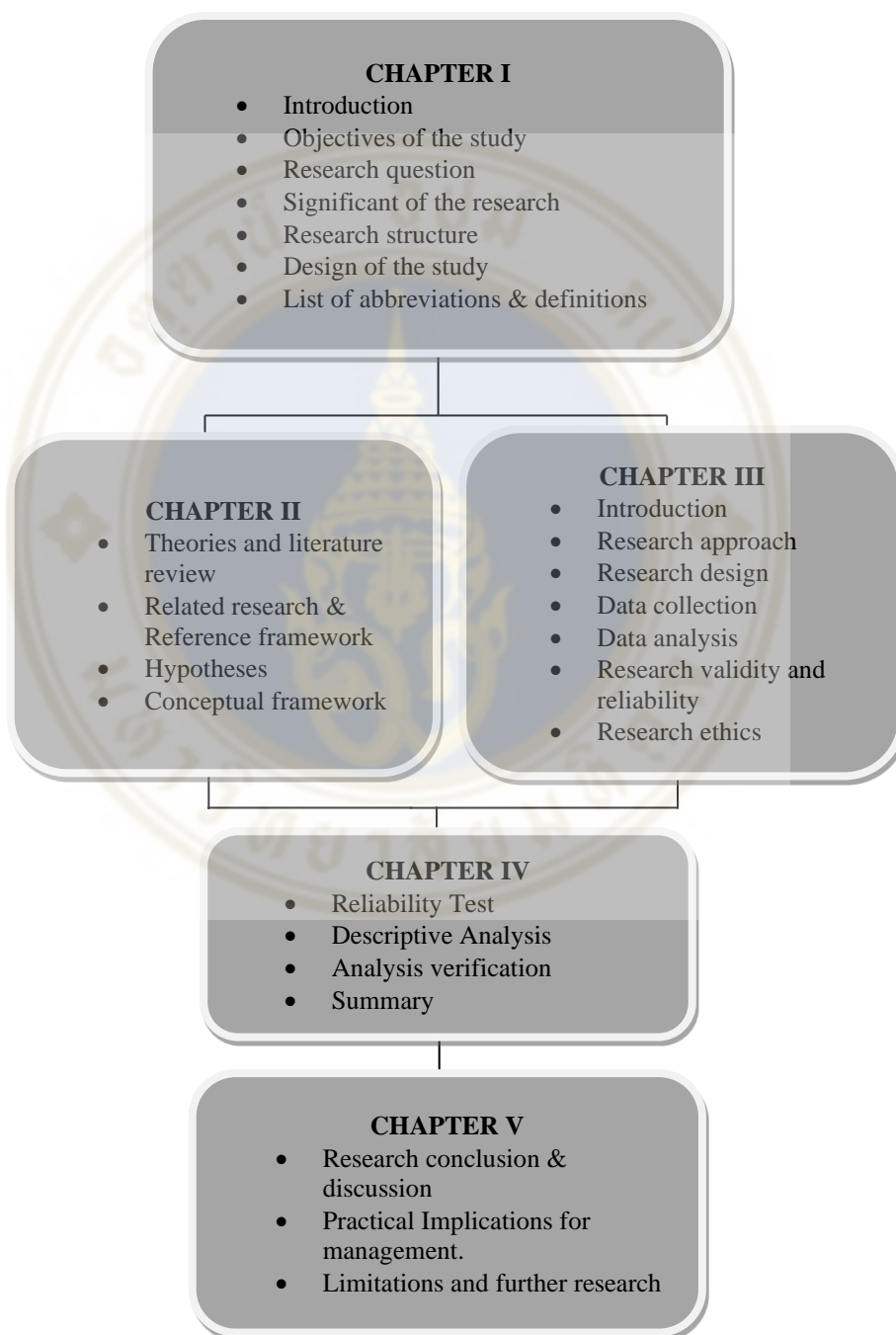
## **1.4 Significance of the research**

This study will support the education administrators in understanding the factors that influence postgraduate student's satisfaction and effect on their WOM. In order to formulate strategies or tactics to appeal to target students better in an era of low enrolment and increased competition from foreign rivals.

## **1.5 Research structure**

The study intends to put forward the introduction in which the problem statement will be highlighted, the objective of the study and the research design and other necessary items. This will be proceeded by the methodology to be adopted in

carrying out the study and the literature review which will provide an insight into the issue under study and how similar studies on the subject were executed previously. This would provide a platform for the empirical studies to be carried out and analyzed and provide a justification for a conclusion to be drawn, recommendations made, and reflections outlined to make the study worthwhile. As shown in Figure 7



**Figure 7** Structure of the Studies



## **1.6 Design of the study**

### **1.6.1 Research design**

- Target population: Thai nationality students who experienced at least postgraduate studies (existing students or those who completed programme) from any university both in domestic and overseas.

- Sample size: 389 samples have completed the survey. Therefore, it was approximately 384 which calculated from Cochran's sample size formula because of a large population whose degree of variability is not known. Assuming the maximum variability, which is equal to 50% ( $p = 0.5$ ) and taking 95% confidence level with  $\pm 5\%$  precision.

- Survey Instrument: Used questionnaire as a survey instrument for study a large group of target population which avoids inappropriate replies and offers respondents confidentiality.

- Respondents: Chosen by convenience sampling methodology and the online survey was conducted through Google Forms.

### **1.6.2 Data collection**

- Prior collected the data with target students, two of the screening questions were asked to reconfirm the right target.

(1) The first question to reconfirming the age over 18 years old.

(2) The second question to reconfirming that they have experienced in postgraduate studies.

- Duration of data collection: December 2019 – March 2020

### **1.6.3 Data analysis**

SPSS was used to analyze the data obtained from the questionnaires for this study. To enable ease of data entry, questions were pre-coded. A variety of data analysis methods were used, including descriptive statistics, regression analysis, reliability analysis, t-test analysis, and statistical testing.

### 1.6.4 Research validity and reliability

To ensure the reliability of the questionnaire, the Cronbach's alpha was calculated for each variable both pilot-group ( $N = 30$ ) and sample population ( $N = 389$ ). Overall, the Cronbach Alpha Coefficient of more than 0.6 (Nunnally, 1978) was used to certify the reliability of the research questions.

### 1.6.5 Research Ethics

Research ethics is the way to protect respondents' personal information. The respondents were informed that they are voluntary to participate in the survey. After completing this research, all information documents will be destroyed to protect respondents' personal information and make sure the information of respondents is not published or used by others.

## 1.7 List of abbreviations & definitions

**Table 3** The abbreviations and definition frequency used in the study

No.	Wording	Definition
1	SERVQUAL	<p>SERVQUAL MODEL is a multi-dimensional research instrument for capturing students perceived of service along the five dimensions.</p> <ol style="list-style-type: none"> <li>1) Tangibility - Physical facilities, equipment, and appearance of personnel.</li> <li>2) Reliability - Ability to perform the promised service dependably and accurately.</li> <li>3) Assurance – Knowledge, and courtesy of employees and their ability to inspire trust and confidence.</li> <li>4) Responsiveness - Willingness to help customers and provide prompt service.</li> <li>5) Empathy - The provision of caring, individualized attention to the customer.</li> </ol>

**Table 3** The abbreviations and definition frequency used in the study (cont.)

No.	Wording	Definition
2	Satisfaction	The satisfaction of an existing students or those who completed the academic programme.
3	Reputation	The reputation for academic programme or university
4	WOM	Word-of-mouth (WOM) is oral person-to-person communication between an information receiver and a sender.
5	WOM receiver	Or called recipient; The person who acts that receives or get the message and tries to understand and then responds accordingly.
6	WOM sender	Or called communicator; The person or action that sends the source of the message and sends it to the receiver.



## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter presents the positioning of this individual study to investigate the factors that impact students' decision making on their postgraduate education choice. The following lists are the structure of the chapter:

#### 2.1 Theories and literature review

- Student decision-making process
- Service quality & SERVQUAL model
- SERVQUAL model in higher education
- Satisfaction
- Student satisfaction in higher education
- Introduction to WOM
- WOM studies
- WOM and satisfaction

#### 2.2 Related research & reference framework

#### 2.3 Hypotheses

#### 2.4 Conceptual framework

### **2.1 Theories and literature review**

#### **Student decision-making process**

People must make decisions all the time and the process of decision making on products or services are slight different. Therefore, the basic five-stage process for consumer buying behavior studies has been published by Philip Kotler, Gary Armstrong (2008), when consumer involved in a purchase decision, they will follow the following basic stages

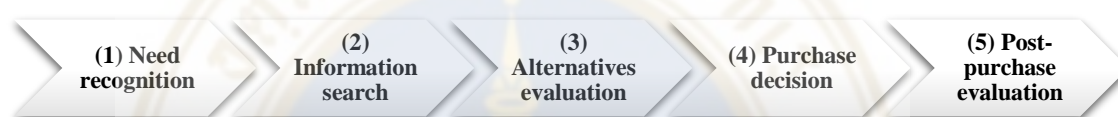
(1) Need recognition - the first stage happens when the consumers establish that they need of product or service.

(2) Information search - once a consumer has decided that they need to purchase a product or service then they will begin to search for information surrounding the product.

(3) Alternatives evaluation – once information has been gathered then the consumer will evaluate alternatives and based on their interpretation.

(4) Purchase decision - consumers will decide what they would like to purchase at this stage.

(5) Post-purchase evaluation - the final stage, after the item has been purchased. Consumers retrospectively evaluate their purchase decision against their original assessment and purchase criteria.



**Figure 8** A five steps in the consumer decision-making process

Source: Philip Kotler, 2008

Thus, the Consumers would often skip stages or even reverse stages, this is usually depending on the actual product and whether it is a complex or habitual buying behaviour. Many researchers adopt the consumer decision-making model into higher education to explored student decision making, it will be presented in the next section.

### **Service quality & SERVQUAL model**

The term of “service quality” is different, due to the characteristic intangible nature of services, which are often experienced subjectively. Therefore, different explanations have been suggested throughout the years.

Nightingale (1985) explained ‘service quality’ as an evolving individual construct of values and expectations in contradiction to which an individual evaluates a product or service.

Gronroos (1984) clarified 'service quality' as the consequence of an evaluation process, where the user compares his or her expectations with the service he or she perceived and received.

Parasuraman et al. (1988) defined the definition of 'service quality' as an attitude, associated but not equivalent to satisfaction and results from a contrast of expectations with perceptions of performance.

Philip Kotler and Gary Armstrong (2006) mentioned the terms of 'service quality' as 'the ability of a service firm to hang on to its customer.

Narangajavana and Hu (2008), also mentioned that 'service quality' results from associating a consumer's real experience with his or her expectation of service.

Mohamed & Shirley (2009) elucidated that 'service quality' is a source of competitive advantage for service-oriented industry.

According, to existing literature from several researchers, terms of 'service quality' are difficult to define the concept in a single definition. However, the concept seems to refer to the totality of characteristics of product or service that meets consumers' satisfaction as defined by Parasuraman et al. (1988), the service quality is an attitude of the consumer relating to the results from comparisons between customer expectations and actual services performed.

The original SERVQUAL instrument reflected the criteria used by customers in assessing the quality of service and consisted of 10 dimensions: tangibles, reliability, responsiveness, competence, access, courtesy, communication, credibility, security, and understanding (Parasuraman, Zeithaml, & Berry, 1988). However, after retesting, some dimensions were found to be autocorrelated and the total number of dimensions was reduced to five dimensions (Parasuraman, Zeithaml, & Berry, 1988) which are:

- (1) Tangibility - Physical facilities, equipment, and appearance of personnel
- (2) Reliability - Ability to perform the promised service dependably and accurately
- (3) Assurance – Knowledge, and courtesy of employees and their ability to inspire trust and confidence

(4) Responsiveness - Willingness to help customers and provide prompt service

5) Empathy - The provision of caring, individualized attention to customer

The SERVQUAL model is the most used for assessing the quality of service in higher education that has been used by many researchers that going to presented the following section.

