

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**FACTORS WHICH INFLUENCE STUDENT SATISFACTION
AMONG INTERNATIONAL POSTGRADUATE STUDENTS IN
UNIVERSITI UTARA MALAYSIA**



AYA KHALED MOHAMED HELMY

UUM
Universiti Utara Malaysia

**MASTER OF HUMAN RESOURCE MANAGEMENT
UNIVERSITI UTARA MALAYSIA
JUNE 2016**

**FACTORS WHICH INFLUENCE STUDENT SATISFACTION AMONG
INTERNATIONAL POSTGRADUATE STUDENTS IN UNIVERSITI UTARA
MALAYSIA**



**By
AYA KHALED MOHAMED HELMY**

UUM
Universiti Utara Malaysia

**Thesis Submitted to
School of Business Management
Universiti Utara Malaysia
In Partial Fulfillment of the Requirement for the
Master in Human Resource Management**

PERMISSION TO USE

In presenting this project paper in partial fulfillment of the requirements for a Post Graduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for the copying of this project paper in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor or, in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my project paper. It is understood that any copying or publication or use of this project paper or parts of it for financial gain shall not be given to me and to UUM in any scholarly use which may be made of any material in me from my project paper.

Request for permission to copy or make other use of materials in this project paper, in whole or in part should be addressed to:



School of Business Management

Universiti Utara Malaysia

06010 UUM Sintok

Kedah Darul Aman

Universiti Utara Malaysia

ABSTRACT

In today's competitive environment student satisfaction become a significant factor for higher education. This was because satisfied students could attract new students and help to retain existing students. Despite importance of student satisfaction in higher education institutions, limited studies have been done on student satisfaction in Malaysian higher education. The declining number of international postgraduate students in UUM had raised researcher interest to make the study. The objective of this study was to examine the influence of some factors like accommodation, cafeteria food service, transportation and teaching quality on student satisfaction among international postgraduate students in Universiti Utara Malaysia (UUM). The survey method utilizes the questionnaire for data collection process. Pearson Correlation and Multiple Regression were used for data analysis through SPSS version The survey questionnaires were distributed to 291 respondents however only 192 questionnaires were received back or 65.9 percent. The main finding of study showed there were significant relationships between accommodation, cafeteria food service, teaching quality and student satisfaction. Transportation, however, did not show any significant relationship with student satisfaction

Keywords: Accommodation, cafeteria food service, transportation, teaching quality and student satisfaction



UUM
Universiti Utara Malaysia

ABSTRAK

Dewasa ini, dalam persekitaran yang berdaya saing untuk pendidikan tinggi, kepuasan pelajar merupakan faktor yang penting. Ini adalah kerana kepuasan pelajar akan menarik minat pelajar-pelajar baru untuk turut serta dan membantu mengekalkan pelajar-pelajar lama. Walaupun kepuasan pelajar di dalam pendidikan pengajian tinggi adalah penting, namun kajian di dalam sektor pendidikan tinggi Malaysia adalah sangat terhad. Pengurangan ini menyebabkan penyelidik berminat untuk mengkaji dan menganalisa faktor-faktor penyumbang kepada masalah ini. Objektif kajian ini adalah untuk menganalisa faktor-faktor yang menyumbang kepada kepuasan pelajar seperti tempat tinggal, kafeteria, sistem pengangkutan dan kualiti sistem pengajaran di Universiti Utara Malaysia (UUM) dalam kalangan pelajar siswazah luar negara. Kaedah survey melalui soal-selidik dipilih sebagai alat untuk proses pengumpulan data. Korelasi Pearson dan Multiple Regression melalui SPSS versi 20 merupakan kaedah analisis yang digunakan bagi soal-selidik ini. Soalan soal selidik soalan diagihkan kepada 291 responden. Namun, hanya 192 responden atau 65.9 peratus responden yang telah menjawab soalan soal selidik. Hasil kajian mendapati, terdapat hubungkait yang signifikan antara tempat tinggal, servis kafeteria, kualiti sistem pengajaran dengan tahap kepuasan pelajar. Sistem pengangkutan tidak memainkan peranan penting dalam faktor penyumbang tahap kepuasan pelajar.