### **SERVQUAL model in higher education**

Hill (1995) founded aspects of the service quality in higher education and conducted research in Britain focusing on the role of students as primary consumers measuring their expectations and perceptions. Higher education in developing countries has serious quality problems.

Tan and Kek (2004) used this model to measure student satisfaction at the university in Singapore and founded that some cultural factors need to be taken into consideration when developing the SERVQUAL questionnaire.

Zafiropoulos and Vrana (2008) researched in Greek higher education, they using this model based on an adjusted questionnaire in the educational context and included students and staff in the research. The research presented that staff's results differentiated significantly from students' scores indicating a gap in the way how students and academic staff perceive quality of the education.

Shekarchizadeh et al. (2011) measured the service quality perceptions and expectations of international postgraduate students studying in selected Malaysian universities. The international students were dissatisfied with all education service quality which measure by Modified SERVQUAL. It caused a negative impact on satisfaction level and repurchase the educational service. The students will not spread positive WOM about the university. In this case, the international students may benchmark with Western or European universities. So, this study proved that the service quality likely effect on satisfaction levels resulting in better. perceived institutional image and student loyalty.

Dado et al. (2011) conducted an empirical investigation into the construct of higher education service quality using the SERVQUAL scale in Serbia

and concluded there was a significant gap between students' expectations and perceptions.

Yousapronpaiboon (2014) was conducted in Thailand from 350 private university students, the research findings that higher education in Thailand does not meet the expectations of students. The analysis between service perceptions and expectations showed that all scores for perceptions were lower than their expectations scores. As a recommendation for meeting the expectation of students in a better way, facilities and equipment improvement of the university should be improved.

Another study, Khoo et al. (2017) founded that perceived service quality is positively correlated to satisfaction; perceived service quality and satisfaction are positively correlated to behavioral intentions, and the relationships among perceived service quality and loyalty and paying more for service are mediated by satisfaction.

### **Satisfaction**

In the recent past, many researchers studied on satisfaction. Elliott & Healy (2001) well-defined that satisfaction is a feeling of happiness that obtain when a person fulfilled his or her needs and desires. Hon (2002) also defined that it can be an experience of fulfillment of an expected outcome.

Furthermore, Kotler et al. (2006) also noted in his marketing management handbook that satisfaction is a function of perceived performance and expectations that identify feelings of a person resulting from comparing products perceived performance in relation to his/her expectations. As well as, Ilyas et al. (2013) identified that it is a state felt by a person who has experienced performance or an outcome that fulfilled his or her expectations.

So, when a person perceives that service encountered as good, he would satisfy on the other hand person will dissatisfy when his or her perception crash with the service expectation. Therefore, satisfaction is a perception of pleasurable fulfillment of a service (Oliver, 1997).

By considering all, satisfaction is a pleasant feeling when a person fulfilled his or her expected outcomes.



### **Student satisfaction in higher education**

According to the studies of students' satisfaction, Elliott and Healy (2001) defined that students' satisfaction as a short-term attitude, resulting from an evaluation of a students' educational experiences. It is a positive antecedent of student loyalty as stated by Marzo-Navarro et al. (2005).

Appleton-Knapp and Krentler (2006) founded two groups of influences on student satisfaction levels in higher education: personal factors that cover gender, employment, preferred learning style, and grade point average (GPA) and institutional factors that include the quality of instructions, the promptness of the instructor's feedback, the clarity of expectation and the teaching style.

In conclusion, students' satisfaction can be defined as a short-term attitude resulting from an evaluation of students' educational experience, services, and facilities. Also, students' satisfaction towards academic experience has had a positive relationship with students' retention (Carter & Yeo, 2016). Student satisfaction is considered as an important research topic in higher education to maintain a competitive advantage in this market. While Bellamkonda (2016) found that service quality has been found to be an important input to student satisfaction.

### **Introduction to WOM**

Over 40 years ago, the pioneer researcher (Arndt, Word of Mouth Advertising: A Review of the Literature, 1967) presented the definition of WOM as follows:

“Word-of-mouth (WOM) is Oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, concerning a brand, product, or a service.”

Furthermore, WOM can be any oral and personal communication, positive or negative, about a brand, product, service, or organization, in which the receiver of the message perceives the sender to have a non-commercial intention, defined by Johan Arndt (1967).

As explored in the marketing literature (Mangold, W.G., Miller, & Brockway, 1999); (Collins & Lewison, 2007); (O'Leary & Sheehan, 2008); (East

& Lomax, 2010); (Liu, Dong, & Kandampully, 2010);) WOM is a concept of consumer referrals, recommendations, and reviews.

Also regarded as the informal exchange of purchase-related, consumption-related, and experience-related information between consumers (Chu & Kim, 2011); (Hennig-Thurau T. , Gwinner, Walsh, & Gremler, 2004). This means of communication serves as a significant impact on consumer behaviors, such as purchasing, switching, and spreading e.g. (Arndt, 1967); (Day, 1971); (Sheth, 1971); (Brown & Reingen, 1987); (Murray, 1991).

### **WOM studies**

Prior studies exposed that this form of communication seems to impact on people's choices than other forms (Bansal & Voyer, 2000); (Murray, 1991); (Day, 1971) also plays an important role in the consumer's decision-making process (Ganesh, Arnold, & Reynolds, 2000). By industry (Keller & Brad, 2009); (Bughin, Doogan, & Vetvik, 2010) both research recognised the power of WOM of one consumer to create product endorsements on another one consumer's decision-making choice.

The value of WOM arises because of its impact on actual and potential consumers. Positive comments from satisfied customers can increase purchases (from that customer and others), while negative comments from dissatisfied customers can decrease purchases (from that customer and others) similarly as Ahmad et al. (2014) said negative WOM about anything influence strongly than positive as well as, for purchasing, mostly people trust on WOM. Thus, Katz and Lazarfeld (1955) found personal influence to be seven times more effective than magazine or newspaper advertising, at persuading housewives to switch brands of household products. Similarly, Beal and Rogers (1957), found interpersonal sources to be most effective in persuading housewives to try new fabrics and change supermarkets, respectively. Supporting by many researchers founded that WOM has a strong influence on product and service perceptions, leading to changes in judgments, value ratings, and the likelihood of purchase (Arndt, 1967); (William & Peterson, 1989). Martilla (1971) found that WOM was more important in the final stages of the purchase process as it reassured consumers and reduced post-purchase uncertainty. In earlier stages,



customers were more likely to rely on impersonal communication. However, the primary impact of WOM, which may mediate these relationships, is on perceived risk. Moreover, positive WOM reduces risk during the evaluation stage of the consumer purchase cycle (Woodside & Delozier, 1976).

### **WOM and satisfaction**

Refer to existing evidence from previous research, Choudhury (2014) exposed that the service quality factor attitude is most important in influencing WOM in the banking sector. While Mangold et al. (1999) found WOM has a stronger influence on purchasing decision than other sources of influence as well as the findings of (Bansal & Voyer, 2000) suggested that WOM information is actively sought, it will have a greater influence on the receiver's purchase decision. Likewise, there is evidence from the previous experiential literatures which showing the relationship between satisfaction and WOM e.g. Parasuraman et al. (1988); Shemwell et al. (1998); Soñderlund (1998); Sivadas et al. (2000); Hennig-Thurau et al. (2004); Liu & Lee (2016), the resulting state that positive consumer perceptions of service quality will lead to positive WOM.

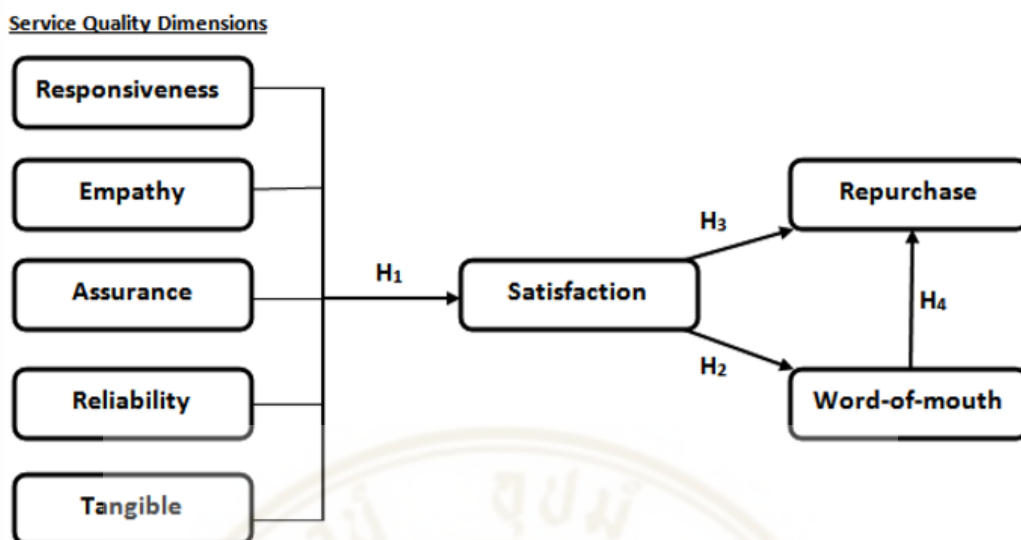
Within the higher education context, the study carried out by Athiyaman (1997) proposed that student attitude to the university is positively related to positive WOM subsequent to their enrollment (post-enrollment communication behavior). In addition, Teo and Soutar (2012) who studied WOM in a Singaporean study have founded student satisfaction had a significant effect that led to WOM being given.

## **2.2 Related research & reference framework**

(Shekarchizadeh, Rasli, & Hon-Tat, 2011) studied the service quality perceptions and expectations of international postgraduate students studying in the top five public universities in Malaysia. The gap analysis based on a modified SERVQUAL was used for research instruments on 522 international postgraduate students who were selected based on stratified sampling. The analysis started with descriptive analysis followed by factor and reliability analyses. Single mean t-tests were conducted to assess

the significance of the gap analysis based on three methods: item-by-item analysis; construct-by-construct analysis; and computation of a single measure of service quality. The findings show that international students were dissatisfied with all education service quality. It caused a negative impact on satisfaction level and repurchase the educational service. The students will not spread positive WOM about the university. In the case, the cause might be from the international students may benchmark with Western or European universities. Some of them might face the difficulty to adapt themselves. These changes affect their attitudes toward their new environment. However, for future studies, the researcher suggested one interesting area of research might be to study types and size of gaps in the perception of educational quality performance in other developing countries and compare it with leading higher education institutions in Western countries. Also, further studies might be conducted in which lecturers and staff of the universities are considered as internal customers and assessed whether SERVQUAL could be generalized across these employees. Finally, another potential study is to explore the factors which influence students' expectations of services rendered at institutions of higher education by conducting in-depth interviews and observations.

(Kitapcia, Akdoganb, & Dortyolb , 2014) explored the impact of service quality dimensions in the public healthcare industry; using the SERVQUAL model; on outpatients' satisfaction while identifying the effect of satisfaction on WOM communication and repurchase intention and searching for a significant relationship between WOM communication and repurchase intention. This study has adopted the work of Parasuraman et al.'s SERVQUAL variables.

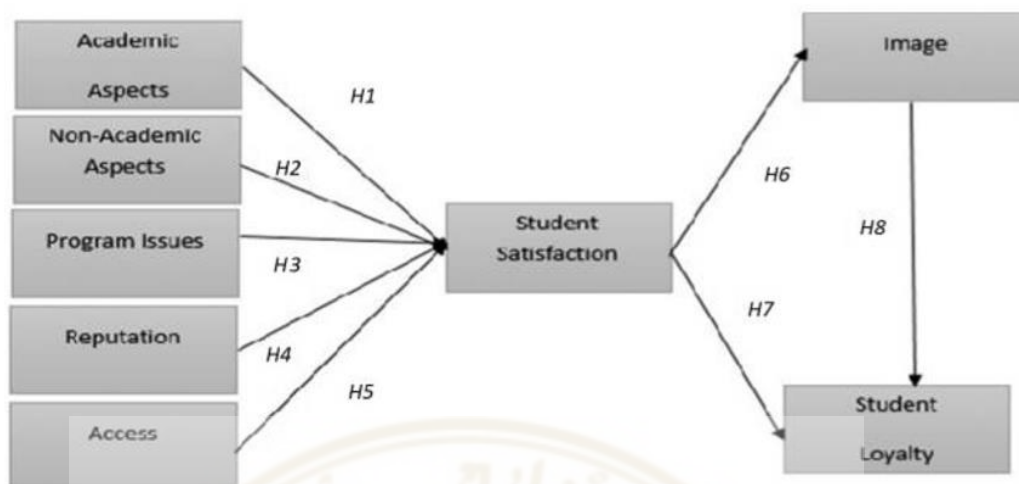


**Figure 9** Proposed framework to explore the impact of service on satisfaction, WOM communication, and repurchase intention

Source: (Kitapcia, Akdoganb, & Dortyolb , 2014)

A structural equation model (SEM) that utilizes data from 369 patients and findings shown two SERVQUAL dimensions (empathy, and assurance) are important antecedents of satisfaction, also the satisfaction effects to the ingredients of WOM communication and repurchase that are found highly interrelated for public hospital administrators in Turkey. The public hospital administrators must effort to modernise hospitals and have successfully improved the level of service quality. However, the only limitation of this study was conducted only a hospital in Sivas city, Turkey.

(Ali, Zhou, Hussain, Nair, & Ragavan, 2016) have investigated the effect of Malaysian public universities' service quality based on the Model on international student satisfaction, institutional image, and loyalty.



**Figure 10** Proposed framework to investigate the effect of service quality on student satisfaction, institutional image, and loyalty.

Source: (Ali, Zhou, Hussain, Nair, & Ragavan, 2016)

By distributed a total number of 400 questionnaires to international students, selected using a convenience sampling technique, at three public Malaysian university campuses in Kuala Lumpur then got around 241 questionnaires fit for analysis. Partial Least Squares Structural Equation Modeling was used to analyze the collected data, assess the model, and test hypotheses. The findings show that all the five dimensions of higher education service quality influence student satisfaction which in turn influences institutional image, and together, they influence student loyalty.

According to all the above finding within the related research & reference framework section, customers are satisfied with services when their expectations are met or exceeded. The satisfaction impacts WOM communication. Also, referring to many works of literatures that the positive or negative communication significant impact on consumer decision-making.

## 2.3 Research question & hypotheses

Regarding to the purpose of study, theories, literature review, and related research, the researcher decided to explore the factors which will influence

students' satisfaction in order to generate WOM communication from students to others.

Consequently, the major research questions in this study is:

(1) How do the service quality dimensions (SERVQUAL) have impact on students' satisfaction in order to generate WOM communication to others?

(2) How do academic programme/university reputation and WOM receiver impact on students' satisfaction?

(3) Are there any differences in perception of service quality between gender?

Hypotheses relevant to the major research question are offered as follows:

H1: SERVQUAL dimensions have a positive impact on the student's overall satisfaction. The H1 can break into five points as follows:

H1a: Tangible dimension has a positive impact on student's overall satisfaction.

H1b: Reliability dimension has a positive impact on student's overall satisfaction.

H1c: Assurance dimension has a positive impact on student's overall satisfaction.

H1d: Responsiveness dimension has a positive impact on student's overall satisfaction.

H1e: Empathy dimension has a positive impact on student's overall satisfaction.

H2: Students' overall satisfaction has a positive impact on WOM sender

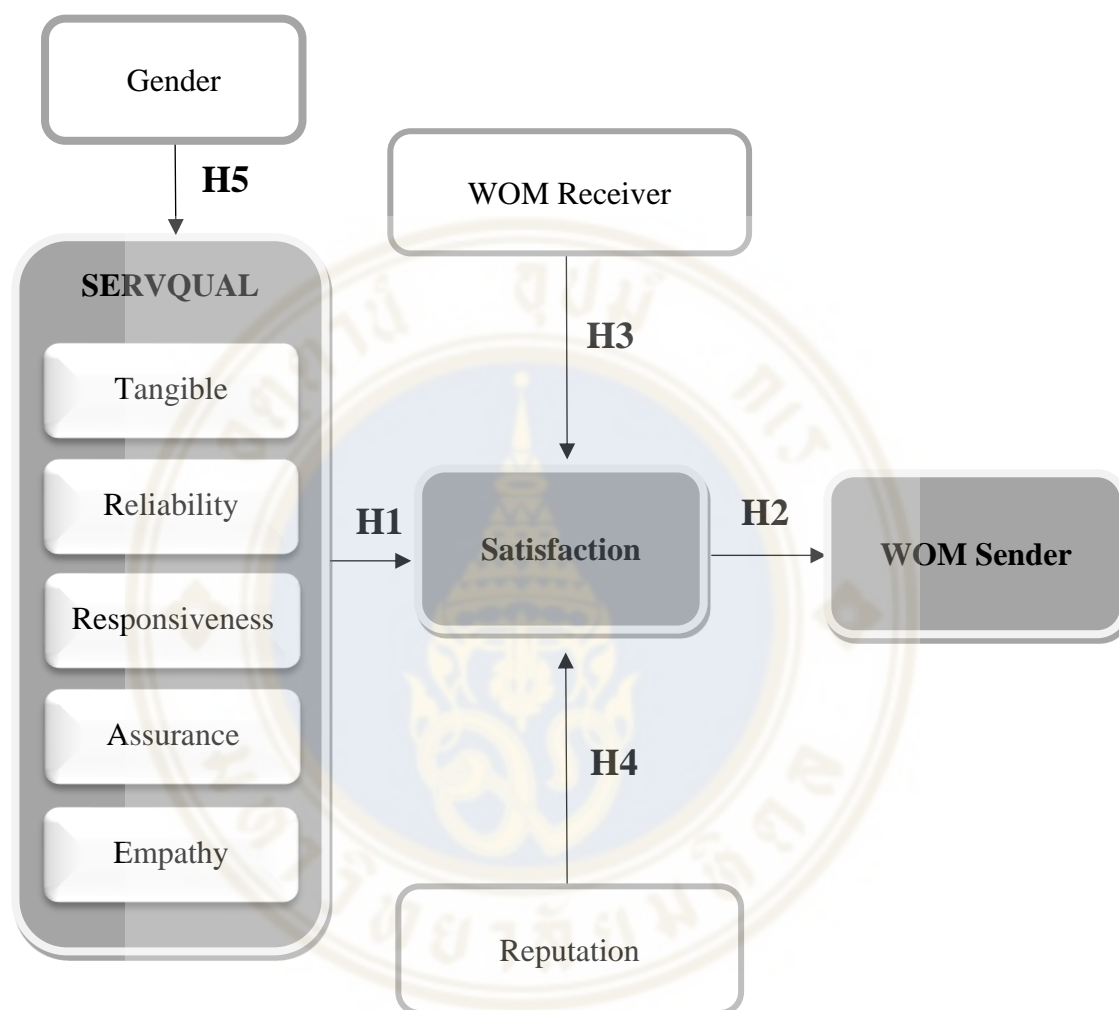
H3: WOM receiver has a positive impact on student's overall satisfaction.

H4: Reputation of academic program/university has a positive impact on student's overall satisfaction.

H5: Gender influences the perceived overall SERVQUAL dimensions have significant differences between males and females.

## 2.4 Conceptual framework

Based on the research questions and hypotheses, the conceptual framework was proposed:



**Figure 11** Conceptual framework



## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This study aims to be understanding the factors which will influence students' satisfaction in order to generate WOM communication from students to others. This methodology chapter represents the following six parts that were implemented to solve the research problem.

- 3.1) Research approach
- 3.2) Research design
- 3.3) Data collection
- 3.4) Data analysis
- 3.5) Research validity and reliability
- 3.6) Research ethics

#### **3.1 Research approach**

Quantitative research is more likely to be used with a deductive approach (Lewis, Saunders, & Thornhill, 2012), in order to test the theory. It is based on examining relationships between variables, where data is collected in numeric form and analyzed using different statistical tools. Therefore, quantitative research is more attached to confirm or deny a hypothesis and its results are 'more readily analyzed and interpreted' (Hughes C. , 2006). However, there is an emphasis on the significant importance of the possibility to utilize a relatively large-scale data. Moreover, the statistical techniques used in this method will help in a sophisticated analysis and understanding of patterns.

#### **3.2 Research design**



- Target population: Thai nationality students who experienced at least postgraduate studies (existing students or those who completed programme) from any university both in domestic and overseas.

- Sample population: according to Israel (1992), the sample size for quantitative method is influenced by some factors, including the purpose of the study, population size, the risk of selecting a “bad” sample, and the allowable sampling error. So, to determine the sample size, the probability sample method was used. To calculate the sample size, Cochran's sample size formula (1977) will be used.

$$n_0 = \frac{z^2 pq}{e^2}$$

Where :

$n_0$  is the sample size

$z$  is the selected critical value of desired confidence level; the  $z$  value is found in a  $z$  table

$p$  is the estimated proportion of an attribute that is present in the population

$q = 1 - p$  and  $e$  is the desired level of precision

In this study:

The researcher would like to calculate a sample size of a large population whose degree of variability is not known. Assuming the maximum variability, which is equal to 50% ( $p = 0.5$ ) and taking 95% confidence level with  $\pm 5\%$  precision, A 95 % confidence level gives  $z$  value of 1.96 per the normal tables, so the sample size will be as follow

$$p = 0.5 \text{ hence } q = 1 - 0.5 = 0.5; e = 0.05; z = 1.96$$

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2}$$

$$n \approx 384.16$$

$$n = 384$$

After calculated the sample size by substituting the numbers into the Cochran's formula, the number of samples is 384.16 persons. Therefore, the sample size of this research is approximately equal to 384.

- Survey Instrument: there are several reasons for using a questionnaire as a survey instrument suggested by Sekaran (2003). First, a questionnaire survey is suitable for studying a large group of a target population. Second, a questionnaire survey avoids irrelevant responses. And third, it offers respondents confidentiality or anonymity to dispel any unwillingness about self-disclosure. Within this research, the questionnaire survey is developed to gain an insight and understanding into the factors which will influence students' satisfaction in order to generate WOM communication from students to others. Hence, this research going to explores the effect of service quality dimensions (SERVQUAL) on postgraduate students' satisfaction and their WOM. Also, considering these variables (1) gender, (2) reputation of academic programme/university, (3) WOM receiver, to find out the effect that will be supported this study. Therefore, the statements of the questionnaire are designed to achieve the objectives of the study.

The designed questionnaires consisted of structured questions, multiple choices, scale questions, and open-end questions. The questionnaires consisted of two sections which are

#### Section 1: Demographic characteristics

(1.1) Multiple-choice questions also the choice of answers are provided to respondents.