Kata Kunci: Tempat tinggal, sistem cafeteria, sistem pengangkutan, kualiti sistem pengajaran dan tahap kepuasan pelajar.



UUM
Universiti Utara Malaysia

ACKNOWLEDGEMENTS

I am very grateful to Allah almighty for his protection and grace bestowed upon me to successfully complete my Master's degree in the university Utara Malaysia. My profound gratitude goes to my supervisor, Dr. Mohd Faizal Mohd Isa. I really appreciate your kindness, time, patience and support given to me to complete my thesis. Your encouragement, understanding, inspiration, tolerant advice has been very wonderful and unquantifiable, really solidified my resolve towards completing this study, indeed you would never be forgotten in my mind.

Space will not permit me to thank you all, let me note and sincerely thank my wonderful Family, my father Dr. Khaled Mohamed Helmly, my mom Azza Mohamed Ali and my brother Mohamed Khaled Helmly who made my education one of their priorities and warm my life with love, happiness and caring. Their kind heart, advices and patience always give me the strength and encouragement to reach my goals and face life challenges.

Finally, let me start by saying a big thank you to my great friend, Solomon for your invaluable support, motivation and being always there for me to achieve my aim. May Allah always bless you and all your dreams come true. And of course I would never fail to express my great appreciation to all my wonderful friends especially Janna, Roa'a Kubas, Hasna, Oussama Saoula, Nourddin, Mohamed Adam and Pridhivraj for their great encouragement and support all the time. God will speed all your endeavors and May Allah blesses you all.

TABLE OF CONTENTS

PERMISSION TO USE	.ii
ABSTRACT	iii
ABSTRAK	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xi

CHAPTER ONE :INTRODUCTION

1.1 Introduction	1
1.2 Background of the study	1
1.3 Problem statement	6
1.4 Research Questions	13
1.5 Objectives of the Study	14
1.6 Significance of the Study	14
1.6.1 Practical / Social importance	14
1.6.2 Knowledge Contribution	14
1.7 Scope of Study	15
1.8 Definition of Key Terms	16
1.9 Organization of Thesis	17

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction	18
2.2 The Conceptual of Customer Satisfaction	18
2.3 Overview of Student Satisfaction	20
2.3.1 Importance of Student Satisfaction	22
2.3.2 Factors That Influences Student Satisfaction	23
2.4 Accommodation	24
2.4.1 Importance of Accommodation	24
2.4.2 Definition of Accommodation	24
2.4.3 Different Perspective of Accommodation	26
2.4.4 Purposes of Students Housing	27
2.4.5 Relationship Between Accommodation and Student Satisfaction	28
2.5 Cafeteria Food Services	29
2.5.1 Importance of University Cafeterias	29
2.5.2 Definition of Cafeteria Food Services	30
2.5.3 Factors That Influence Student satisfaction and University Foodservice Cafeterias	30
2.5.4 Relationship Between University Cafeteria Food Services and Student Satisfaction	33
2.6 Teaching Quality	33
2.6.1 Overview of Teaching Quality	33
2.6.2 Definition of Teaching Quality	34
2.6.3 Importance of Teaching Quality	34

2.6.4 Relationship Between Quality of Teaching and Student Satisfaction	37
2.7 Transportation	37
2.7.1 Overview of Transportation	37
2.7.2 Importance of Transportation Services in Universities	38
2.7.3 Relationship Between Transportation Services and Student Satisfaction	39

CHAPTER THREE :METHODOLOGY

3.1 Introduction	40
3.2 Research Framework	40
3.3 Research Hypothesis	41
3.4 Research Design	42
3.5 Unit of Analysis	43
3.6 Population and Sampling Design	43
3.6.1 Population	43
3.6.2 Sample	44
3.6.3 Sampling Technique	44
3.7 Structure of the Questionnaire	45
3.8 Operational Definitions and Measures	46
3.8.1 Student Satisfaction	47
3.8.2 Accommodation	48
3.8.3 University Cafeteria Food Services	49
3.8.4 Transportation	50
3.8.5 Teaching Quality	51
3.9 Procedure for Data Collection	53
3.10 Techniques for Data Analysis	55
3.10.1 Data Screening / Cleaning	55
3.10.2 Data Analysis	56
3.10.3 Descriptive Statistics	56
3.10.4 Inferential Statistics	57
3.10.5 Pearson Correlation Coefficient	58
3.10.6 Multiple Regression Analysis	59
3.11 Pilot Test	59
3.12 Goodness of Measure	61
3.13 Summary of Chapter	62