(1.2) Open-end questions are also used as any optional answers.

Section 2: Students' satisfaction or agreement of their postgraduation experience

(2.1) Scales choice questions are being used with 5 measure satisfaction or agreement criteria, this scale ranges from 1 (strongly disagree), 2 (disagree), 3 (moderate agreement), 4 (agree) and 5 (strongly agree).

### **3.3 Data collection**

The pilot study was conducted with a small group (approximately 30) of students at the College of Management, Mahidol University. The pilot study allows the researcher to ask respondents for suggestive feedback and help eliminate author bias on the survey. Once the pilot survey had been modified as per the educational expert's feedback, the online survey was sent out to the sample population. Respondents chosen by convenience sampling methodology and the online survey was conducted through Google Forms, a free online survey for personal use. Key advantages of using Online surveys provide more flexibility in the design. Another importance is that they provide offers respondents with confidentiality or anonymity to dispel any unwillingness about self-disclosure. Once confidentiality is assured, respondents feel more comfortable providing open and honest feedback. For the respondent's security reason, the program provided the option to turn on SSL (Secure Sockets Layers) to utilize data encryption and provide data protection. Responses to the survey were recorded, exported in a spreadsheet, and transferred to a statistical software; SPSS; for in-depth analysis.

The data for this study were Thai nationality students who experienced at least postgraduate studies (existing students or those who completed programme) from any university both in domestic and overseas, with the time frame from late December 2019 to March 2020. By utilizing quantitative methods, the procedures of data collection usually adopted in quantitative research in order to produce specific information from the respondents by providing a structured questionnaire. Prior collected the data with target students, two of the screening questions were asked to ensure that they were the correct target.

- (1) The first question to reconfirming the age over 18 years old.
- (2) The second question to reconfirming that they have experienced in postgraduate education.

There are two sections in the designed questionnaire which are personal information and the level of satisfaction or agreement of student's postgraduation experience to answer the following question lists.

#### Section 1: Demographic characteristics

This section contained a set of personal information of each respondent by this set of questions.

- (1) Age range (Screening question)

- (2) Education Level (Screening question)
- (3) The Postgraduate University
- (4) Field of study
- (5) Gender

Section 2: Students' satisfaction or agreement of their postgraduation experience

This section was collected data about the postgraduation experience of respondents by this set of questions.

- (1) The experience before study
- (2) The experience during study
- (3) The experience after study

### 3.4 Data analysis

After all questionnaires are checked for completion, the SPSS was used to analyze the data obtained from the questionnaires. To enable ease of data entry, questions were pre-coded.

- All demographic characteristics of respondents are analyzed using frequency distributions and percentage distribution. This descriptive data is analyzed by frequency, mean, and standard deviation.

- All the data regarding to students' satisfactions/ agreements of their postgraduation experience. This set of questionnaires used 5-point Likert scales as shown in table 4

**Table 4** The level of agreement towards service quality of OTAs

Satisfaction or Agreement Criteria	Scale
Strongly disagree	1
Disagree	2
Moderate agreement	3
Agree	4
Strongly agree	5

All the statements in this questionnaire were analyzed by arithmetic mean and standard deviation (S.D). The mean score in this study is interpreted as listed in table 5

**Table 5** The Arithmetic Mean Interpretation for satisfactions or agreements in service quality dimensions toward student's satisfaction.

<b>Degree</b>	<b>Mean</b>
Strongly disagree	1.00 – 1.80
Disagree	1.81 – 2.60
Moderate agreement	2.61 – 3.40
Agree	3.41 – 4.20
Strongly agree	4.21 – 5.00

Finally, a variety of data analysis methods were used, including reliability analysis, t-test analysis, and regression analysis.

### **3.5 Research validity and reliability**

In order to reduce the possibility of getting inaccurate results, attention should be paid to validity and reliability concept. The concept of validity is defined by Saunders et al. (2009) as a determinant whether the results of the research instrument are accurate with the objective of the research or not. Hence, to ensure validity, face validity was performed.

Thirty sets of questionnaires were distributed to thirty people as a pilot pre-test to evaluate the reliability and validity of the questionnaires. The concept of reliability is developed by Easterby-Smith et al. (1991). They defined reliability is a method to identify whether the measure will yield the same results when testing in different cases. When the research represents the same results through the measurement, therefore, the research is reliable. To ensure the reliability of questionnaire, the pilot-test was conducted. It aims to pretest the format and suitability of the questionnaire as

well as eliminate ambiguity. Moreover, the Cronbach Alpha Coefficient of more than 0.6 was used to certify the reliability of research questions.

In this research, all the items will be started by this method to ensure that the questionnaire is completely applicable.

**Table 6** Cronbach's alpha score's level

<b>Coefficient of Cronbach's alpha</b>	<b>Reliability Level</b>
$0.9 \leq \alpha$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Sources: Hair et.al (2003); Essential of Business Research Method

### **3.6 Research ethics**

Before gathering the data and sending questionnaires, the research ethic must be approved by Mahidol University's Office of the Committee for Research Ethics (Social Science). The research ethics in this research for any collecting data process such as the way to approach the target population, the way to protect respondents' personal information.

For this study, the researcher was informed every respondent about the purpose of study, the contents of questionnaire as well as the way participate in this study. Moreover, the respondents have the right to withdraw from answering the questionnaires at any time. This is to confirm that they are voluntary to participate in the survey. After completing this research, all information documents will be destroyed in order to protected respondents' personal information. To make sure the information of respondents is not published or used by others.



## **CHAPTER IV**

### **ANALYSIS OF RESEARCH FINDINGS**

This chapter presents the data findings of the research after completing the fieldwork over 3 months from late December 2019 to March 2020 via an online survey. There are 453 randomly selected and only 389 were considered for analyses because they passed the two screening questions (age 18 and older, experienced in postgraduate education). The target population was limited to Thai nationality students who experienced at least postgraduate studies (existing students or those who completed programme) from any university both in domestic and overseas. Furthermore, this chapter presents the results of data collection based upon the research methodology discussed in Chapter III. The data is presented to answer the questions of the research. The SPSS software was used to analyze the collected data as following:

- 4.1) Reliability Test
- 4.2) Descriptive Analysis
- 4.3) Analysis verification
  - Result of analysis verification
  - Hypotheses testing
- 4.4) Summary

#### **4.1 Reliability test**

This section confirms the reliability of the questionnaire, the pilot test was conducted to pretest the format and suitability of the questionnaire as well as eliminate ambiguity. The interval in Cronbach Alpha is ranged from 0 to 1, where 0 is indicating no internal reliability and 1 perfect internal reliability. Moreover, the Cronbach Alpha Coefficient of more than 0.6 was used to certify the reliability of research questions (Nunnally, 1978)

#### 4.1.1 Reliability test results of SERVQUAL dimensions

The Cronbach's alpha was calculated for each variable of SERVQUAL dimensions both pilot-group ( $N = 30$ ) and sample population ( $N = 389$ ) as shown in table 7

The coefficient values for the pilot-group were greater than 0.70 which is acceptable for psychological constructs (Kline, 1999). However, the coefficient value for tangibility was 0.69 that considered as questionable is also accepted referring to Nunnally (1978). While the Cronbach's alpha coefficients for the sample population are very high, all values are all above 0.7, indicating acceptable that means the model has sufficient composite reliability.

**Table 7** Reliability test results of SERVQUAL

Service Dimensions	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha ( $N = 30$ )	Cronbach's alpha ( $N = 389$ )
Tangibility	Tan01	Uses modern equipment and technology	(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	0.69	0.725
	Tan02	Physical facilities visually appealing			
	Tan03	Materials visually appealing			
Reliability	Reli01	Promised to do something and did so	(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	0.92	0.904
	Reli02	Support staff provided services at time promised			

**Table 7** Reliability test results of SERVQUAL (cont.)

Service Dimensions	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha (N = 30)	Cronbach's alpha (N = 389)
	Reli03	Support staff performed service right first time			
	Reli04	Support staff-maintained error free records			
	Reli05	Support staff told exactly when services were done			
	Reli06	Support staff gave prompt service to you			
Assurance	Ass01	Showed honest interest solving your problem	(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	0.76	0.794
	Ass 02	Felt safe in learning environment			
	Ass03	Operating hours were convenient for you			
	Ass04	Support staff are well dressed			
Responsiveness	Res01	Staff willing to help	(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	0.89	0.901
	Res02	Support staff respond to requests all the time			

**Table 7** Reliability test results of SERVQUAL (cont.)

Service Dimensions	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha (N = 30)	Cronbach's alpha (N = 389)
	Res03	Support staff behavior instilled confidence in you			
	Res04	Support staff consistently courteous to you			
	Res05	Support staff had knowledge to answer your questions			
	Res06	Support staff gave you individual attention			
	Res07	Staff had your best interests at heart			
	Res08	Support staff understood your specific needs			
Empathy	Emp01	Members of university are well dressed	(Shekarchizadeh, Rasli, & Hon-Tat, 2011)	0.94	0.948
	Emp02	The university provided services at time promised			
	Emp03	The university performed service right first time			

**Table 7** Reliability test results of SERVQUAL (cont.)

<b>Service Dimensions</b>	<b>Variables in shorted form</b>	<b>Questionnaires</b>	<b>Modified From</b>	<b>Cronbach's alpha (N = 30)</b>	<b>Cronbach's alpha (N = 389)</b>
	Emp04	The university maintained error free records			
	Emp05	The university told exactly when services were done			
	Emp06	The university gave prompt services to you			
	Emp07	The university readily helped when requested			
	Emp08	The university responded to requests promptly			
	Emp09	The university behavior instilled confidence in you			
	Emp10	Staff and support staff were polite with you			
	Emp11	The university had knowledge to answer your questions			
	Emp12	The university gave you individual attention			

**Table 7** Reliability test results of SERVQUAL (cont.)

Service Dimensions	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha (N = 30)	Cronbach's alpha (N = 389)
	Emp13	The university had your best interests at heart			
	Emp14	The university understood your specific needs			

Source: Researcher analysis output (2020)

#### 4.1.2 Reliability test results of Satisfaction, Reputation, WOM

The Cronbach's alpha was calculated for each variable; satisfaction reputation and WOM; both pilot-group ( $N = 30$ ) and sample population ( $N = 389$ ) as shown in table 8. All variables exceeded the minimum of 0.70 for Cronbach's alpha values. So, it means the data set is appropriate to use for the survey.

**Table 8** Reliability test results of Satisfaction, WOM, and Reputation

Variables	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha (N = 30)	Cronbach's alpha (N = 389)
Satisfaction	Sati01	I am satisfied with my decision to register at this university	(Athiyaman, 1997)	0.899	0.924
	Sati02	My choice to choose this university was a wise one			
	Sati03	I think I did the right thing when I chose to study at this university			



**Table 84** Reliability test results of Satisfaction, WOM, and Reputation (cont.)

Variables	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha ( <i>N</i> = 30)	Cronbach's alpha ( <i>N</i> = 389)
	Sati04	I feel that my experience with this university has been enjoyable			
	Sati05	Overall, I am satisfied with this university			
Reputation	Rep01	The university has a professional image	(Athiyaman, 1997)	0.796	0.840
	Rep02	The academic program run by the university is reputable			
	Rep03	The university's graduates are easily employable			
	Rep04	The university has a good image			
WOM Receiver	WOMR01	This university has been frequently mentioned in discussions	(Sipilä, Herold, Tarkiainen, & Sundqvist, 2017)	0.766	0.829
	WOMR02	I have had more discussions about this university than other universities			
	WOMR03	The discussions about the universities tend to be in great detail			

**Table 8** Reliability test results of Satisfaction, WOM, and Reputation (cont.)

Variables	Variables in shorted form	Questionnaires	Modified From	Cronbach's alpha ( <i>N</i> = 30)	Cronbach's alpha ( <i>N</i> = 389)
WOM Sender	WOMS01	I like to talk positive things about this university to others	(Casidy, 2014)	0.834	0.859
	WOMS02	I would recommend this university to someone who seeks your advice			

Source: Researcher analysis output (2020)

## 4.2 Descriptive analysis

This section to show the descriptive analysis in the study that expected to describe the variables used in this research, the results are as follows:

### 4.2.1 Respondent's Profile

This section presents the personal profile of 389 respondents who completed the survey between late December 2019 to March 2020. The following table 11 provides a detailed of the respondent's profile based on gender, age-range, and education. The findings showed that many of them are women (69.7%), age between 26 – 30 years old (38.8%) holding at least a master's degree (98.2%), studied in business management or related field (68.1%). Most of the respondents (93%) from domestic universities while the rest (7%) from international universities including Asia, Europe, and America.

**Table 9** Respondent's Profile ( $N = 389$ )

<b>Respondent's Profile</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Age range:</b>		
<i>*screening question</i>		
Less than 20 years old	N/A	N/A
20 – 25 years old	42	10.8
26 – 30 years old	151	38.8
31 – 35 years old	128	32.9
Over 36 years old	68	17.5
Total	389	100
<b>Education level:</b>		
<i>*screening question</i>		
Bachelor's Degree	382	98.2
Master's Degree	7	1.8
Doctorate Degree and more	389	100
Total		
<b>The Postgraduate University</b>		
Mahidol University (MU)	86	22.1
Chulalongkorn University CU	68	17.5
Thammasat University (TU)	29	7.5
Kasetsart University (KU)	32	8.2
Srinakharinwirot University (SWU)	7	1.8
King Mongkut's University of Technology (KMUTT KMUTNB KMITL)	11	2.8
Chiang Mai University (CMU)	5	1.3
Khon Kaen University (KKU)	1	0.3
Ramkhamhaeng University (RU)	48	12.3
Bangkok University (BU)	4	1.0
Rangsit University (RSU)	9	2.3
Sripatum University (SPU)	1	0.3
University of the Thai Chamber of Commerce (UTCC)	4	1.0
Assumption University (ABAC)	3	0.8
National Institute of Development Administration (NIDA)	14	3.6
Others – Domestic	39	10
Others – International	28	7.2
Total	389	100

**Table 9** Respondent's Profile ( $N = 389$ ) (cont.)

<b>Respondent's Profile</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Field of study:</b>		
Medical, Health Care & Related	7	1.8
Engineering, Sciences & Related	35	9.0
Business, Management and Related	265	68.1
Arts, Humanities and Social Sciences	82	21.1
Total	389	100.0
<b>Gender:</b>		
Male	118	30.3
Female	271	69.7
Total	389	100

Source: Researcher analysis output (2020)

#### 4.2.2 Service Quality Dimensions (SERVQUAL)

Table 10 shows the descriptive statistics for five dimensions of Service Quality (SERQUAL), ratings on “tangibility” (mean = 4.13, Standard Deviation = 0.811), “reliability” (mean = 4.15, Standard Deviation = 0.844), “assurance” (mean = 4.21, Standard Deviation = 0.752), “responsiveness” (mean = 4.28, Standard Deviation = 0.780) and “empathy” (mean = 4.21, Standard Deviation = 0.744). In summary, all mean scores were above 4 on the 5-point Likert scales which implied that respondents quite “Agree” about the items to satisfaction towards postgraduate students.

**Table 10** Summary for Service Quality Dimensions (SERQUAL)'s scores ( $N = 389$ )

<b>Service Dimensions</b>	<b>Variables in shorted form</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Degree</b>
Tangibility	Tan01	4.05	0.755	Agree
	Tan02	3.96	0.993	Agree
	Tan03	4.38	0.685	Strongly agree
<b>Average</b>		<b>4.13</b>	<b>0.811</b>	<b>Agree</b>
Reliability	Reli01	4.21	0.720	Strongly agree
	Reli02	4.15	0.863	Agree

**Table 10** Summary for Service Quality Dimensions (SERQUAL)'s scores ( $N = 389$ )

(cont.)

Service Dimensions	Variables in shorted form	Mean	Standard Deviation	Degree
	Reli03	4.08	0.890	Agree
	Reli04	4.19	0.829	Agree
	Reli05	4.09	0.902	Agree
	Reli06	4.21	0.860	Strongly agree
<b>Average</b>		<b>4.15</b>	<b>0.844</b>	<b>Agree</b>
Assurance	Ass01	4.09	0.794	Agree
	Ass02	4.30	0.734	Strongly agree
	Ass03	4.15	0.779	Agree
	Ass04	4.30	0.704	Strongly agree
<b>Average</b>		<b>4.21</b>	<b>0.752</b>	<b>Strongly agree</b>
Responsiveness	Res01	4.60	0.581	Strongly agree
	Res 02	4.27	0.830	Strongly agree
	Res 03	4.06	0.896	Agree
	Res 04	4.34	0.776	Strongly agree
	Res 05	4.19	0.851	Agree
	Res 06	4.14	0.859	Agree
	Res 07	4.58	0.584	Strongly agree
	Res 08	4.07	0.865	Agree
<b>Average</b>		<b>4.28</b>	<b>0.780</b>	<b>Strongly agree</b>
Empathy	Emp01	4.71	0.518	Strongly agree
	Emp02	4.12	0.800	Agree
	Emp03	4.02	0.831	Agree
	Emp04	4.07	0.785	Agree
	Emp05	4.17	0.832	Agree
	Emp06	4.17	0.779	Agree
	Emp07	4.23	0.732	Strongly agree
	Emp08	3.94	0.823	Agree
	Emp09	4.20	0.747	Strongly agree
	Emp10	4.67	0.517	Strongly agree

**Table 10** Summary for Service Quality Dimensions (SERQUAL)'s scores ( $N = 389$ )  
(cont.)

Service Dimensions	Variables in shorted form	Mean	Standard Deviation	Degree
	Emp11	4.27	0.740	Strongly agree
	Emp12	4.16	0.778	Agree
	Emp13	4.17	0.775	Agree
	Emp14	4.14	0.762	Agree
<b>Average</b>		<b>4.21</b>	<b>0.744</b>	<b>Strongly agree</b>

Source: Researcher analysis output (2020)

#### 4.2.3 Satisfaction

Following table 11 shows the descriptive statistics for “satisfaction” (mean = 4.44, Standard Deviation = 0.696). The overall mean scores were above 4 on the 5-point Likert scales which also indicated the positive response of the respondents towards all items related to satisfaction.

**Table 5** Summary for Satisfaction's scores ( $N = 389$ )

Variables	Variables in shorted form	Mean	Standard Deviation	Degree
Satisfaction	Sati01	4.49	0.660	Strongly agree
	Sati02	4.42	0.722	Strongly agree
	Sati03	4.43	0.734	Strongly agree
	Sati04	4.40	0.702	Strongly agree
	Sati05	4.48	0.664	Strongly agree
<b>Average</b>		<b>4.44</b>	<b>0.696</b>	<b>Strongly agree</b>

Source: Researcher analysis output (2020)

#### 4.2.4 WOM

Following table 12 shows the descriptive statistics for “WOM Receiver” (mean = 3.98, Standard Deviation = 0.885) which means the respondents agree with the



items and “WOM Sender” (mean = 4.41, Standard Deviation = 0.756) which means the respondents strongly agree with the items.

**Table 6** Summary for WOM’s scores ( $N = 389$ )

Variables	Variables in shorted form	Mean	Standard Deviation	Degree
WOM Receiver	WOMR01	4.03	0.911	Agree
	WOMR02	3.82	0.921	Agree
	WOMR03	4.10	0.825	Agree
<b>Average</b>		<b>3.98</b>	<b>0.885</b>	<b>Agree</b>
WOM Sender	WOMS01	4.41	0.707	Strongly agree
	WOMS02	4.41	0.756	Strongly agree
<b>Average</b>		<b>4.41</b>	<b>0.731</b>	<b>Strongly agree</b>

Source: Researcher analysis output (2020)

#### 4.2.5 Reputation

Table 13 shows the descriptive statistics for “reputation” (mean = 4.19, Standard Deviation = 0.823). The Overall scores demonstrated the respondents “Agree” with the items.

**Table 13** Summary for reputation’s scores ( $N = 389$ )

Variables	Variables in shorted form	Mean	Standard Deviation	Degree
Reputation	Rep01	4.29	0.786	Strongly agree
	Rep02	4.24	0.845	Strongly agree
	Rep03	3.88	0.929	Agree
	Rep04	4.36	0.735	Strongly agree
<b>Average</b>		<b>4.19</b>	<b>0.823</b>	<b>Agree</b>

Source: Researcher analysis output (2020)

## 4.3 Analyse & Result

### 4.3.1 Result of analysis verification

This section is to find out the answer of each hypothesis to answer the research questions:

(1) How do the service quality dimensions (SERVQUAL) have impact on students' satisfaction in order to generate WOM communication to others?

(2) How do academic programme/university reputation and WOM receiver impact on students' satisfaction?

(3) Are there any differences in perception of service quality between gender?

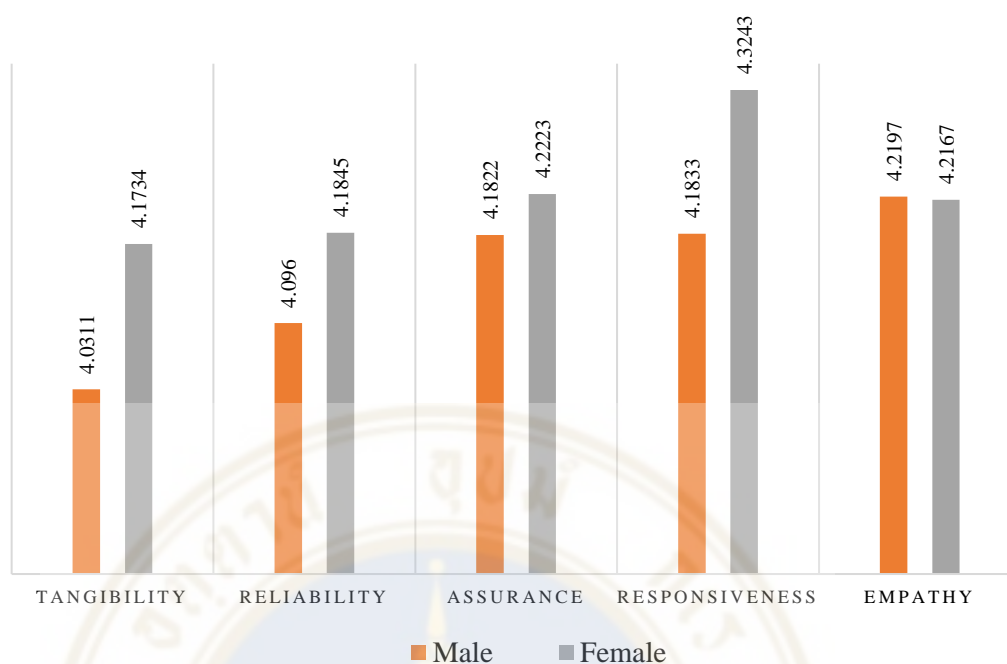
#### 4.3.1.1 Independent samples t-test

In order to determine whether gender differences affect the perceived of five service quality dimensions (SERVQUAL), a t-test for independent samples was conducted. The following table shows the results of the statistical tests.