CHAPTER FOUR: DATA ANALYSIS

4.1 Introduction	63
4.2 Response Rate	63
4.3 Descriptive Analysis	64
4.4 Data Screening and Cleaning	68
4.4.1 Treatment of outliers	69
4.4.2 Normality test	69
4.4.3 Multicollinearity	71
4.4.4 The Reliability Analysis	72
4.5 Factor Analysis	73
4.6 Hypotheses Testing	77
4.6.1 Correlation Analysis Test	77
4.6.2 Multiple Regression Analysis	78

4.7 Hypothesis Decision	80
4.8 Summary	80
CHAPTER FIVE : DISCUSSION AND RECOMMENDATION	
5.1 Introduction	81
5.2 Summary of the Results	81
5.3 Discussion	81
5.3.1 The Relationship Between Accommodation and Student Satisfaction	81
5.3.2 The Relationship Between Cafeteria Food Services and Student Satisfaction	84
5.3.3 The Relationship Between Teaching Quality and Student Satisfaction	85
5.3.4 The Relationship Between Transportation and Student Satisfaction	86
5.4 Implication of Study	87
5.4.1 Knowledge Contribution	87
5.4.2 Managerial Implication	88
5.5 Limitations of The Study	90
5.6 Suggestions for Future Study	91
5.7 Conclusion	92
REFERENCES	93
APPENDICES	125
APPENDIX A: QUESTIONNAIRE	125
APPENDIX B: PILOT STUDY RESULT	130
APPENDIX C: NORMALITY TEST	131
APPENDIX D: RELIABILITY	135
APPENDIX E: FACTOR ANALYSIS FOR ACTUAL STUDY	135
APPENDIX F: THE RESULT OF PEARSON CORRELATION ANALYSIS	137
APPENDIX G: REGRESSION ANALYSIS	137

LIST OF TABLES

Table3.1 Student Satisfaction	48
Table 3.2 Accommodation	49
Table 3.3 Universiti Cafeteria Food Services	50
Table 3.4 Transportation	51
Table 3.5 Teaching quality	52
Table 3.6 Strength of Correlation Table	59
Table3.7 Reliability for Pilot Test	61
Table 4.1 Response Rate of the Questionnaires	64
Table 4.2 Demographic Profile of the Respondents	64
Table 4.3 Reliability Analysis	73
Table 4.4 KMO and Bartlett's Test	75
Table 4.5 Rotated Component Matrix	76
Table 4.6 Correlation Analysis Summary between Variables	78
Table 4.7 Regression Analysis	79
Table 4.8 Summary of The Hypotheses Testing	80



LIST OF FIGURES

Figure 3.1 Research Framework	41
Figure 4.1 Normality	70
Figure 4.2 Scatterplot	70
Figure 4.3 Normal P-P Plot	71



LIST OF ABBREVIATIONS

MOHE	Minister of Higher Education
HE	Higher Education
UUM	Universiti Utara Malaysia
HEA	Academic Affairs Department



CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter reflects the outline of the study. The chapter begins with the background of the study from which the issues of the study were highlighted followed by research questions and objectives. Afterwards, the significance of study as well as the scope of study is highlighted. Lastly, the organization of thesis is presented.

1.2 Background of the study

The Higher education market is unequivocally influenced by globalization, resulting in producing international market for educational services and has increased competition of attracting students (Hemsley-Brown & Oplatka, 2006). The increased competition among higher education institutions forced them to differentiate themselves from their competitors by adopting marketing strategies in order to attract more students (Butt & Rehman, 2010).