**Table 7** Independent samples t-test between gender and perceive of service quality dimensions (SERVQUAL)

Service Quality Dimensions (SERVQUAL)	Gender (Male = 118, Female = 271)	Mean	Std. Deviation	Std. Error Mean
Tangibility	Male	4.0311	.62549	.05758
	Female	4.1734	.67086	.04075
Reliability	Male	4.0960	.69094	.06361
	Female	4.1845	.69773	.04238
Assurance	Male	4.1822	.55051	.05068
	Female	4.2223	.61023	.03707
Responsiveness	Male	4.1833	.62268	.05732
	Female	4.3243	.59480	.03613
Empathy	Male	4.2197	.58688	.05403
	Female	4.2167	.57798	.03511

Source: Researcher analysis output (2020)



**Figure 12** Comparison the average score for the gender on perceived service quality dimension (SERVQUAL)

As can be seen above (table 14, figure 12) from mean score for the perceived of service quality dimensions (SERVQUAL), mean scores reflects that perceived of SERVQUAL for females are higher than males at 4 which are tangibility, reliability, assurance, responsiveness out of total 5 dimensions.

**Table 8** Results of Independent samples t-test between gender and perceive of each dimension of SERVQUAL

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Tangibility	Equal variances assumed	2.397	.122	-1.963	387	.050	-.14236	.07252

**Table 15** Results of Independent samples t-test between gender and perceive of each dimension of SERVQUAL (cont.)

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
	Equal variances not assumed			-2.018	237.717	.045	-.14236	.07054
Reliability	Equal variances assumed	2.175	.141	-1.153	387	.250	-.08846	.07673
	Equal variances not assumed			-1.157	224.764	.248	-.08846	.07643
Assurance	Equal variances assumed	3.997	.046	-.614	387	.540	-.04012	.06538
	Equal variances not assumed			-.639	245.264	.523	-.04012	.06279
Responsiveness	Equal variances assumed	.005	.945	-2.119	387	.035	-.14100	.06655
	Equal variances not assumed			-2.081	213.810	.039	-.14100	.06776
Empathy	Equal variances assumed	.156	.693	.048	387	.962	.00308	.06405
	Equal variances not assumed			.048	219.712	.962	.00308	.06443

From table 15, the perceived of each SERVQUAL dimensions; tangibility, reliability, responsiveness, empathy given Levene's test has a probability greater than 0.05, it can be assumed that the population variances are equal. The two-tailed significance of equal variances that  $p < 0.05$  is only responsiveness so it defines that the perceived differences in SERVQUAL dimensions between gender for responsiveness are significant. Therefore, the only SERVQUAL dimension; assurance; given Levene's test has a probability less than 0.05, it can be assumed that the population variances are unequal. The two-tailed significance of unequal variances indicates that  $p > 0.05$  ( $p =$

0.523) and therefore is not significant. In summary, the perceived differences in overall SERVQUAL dimensions between gender is not significant.

Also, the t-test result of gender on overall SERVQUAL dimensions supported by the following test.

**Table 16** Results of Independent samples t-test between gender and overall SERVQUAL dimensions

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Overall Service Quality	Equal variances assumed	.939	.333	-1.343	387	.180	-.08177	.06090
	Equal variances not assumed			-1.373	234.551	.171	-.08177	.05958

Source: Researcher analysis output (2020)

From table 16, the overall SERVQUAL dimensions given Levene's test has a probability greater than 0.05, it can be assumed that the population variances are equal. The two-tailed significance of equal variances that  $p > 0.05$  ( $p = .180$ ) and therefore is not significant.

#### 4.3.1.2 Results of Regression Analysis

a. Simple Linear Regression intended to analyze the influence of the dependent variable; namely WOM Sender; and the independent variables namely, Student's Satisfaction; as the following:

**Table 17** Regression Test Results - Student's Satisfaction & WOM Sender

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.646	0.161		4.009	0.000
	Student's Satisfaction	0.848	0.036	0.768	23.585	0.000

a Dependent Variable: WOM Sender

Source: Researcher analysis output (2020)

The results that stated above (table 17), it shows a statistically significant effect between Student's Satisfaction and WOM Sender. The sig. value is at 0.00 which less than 0.05 ( $\alpha \leq 0.05$ ) so it defines a significant positive effect of Student's Satisfaction on WOM Sender.

b. Multiple Linear Regression used to examine the relationship between the dependent variable; namely student's satisfaction; and the independent variables including SERVQUAL (which are tangibility, reliability, assurance, responsiveness, and empathy), reputation, WOM receiver. The interpretation of multiple regression data obtained as follows:

To describe the correlation between each variable, a Karl Pearson correlation test is conducted. The correlation coefficients are valued from -1 to +1, which indicates whether there is a negative or positive correlation and a correlation of zero indicates no relationship between the variables (Pallant, 2016)

**Table 18** Pearson correlation test between each variable on Student's Satisfaction

	Tan	Reli	Assu	Resp	Emp	Repu	WOMR	Satis
Tan	1.000							
Reli	.563	1.000						
Assu	.637	.751	1.000					
Resp	.617	<b>.907</b>	.768	1.000				
Emp	.631	.758	.883	.735	1.000			
Rep	.443	.249	.389	.338	.436	1.000		
WOMR	.282	<b>.205</b>	.278	.274	.338	.714	1.000	
Satis	.521	.489	.580	.535	.665	.551	.399	1.000

Correlation is significant at 0.05 level (2-tailed)

Source: Researcher analysis output (2020)

As seen in table 18, the correlation coefficients between each variable present an overall positive correlation with student's satisfaction. 0.907 is the highest correlation between responsiveness and reliability while 0.205 is the lowest correlation between WOM receiver and reliability.



To find the contribution of all independent variables to the dependent variable, the coefficient of determination R Square is used for testing. The fundamental flaw using the coefficient of determination is biased against the number of independent variables included in the model.

**Table 19** Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733 <sup>a</sup>	.537	.529	.42567

a. Predictors: (Constant), Tangibility, Reliability, Assurance, Responsiveness, Empathy, Reputation, WOM Receiver

b. Dependent Variable: Student's Satisfaction

Source: Researcher analysis output (2020)

R = 0.733 indicates a good level of prediction.

R Square = 0.537 explains 53.7% of the variability of our dependent variable, student's satisfaction. And 46.3% (100%-53.7%) influenced by other causes further than the research model.

To answer the research objective, the regression coefficient of student's satisfaction is considered as the dependent variable and the set of dependent variables includes the five service quality dimensions (SERVQUAL) which are tangibility, reliability, assurance, responsiveness, and empathy, reputation and WOM receiver.

**Table 20** Results of Multiple Regression Analysis (Level of significance 5%)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.709	.186		3.809	.000
	Tangibility	.065	.046	.069	1.409	.160
	Reliability	-.118	.081	-.132	-1.457	.146
	Assurance	-.130	.085	-.124	-1.527	.128
	Responsiveness	.204	.093	.199	2.182	<b>.030</b>

**Table 20** Results of Multiple Regression Analysis (Level of significance 5%) (cont.)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	Empathy	.597	.088	.559	6.805	.000
	Reputation	.279	.050	.306	5.595	.000
	WOM Receiver	-.017	.041	-.021	-.419	.676

a Dependent Variable: Student's satisfaction

Source: Researcher analysis output (2020)

From the results of table 20, Only the following variables; responsiveness, empathy, and reputation of academic programme /university have a sig. value less than 0.05. This indicates the positive relation of these factors on the overall student's satisfaction. While other variables have no relation to the overall student's satisfaction.

#### 4.3.2 Result of hypothesis testing

**H1:** SERVQUAL dimensions have a positive impact on student's overall satisfaction

The H1 can break into five points as follows:

- H1a: Tangible dimension has a positive impact on student's overall satisfaction.
- H1b: Reliability dimension has a positive impact on student's overall satisfaction.
- H1c: Assurance dimension has a positive impact on student's overall satisfaction.
- H1d: Responsibility dimension has a positive impact on student's overall satisfaction.
- H1e: Empathy dimension has a positive impact on student's overall satisfaction.

To summarise the findings of multiple regression in the previous section (4.3.1), the result is shown in table 20. There are only two SERVQUAL variables which are responsiveness ( $\beta = .199$ ,  $p = .030$ ) and empathy ( $\beta = .599$ ,  $p = .000$ ) is significant.

This indicates that two variables have positive impact on students' satisfaction; so, H1d, H1e are accepted, suggesting the higher in responsiveness and empathy have higher in student's satisfaction. In contrast, the following variables: tangibility, reliability, assurance; have  $p\text{-value} > 0.05$  so they have no positive impact on students' satisfaction thus H1a, H1b, H1c are rejected.

**H2: Students' overall satisfaction has a positive impact WOM sender**

To summarise findings of simple linear regression in previous section (4.3.1) the result is shown in table 18. The testing variable student's satisfaction ( $\beta = .768$ ,  $p = .000$ ) is significant. This indicates that student's satisfaction has a positive impact on WOM sender; so, H2 is accepted, suggesting the higher in student's satisfaction has higher in WOM sender.

**H3: WOM receiver has a positive impact on student's overall satisfaction**

To summarise the findings of multiple regression in the previous section (4.3.1), the result is shown in table 21. The result of WOM receiver ( $\beta = -.017$ ,  $p = .676$ ) is not significant, suggesting WOM receiver is not significant predictor of student's satisfaction. This means that H3 is rejected.

**H4: Reputation of academic program/university has a positive impact on student's overall satisfaction**

To summarise the findings of multiple regression in the previous section (4.3.1), the result is shown in table 21. The result of reputation ( $\beta = .306$ ,  $p = .000$ ) is significant. This indicates that this variable has a positive impact on students' satisfaction; so, H4 is accepted, suggesting the higher in reputation of academic programme/university have higher in student's satisfaction.

**H5: Gender influences the perceived overall SERVQUAL dimensions have significant differences between males and females.**

- H0<sub>5</sub>: Gender influences the perceived overall SERVQUAL dimensions no significant differences between males and females

- Ha<sub>5</sub>: Gender influences the perceived overall SERVQUAL dimensions

significant differences between males and females

A t-test was performed to determine if there was a difference of gender on overall SERVQUAL dimensions in the previous section (4.3.1), the result is shown in table 17. There is the significance of Sig. (2-tailed) values for overall SERVQUAL dimensions higher than 0.05, it can be assumed that the difference in means between gender for these dimensions is not significant that indicates male and female respondents perceive these dimensions in the same manner.

To summarise the findings for H5 Gender influences the perceived of overall SERVQUAL dimensions have significant differences between males and females, the null hypothesis  $H_{05}$  is accepted and the alternative hypothesis  $H_{a5}$  rejected. This means that gender influences the perceived overall SERVQUAL dimensions have no significant differences between males and females.

#### 4.4 Summary

This chapter including a brief introduction, reliability test, and respondents' profiles. The testing of hypotheses including the use of independent sample t-tests and regression coefficients.

This summarises the respective hypotheses' findings shown in table 21.

**Table 21** Summary of Hypothesis Testing

No.	Hypothesis	$\beta$	p-vale	Result
1	H1a: Tangibility dimension has a positive impact on student's overall satisfaction.	.069	.160	Rejected
2	H1b: Reliability dimension has a positive impact on student's overall satisfaction.	-.132	.146	Rejected
3	H1c: Assurance dimension has a positive impact on student's overall satisfaction.	-.124	.128	Rejected
4	H1d: Responsiveness dimension has a positive impact on student's overall satisfaction.	.199	.030	Accepted

**Table 21** Summary of Hypothesis Testing (cont.)

No.	Hypothesis	$\beta$	p-value	Result
5	H1e: Empathy dimension has a positive impact on student's overall satisfaction.	.559	.000	Accepted
6	H2: Students' overall satisfaction has a positive impact on WOM Sender.	.768	.000	Accepted
7	H3: WOM Receiver has a positive impact on student's overall satisfaction.	-.021	.676	Rejected
8	H4: Reputation of academic program/university has a positive impact on student's overall satisfaction	.306	.000	Accepted
9	H5: Gender influences the perceived overall SERVQUAL dimensions have significant differences between males and females.	N/A	0.180	Rejected

Source: Researcher analysis output (2020)

## **CHAPTER V**

### **CONCLUSION AND DISCUSSION**

In the current research, the effects of SERVQUAL on Thai's postgraduate students' satisfaction and their word-of-mouth were studied with the main objective to gain insight and understanding into the factors which will influence student's satisfaction and their WOM to others. The study also explores the impact of these variables to discover how impact they are (1) gender, (2) reputation of academic programme/university, (3) WOM receiver. This study will support the education administrators in understanding the factors that influence postgraduate student's satisfaction in order to make an outcome of WOM. To formulate strategies or tactics to appeal to target students better in an era of low enrolment and increased competition from foreign rivals.

This chapter is including the following three sections:

- 5.1) Research conclusion & discussion
- 5.2) Practical Implications for management.
- 5.3) Limitations and further research

#### **5.1 Research conclusion & discussion**

##### **5.1.1 Demographic characteristic**

There are total 389 samples, a majority of them are women at 69.7% while male at 30.3%, age range between 26 – 30 years old 38.8% as majority follow by 26 – 30 years old at 32.9% holding at least master's degree at 98.2% and studied in business, the management or related field at 68.1%. However, from a total 18 choices of postgraduate universities, the respondents were from Mahidol University at 22.1%, Chulalongkorn University at 17.5% followed by Ramkhamhaeng University at 12.3%



### **5.1.2 Factor impacts on students' satisfaction**

For the factor called "SERVQUAL dimensions"; This study defines that only two dimensions (responsiveness and empathy) have positive impacts to student's satisfaction at the 0.5 significant level, suggesting that the improvement of responsiveness dimension and empathy dimension have will help students to give a better evaluation to their satisfaction.

Nevertheless, the reputation of academic programme/university also plays a positive impact on students' satisfaction at the 0.5 significant level, suggested to increasing or keeping strong in reputation to maintain in student's satisfaction.

In contrast, other SERVQUAL dimensions (including tangibility, reliability, assurance) and WOM receiver do not affect student's satisfaction.

### **5.1.3 Factor impacts on WOM**

According to the result in chapter IV, it describes that student's satisfaction provides a strong impact on WOM sender at the 0.5 significant level. Suggested to maintaining the higher satisfaction perceived by students will be the higher spread of WOM communication from students to others.

### **5.1.4 Factor impact perceived of service quality**

According to the hypothesis tested, the result of demographic factor; gender have no significant differences between male and female on perceived of SERVQUAL dimensions at the 0.5 significant level. That means, in overall, male and female perceived SERVQUAL dimensions in the same manner.

## **5.2 Practical Implications for management.**

According to the hypotheses tested and resulted as summarise above section, the influence of service quality especially in responsiveness and empathy, as well as, the reputation of academic programme/ university on WOM is provided by mediating variable; student's satisfaction; thus, the challenge is not only to focus on how to gain new students but also to ensure that the existing students or those who completed the programme are satisfied on their postgraduate studies. This can only be

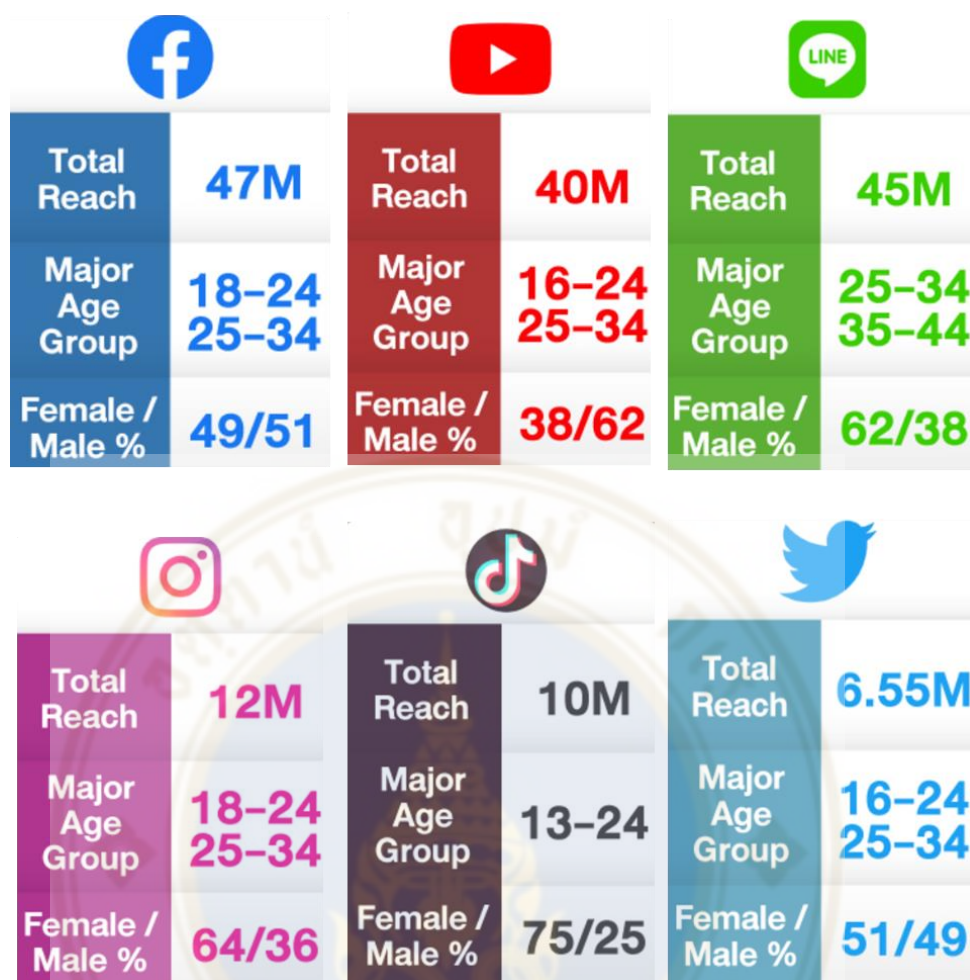
assumed through maintaining and improving the high quality of services especially in responsiveness and empathy, as well as, the reputation of academic programme/ university.

To grow the effect of these significant factors, different techniques can be used. The researcher would be suggested as following:

(1) Increasing empathy and responsiveness, it is proposed management to do as training or do KPI setting to who that serve students (e.g. main staff, supporting staff) so after they hold a willingness to help attitude, the provision of caring, individualized attention to serve student appropriately. Maintaining or increasing the reputation of academic programme/university is about to boost professional and good image as well as easily employable after graduated, it is recommended management to do

(a.) evaluating its current situation and how student perceived towards the programme or university, first, in order to do any plan or strategy to improvement (Hanover Research Academy Administration Practice, 2015), the evaluate is an easy and efficient way to gather student opinion and facilitate the improvement of institution's reputation.

(b.) communicating about the expertise the programme or university have through online channels. Because today's people have grown up communicating and sharing experiences on social media, e.g. offering the best showcases, awards, any standard certification. Even go as far as to create an education content or stories that reflect the programme or university expertise on platform that will attract target students. These following are social media platform that Thai's people engaged most; updated March 2020



**Figure 13** Summary of the social network in Thailand updated March 2020

Source : data summarise by (The Flight 19 Agency, 2020)

However, management should consider any negative feedback through social media that it could damage the reputation (Rowe, 2014)

(c.) Due in large part to its commitment to employability. Management must plan to boast a transformative education that includes student exchange programmes and entrepreneurial internships at the company that recognised as the most aspired companies as well as design a course specifically to improve a student's employability.

(2) Ensuring that things that programme/ university have done lead to students' satisfaction, it encouraged the management to do the surveys by asking them for feedback what we have done, recheck in with them periodically to see the response.

This turns out very important to gain the greatest level of student's satisfaction and the positive word-of-mouth level.

(3) Growing with a "0 THB Marketing"

Referring to this study, due to WOM is provided by student's satisfaction, suggested the management of using the WOM power from existing students as a weapon to attack future students without any marketing budget. Following is just a few of WOM strategies that management could consider.

- (a.) Start with an existing satisfied customer
- (b.) Provide thing worth talking about
- (c.) Generate an emotional response
- (d.) Empower them to become WOM advocated
- (e.) Extra push! consider a referral program

### **5.3 Limitations and further research**

This study basically analyses the influence of SERVQUAL dimensions and reputation on students' satisfaction and word-of-mouth. The addition of other variables for further studies is highly recommended.

In addition, a modified SERVQUAL dimensions has been used in this study. The use of other dimensions of service quality for advanced studies is also suggested to observe the different effects of each service level. (Easterby-Smith, Thorpe, & Lowe, Management Research: An Introduction, 1991)

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## APPENDIX A

### Research tool - questionnaire



**วิทยาลัยการจัดการ**  
มหาวิทยาลัยมหิดล

แบบสอบถามนี้เป็นส่วนหนึ่งของงานสารนิพนธ์ของนักศึกษาปริญญาโท วิทยาลัยการจัดการ สาขาการตลาด มหาวิทยาลัยมหิดล เพื่อศึกษาเรื่อง “ผลกระทบของคุณภาพการให้บริการทางการศึกษา ต่อความพึงพอใจ และการบอกต่อ ของนักศึกษาระดับบัณฑิตศึกษา” ( **EFFECTS OF SERVQUAL ON POSTGRADUATE STUDENTS’ SATISFACTION AND THEIR WORD-OF-MOUTH** )

แบบสอบถามชุดนี้ ประกอบด้วยชุดคำถาม 2 ส่วน โดยคาดว่าจะใช้เวลาตอบคำถามประมาณ 10 – 15 นาที ขอให้ท่านตอบคำถามให้ตรงกับความคิดเห็นของท่านมากที่สุด ข้อมูลทั้งหมดจะถูกเก็บเป็นความลับ

**ส่วนที่ 1:** ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

คำชี้แจง โปรดตอบข้อคำถามให้ตรงกับความเป็นจริงมากที่สุด

- อายุมากกว่า 18 ปี

(1) ไม่ใช่

(2) ใช่

กรณีตอบ (1) ไม่ใช่ : ปิดการสอบถาม

กรณีตอบ (2) ใช่ : ช่วงอายุ

- ช่วงอายุ

(1) น้อยกว่า 20 ปี

(2) 20-25 ปี

(3) 26-30 ปี

(4) 31-35 ปี

(5) 36 ปีขึ้นไป

- ระดับการศึกษาสูงสุด/กำลังศึกษา

(1) ต่ำกว่า หรือปริญญาตรี

(2) ปริญญาโท

(3) ปริญญาเอก กรณี

ตอบ (1) ต่ำกว่า หรือปริญญาตรี : ปิดการสอบถาม

กรณีตอบ (2) ปริญญาโท หรือ (3) ปริญญาเอก ใช่ : สถาบันการศึกษาระดับปริญญาโท

- สถาบันการศึกษาระดับปริญญาโท

- (1) จุฬาฯ (2) ม.เกษตรศาสตร์ (3) ม.เชียงใหม่  
 (4) ม.เทคโนโลยีพระจอมเกล้าฯ (5) ม.กรุงเทพ (6) ม.ขอนแก่น  
 (7) ม.ธรรมศาสตร์ (8) ม.มหิดล (9) ม.รังสิต  
 (10) ม.รามคำแหง (11) ม.ศรีปทุม (12) ม.สงขลานครินทร์  
 (13) ม.หอการค้า (14) ม.อัสสัมชัญ (15) มศว.  
 (16) สถาบันบัณฑิตพัฒนบริหารศาสตร์ (NIDA)  
 (17) อื่นๆ ในประเทศไทย โปรดระบุ .....