The marketing strategy used by most organizations to achieve stated goals was satisfying their target customers as well as achieving desired satisfaction more efficiently and effectively higher than competitors (Kotler & Fox, 2002). Within the context of higher education, students are the target customers because they are the primary consumer of the university services (Chen, 2008; Hill, 1995) and they are the direct recipients of service provided and expecting value for their payment of tuition fees (Brochado, 2009; Douglas, Douglas & Barnes, 2006).

Student satisfaction is the emotional state of feeling in which student's desire, expectations and requirement of service delivery is being met or exceeded (Abdullah, 2006). In addition, Elliott and Healy (2001) defined student satisfaction as a short-term attitude of the student resulting from his / her assessment of educational experience. As such, it is important to understand student satisfaction for a variety of reasons. For instance, large portion of satisfied students represents a competitive advantage for institution with beneficial outcomes as positive word of mouth communication, loyalty and student retention (Kolter & Fox, 2002).

For example, satisfied students will engage in positive word of mouth spreading good news about the university subsequently affecting the reputation of the university, encouraging and motivating others to join and retaining existing ones. On the other hand, dissatisfied students will talk negatively about the institutions to their friends, lose their loyalty and possibly withdraw or transfer to other university (Farahmandian, Minavand & Afshardost, 2013). Thus, student satisfaction helps universities all over the world not only to retain their students but also attract new students in today's competitive environment (Songsathaphorn, Chen & Ruangkanjanase, 2014). For instance, several universities in United Kingdom and Australia gave special attention to student satisfaction in formulating their strategies regarding recruitment and retention (Poon & Brownlow, 2015). Moreover, Douglas et. al. (2006) found student satisfaction as a significant factor in reducing the rate of attrition in the United Kingdom.

Furthermore, the role of student satisfaction is crucial in investigating the quality and accuracy of the university services and system as well (Sapri, Kaka, & Finch, 2009). This is because a higher level of student satisfaction results in better course comprehension, improved mental grooming and enhanced skills development of students (Muhammed, Rizwan, & Ali, 2010). Hence, student satisfaction is vital as it is considered as performance indicator of service quality provided in higher learning institutions (Barnett, 2011). Moreover, students' satisfaction works as an indicator or a measure of the responsiveness of the institution to the needs and expectations of the students. Besides, it's also an indicator of the vitality and success of the institution (Ahmed, Khairuzzaman, Mohamad & Islam, 2014). For example, educational institutions utilize the data of student satisfaction for getting better understanding, improving and changing the environment of the institution, thus making more conducive environment for the development and satisfaction of the students. This was supported by Farahmandian *et al.*, (2011) that one of the reasons organizational failures is inability to satisfy students and fulfilling their expectations.

Moreover, the increased expectations of the students, higher competition among education providers, the spirit of internationalisation and increased fees and dues has made student satisfaction vital for the survival of higher education institutions (Ling, Chai, & Piew, 2010). Thus, universities should be able to satisfy their students in order to survive in today's high competitive environment. Student satisfaction can be achieved through delivery of excellent services to the students by the higher education institutions (HEIs) (Huang, Binney & Hede, 2012). This is consistent with Schertzer and Schertzer (2004) that one of the most critical elements that results in satisfaction of students is the positive perception of quality of services provided. Athiyaman (1997)

also supported this argument that there is a significant relationship between perceived institution quality and student satisfaction. This leads to the conclusion that public perception of the institution quality can be improved with an enhanced level of student satisfaction.

In this regards, student satisfaction and its measurement has emerged as a critical issue for management of the universities. Various surveys have been conducted for the measurement of student satisfaction. For example, in Italian and Australian universities, course evaluation survey (CEQ) and in the universities of UK, national student survey (NSS) are popular (Poon & Brownlow, 2015). The governments of these countries use the survey results for gauging the performance of the universities and producing league tables. The public image of the universities is affected by their positions in the league tables and public image strongly affects the induction of new students and the retention of existing students (James, Baldwin & McInnis, 1999).

Thus, universities all over the world are focusing currently on minimizing student dissatisfaction and maximizing student satisfaction in order to compete in the market, retain existing students, improve the university performance and attract new students (Padlee & Yakoop, 2010; Kwek & Choon, 2010). Attracting international students is very critical because international student enrolment plays a vital role in national economic growth of every country (Becket & Brookes, 2008). As such, many countries have declared their plan to attract new international students. For instance, Canada has declared her plan to double the number of international students in the coming years, whereas, by 2020, the target set by Japan is to attract 300,000 international students. China has announced her plan to increase the number of international students from

200,000 to 500,000 by 2020. While, in the last decade; the United States have increased their international undergraduate students up to 70 percent.