(18) อื่นๆ ต่างประเทศ โปรดระบุ .....

- กลุ่มวิชาที่ศึกษา

- (1) กลุ่มสาขาการแพทย์และสาขาที่เกี่ยวข้อง  
 (2) กลุ่มสาขาวิศวกรรมศาสตร์และวิทยาศาสตร์  
 (3) กลุ่มสาขาการบริหารการจัดการธุรกิจ  
 (4) กลุ่มสาขาสังคมศาสตร์ มนุษยศาสตร์ และภาษาศาสตร์  
 (5) อื่นๆ โปรดระบุ .....

- เพศ

- (1) ชาย (2) หญิง

ส่วนที่ 2 สอบถามเกี่ยวกับประสบการณ์การศึกษาในระดับปริญญาโท

คำชี้แจง โปรดตอบข้อคำถามให้ตรงกับความเป็นจริงมากที่สุด โดยการเลือกให้คะแนน

5 = มากที่สุด 4 = มาก 3 = ปานกลาง 2 = น้อย 1 = น้อยที่สุด

\*\* คำจำกัดความ “มหาวิทยาลัยนี้” หมายถึง สถาบันการศึกษาที่ผู้ตอบแบบสอบถามเรียนในระดับการศึกษาปัจจุบัน\*\*

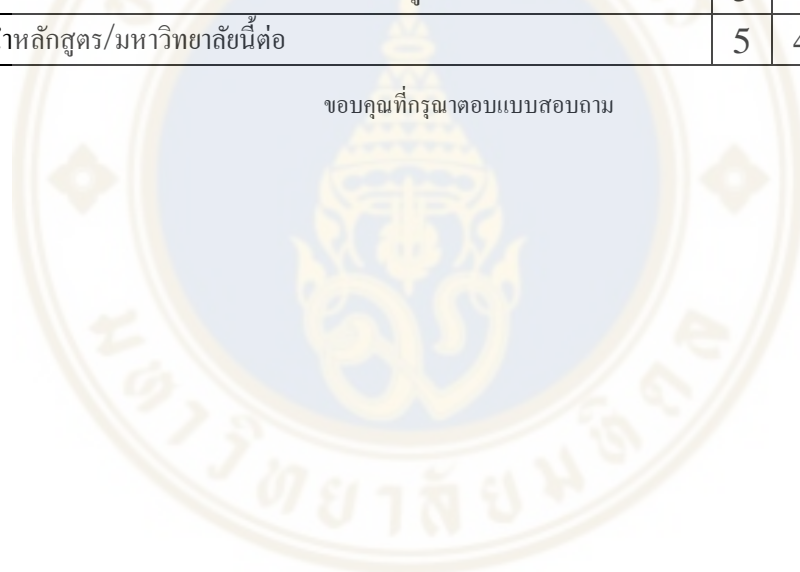
1. ก่อนสมัครเข้าเรียนในระดับปริญญาโท คุณมีความคิดเห็นในประเด็นต่อไปนี้อย่างไร	ระดับความคิดเห็น				
	5	4	3	2	1
ได้ยื่นชื่อของหลักสูตรของมหาวิทยาลัยนี้บ่อยๆ	5	4	3	2	1
พูดถึงหลักสูตรของมหาวิทยาลัยนี้มากกว่าที่อื่นๆ	5	4	3	2	1
ได้ยื่นว่าหลักสูตรของมหาวิทยาลัยนี้ดี	5	4	3	2	1
หลักสูตรของมหาวิทยาลัยนี้มีความเป็นมืออาชีพ	5	4	3	2	1
หลักสูตรของมหาวิทยาลัยนี้มีชื่อเสียง	5	4	3	2	1
ผู้เรียนจบจากหลักสูตรของมหาวิทยาลัยนี้หางานง่าย	5	4	3	2	1
หลักสูตรของมหาวิทยาลัยนี้มีภาพลักษณ์ดี	5	4	3	2	1



2. ระหว่างเรียนปริญญาโท คุณมีความคิดเห็นในประเด็นต่อไปนี้อย่างไร	ระดับความคิดเห็น				
มีสื่อการเรียนการสอนและมีเทคโนโลยีที่ทันสมัย	5	4	3	2	1
มีสิ่งอำนวยความสะดวก เช่น ห้องเรียน ห้องประชุม ที่จอดรถ เพียงพอ	5	4	3	2	1
มีเนื้อหาการเรียนการสอนน่าสนใจ	5	4	3	2	1
เจ้าหน้าที่ เข้าใจความต้องการของนิสิต/นักศึกษา	5	4	3	2	1
เจ้าหน้าที่ เสริมสร้างความมั่นใจในตัวนิสิต/นักศึกษา	5	4	3	2	1
เจ้าหน้าที่ แต่งกายเหมาะสม	5	4	3	2	1
เจ้าหน้าที่ แสดงความใส่ใจนิสิต/นักศึกษา	5	4	3	2	1
เจ้าหน้าที่ ให้ความช่วยเหลือในกรอบเวลาที่เหมาะสม	5	4	3	2	1
เจ้าหน้าที่ ให้บริการได้ดีตั้งแต่เริ่มมีปัญหา	5	4	3	2	1
เจ้าหน้าที่ การแจ้งระยะเวลาดำเนินงานต่างๆ โดยมีกรอบเวลาชัดเจน	5	4	3	2	1
เจ้าหน้าที่ ช่วยเหลือนิสิต/นักศึกษาทุกครั้งเมื่อมีการร้องขอ	5	4	3	2	1
เจ้าหน้าที่ ดูแลสิ่งต่างๆให้อยู่ในความเรียบร้อยเสมอ	5	4	3	2	1
เจ้าหน้าที่ มีความยินดีและเต็มใจจะช่วยเหลือตลอดเวลา	5	4	3	2	1
เจ้าหน้าที่ มีความรู้ความสามารถที่ตอบคำถามได้	5	4	3	2	1
เจ้าหน้าที่ มีความสุภาพ	5	4	3	2	1
คณะ/มหาวิทยาลัย เข้าใจความต้องการของนิสิต/นักศึกษา	5	4	3	2	1
คณะ/มหาวิทยาลัย เสริมสร้างความมั่นใจในตัวนิสิต/นักศึกษา	5	4	3	2	1
คณะ/มหาวิทยาลัย แสดงความใส่ใจนิสิต/นักศึกษา	5	4	3	2	1
คณะ/มหาวิทยาลัย ใส่ใจในการแก้ปัญหา ตามที่นิสิต/นักศึกษาร้องขอเสมอ	5	4	3	2	1
คณะ/มหาวิทยาลัย ให้บริการ/ความช่วยเหลือ ในกรอบเวลาที่เหมาะสม	5	4	3	2	1
คณะ/มหาวิทยาลัย ให้บริการอย่างประทับใจ ตั้งแต่ครั้งแรก	5	4	3	2	1
คณะ/มหาวิทยาลัย ดูแลสิ่งต่างๆให้อยู่ในความเรียบร้อยเสมอๆ	5	4	3	2	1
คณะ/มหาวิทยาลัย ตอบสนองการร้องขอทุกครั้งโดยทันที	5	4	3	2	1
2. ระหว่างเรียนปริญญาโท (ต่อ) คุณมีความคิดเห็นในประเด็นต่อไปนี้อย่างไร	ระดับความคิดเห็น				
คณะ/มหาวิทยาลัย มีเวลาทำการที่เหมาะสม	5	4	3	2	1
คณะ/มหาวิทยาลัย มีการแจ้งระยะเวลาดำเนินงานต่างๆ อย่างชัดเจน	5	4	3	2	1
คณะ/มหาวิทยาลัย มีความใส่ใจนิสิต/นักศึกษา	5	4	3	2	1
คณะ/มหาวิทยาลัย มีความปลอดภัย	5	4	3	2	1
คณะ/มหาวิทยาลัย มีความยินดีและเต็มใจจะช่วยเหลือตลอดเวลา	5	4	3	2	1
คณะ/มหาวิทยาลัย มีความยินดีให้ความช่วยเหลือ	5	4	3	2	1
คณะ/มหาวิทยาลัย มีความรู้ความสามารถที่ตอบคำถามนิสิต/นักศึกษาได้	5	4	3	2	1

คณะ/มหาวิทยาลัย ดำเนินการตามสิ่งที่แจ้งไว้ต่างๆ สำเร็จเสมอๆ	5	4	3	2	1
อาจารย์ แต่งกายเหมาะสม	5	4	3	2	1
อาจารย์ แสดงความใส่ใจนิสิต/นักศึกษา	5	4	3	2	1
อาจารย์ มีความยินดีให้ความช่วยเหลือ	5	4	3	2	1
อาจารย์ มีความสุภาพกับนิสิต/นักศึกษา	5	4	3	2	1
<b>3. หลังจากเริ่มเรียน หรือเรียนจบไปแล้ว คุณมีความคิดเห็นในประเด็นต่อไปนี้อย่างไร</b>	<b>ระดับความคิดเห็น</b>				
พอใจกับการตัดสินใจเรียนที่นี่	5	4	3	2	1
รู้สึกว่าการเลือกเรียนที่นี่เป็นทางเลือกที่ชาญฉลาด	5	4	3	2	1
ไม่ผิดหวังที่เลือกเรียนที่นี่	5	4	3	2	1
สนุกกับการเรียนที่นี่	5	4	3	2	1
โดยรวมๆ พอใจกับการเรียนที่นี่	5	4	3	2	1
จะแชร์ความประทับใจในการเรียนที่นี่ให้คนอื่นรับรู้	5	4	3	2	1
จะแนะนำหลักสูตร/มหาวิทยาลัยนี้ต่อ	5	4	3	2	1

ขอบคุณที่กรุณาตอบแบบสอบถาม



## APPENDIX B

### Certificate of Ethical Approval



IPSR-Institutional Review Board (IPSR-IRB)

*Established 1985*

COA. No. 2019/11-415

#### Certificate of Ethical Approval

Title of Project: *A Study on the Effects of SERVQUAL & Word-of-Mouth Communication*

Duration of Project: *3 months (December 2019 - February 2020)*

Principal Investigator (PI): *Ms. Naiphatsorn Sakyaphinant*

PI's Institutional Affiliation: *College of Management, Mahidol University*

Approval includes:

- 1) Submission form*
- 2) Research proposal*
- 3) Questionnaire*
- 4) Participant information sheet*
- 5) Informed consent document*

IPSR-Institutional Review Board (IPSR-IRB) met on 28<sup>th</sup> November 2019 and decided to issue the COA to the above project.



Signature

(Professor Emeritus Pramote Prasartkul)  
Chairman, IPSR-IRB

Valid from January 13, 2020 to January 12, 2021

Remarks

- 1) Upon the completion of this project, the PI should inform the IPSR-IRB of such progress.
- 2) The PI is obliged to notify any modification of the research project to the IPSR-IRB.
- 3) For verifying this document, please use QR code above.

IORG Number: IORG0002101; FWA Number: FWA00002882; IRB Number: IRB0001007

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Phuttamonthon district, Nakhon Pathom 73170. Tel (662)441-0201-4 ext. 223