In Malaysia, the country aims to attract 200,000 international students by 2020 because the increase in the number of international student worth approximately RM600 billion to the economy (The Malaysian Insider, 2011). Therefore, for Malaysian higher education to achieve this goal of attracting more international students by year 2020, it is important for higher institutions to focus on satisfying students through understanding and listening to their needs, requirements and finding ways to satisfy them (Zeeshan, Sabbar, Bashir & Hussain, 2013; Jalali, Islam, & Ariffin, 2011). Thus, higher learning institution will be able to deliver high service quality to international students that will satisfy their needs.

According to Oldfield and Baron (2000), to satisfy students and offer them high service quality, it is important to understand student's requirement instead of collecting information based on institution expectation of what students consider as important. One of the reasons of organizations failure is their inability to understand their customer's requirement and fulfill their expectations (Farahmandian *et al.*, 2011). Thus, feedback from students is critical because it helps institutions to understand needs and wants of their students modify their offerings to meet those needs, and thereby enhance customer satisfaction by delivering superior quality services (Keegan & Davidson, 2004). This was further supported by Bitner, Brown and Meuter, (2000) that the service delivery that can satisfy the customers can be provided by the service providers only if they understand their customer needs. In the same way, educational institutions might be able to provide services according to the students' expectations if they have

somewhat prior knowledge about it so that they can modify their services provided to meet student's needs and gain their satisfaction (Hasan & Masri, 2013).

In view of the above issues the need to examine international student satisfaction in Malaysian higher education is important because addressing the issue of international student satisfaction will consequently help the government to increase the revenue worth RM600 billion to the economy and increase the reputation of higher education institutions to compete in a competitive business environment.

1.3 Problem statement

In the current era of globalization, the internalization was considered as a basic strategic element for universities around the world (Ayuobi & Massoud, 2007). Since 1996, the flow of foreign students to Malaysia had increased gradually. This occurred when different higher education changes were made in order to facilitate admission of foreign students into tertiary education institutions. As a result, Malaysia became a new attractive destination for international students especially from Middle East and Arab world to undertake their studies (Morshidi, 2008).

Moreover, the number of international students kept on increasing after the incident of September 11, 2001 in United States where foreign students especially from Middle East, Pakistan, Bangladesh and Africa shifted their core study destination from United States and United Kingdom to Malaysia as their top choice for higher education particularly for postgraduate studies (Memon, Salleh, Baharom & Harun, 2014). This radical change of international student destination is due to massive restrictions in university admission policies as well as visa procedures and policies. In addition,

increment of tuition fees in The US and UK caused a decline in the number of international students while viability of low cost study opportunity in Asia leads to attraction of foreign students to Malaysia (Zeeshan *et al.*, 2013). Consequently, changes in study destination have led to increment in international postgraduate student's numbers preceding their studies in Malaysian higher institution.

Realizing the significance role of international students to Malaysian economy (MOHE,2012), the education minister, Tan Sri Muhyiddin Yassin announced that the aim of Ministry of Higher Education (MOHE) by 2020 is attracting at least 200,000 international students (The Malaysian Insider, 2011). Additionally, he also stated at the Education Nation Conference 2011, that the Malaysian government plans to make the education sector an economic endeavor through attracting more international students as the increase in the number of international student will be worth an estimated RM600 billion to the economy (The Malaysian Insider, 2011).

So far, Malaysia is successful in accomplishing its purpose of attracting more foreign students as it is announced by the second education Minister Datuk Seri Idris Jusoh, that Malaysia is on track to achieve the target of attracting 200,000 international students by 2020 in line with Malaysia's aim of becoming an international and regional education hub. Over the past decade, Malaysia had become the fastest growing destination for international students, attracting an annual increase of over 16%. For instance, in 31 December 2014 Malaysia had 135,502 international students from about 160 nations, studying in public and private higher education institutions as well as international schools whereby 32,842 international students studying in public

universities, 74,996 are studying in private higher education and 27,812 of international students are currently enrolled in postgraduate programs (The sundaily,2015).

Over the past decade, the number of international students in Malaysia increases daily this is because large number of international students are being recruited by Malaysian institutions (Tham, 2013; Zain, Jan & Ibrahim, 2103). This places Malaysia as one of the major education destinations of many international students from across the world (ASIAN Correspondent, 2011). However, there is increasing decline in the number of international students in University Utara Malaysia. For instance, from 2013-2014 to date, the number of postgraduate international students has constantly decreasing. For instance, the total number of postgraduate international students in the academic year 2013-2014 decline to 621 while in the academic year 2014-2015 become 531 (HEA, 2015). Thus, there is continuous decline in the total number of postgraduate international student since the past two years by 14%.

In the institutional context, some researchers have asserted that career or job dissatisfaction is a significant predictor of employee turnover (Egan, Yang, & Bartlett, 2004) . Others researchers have suggested that employees are most likely to turnover when both their psychological well-being and their job satisfaction are low (Wright & Bonett, 2007). This is also applicable in the Malaysia higher education institution. For instance, if students dissatisfied with the university services, they may possibly withdraw as well as discourage other students to apply for the university. This is consistent with Farahmandian, Minavand and Afshardost (2013) that dissatisfied students will lose their loyalty, intends to withdraw or transfer to other university and will talk negatively about the institutions to others.

On the other hand, previous studies asserted that satisfied student population was a source of competitive advantage and with outcomes such as positive word of mouth, student retention and attraction (Kotler & Fox, 2002). For instance, satisfied students will help in promoting the university because they will spread good news and good reputation of university through positive word of mouth communication to their social circle such as their friends and relatives (Lee, 2015). This plays a critical role in marketing higher institutions otherwise known as viral marketing (Mcelelland, Horne, Dearnley, Raynsford & Irving, 2015; Stromquist & Monkman, 2014). Viral marketing is known as a powerful marketing tool as it can reach and persuade large number of customers about specific services or products (Kotler, 2014).

Thus, looking at current situation of decrement in the number of international student every year in the university Utara Malaysia, it is importance to provide more attention and focus on international student satisfaction as it is the most influencing factors in attracting large proportion of international students to UUM. This is consistent with Memon *et al.*, (2014) that student satisfaction become significant element and a major goal of higher education institutions, because satisfied student encourages and attracts new students as well as helps in retaining existing one.

Thus, there were varieties of factors that can significantly impact student satisfaction. For instance, DeShields, Kara and Kaynak (2005) looked at factors such as Faculty, advising staff and class as determinants for student satisfaction in United States. Besides, Ngamkamollert and Ruangkanjanases (2015) looked at factors like academic quality, image and prestige, administration support, environment and safety, personal influence and financial consideration as factors influences student satisfaction in Thai

universities. Additionally, Ali, Zhou, Hussain, Nair, & Ragavan (2016) looked at factors such as academic aspects, nonacademic aspects, program issues, reputation and access as factors influencing student satisfaction in Malaysia. Moreover, Gamage, Suwanabroma, Ueyama, Hada and Sekikawa, (2008) examined factors such as quality of academic staff, quality of academic programs, University's reputation, financial assistance and tuition fees, Counselling and support services, Job placement services, Grievance procedures, Library and computer facilities, and recreational facilities as influencing factors on student satisfaction in Japanese and Thai private universities.

Furthermore, Arambewela and Hall (2009) studied factors such as education, social, technology, economic consideration, accommodation, safety, image and prestige as factors that influences international student satisfaction in Australia. Also Malik, Chaudhry and Imdadullah (2011) focus on ten factors which are quality of teaching, sports facilities, administration support, transportation, library facilities, prayer facilities, medical facilities, accommodation facilities, class room and computer labs as determinates of student satisfaction in Pakistan. Besides, Poturak (2014) studies factors such as administration staff, campus environment, programs, academic staff, cafeteria, personal development and education services as factors affecting student satisfaction with private universities in Europe. Moreover, Fernandes, Ross and Meraj (2013) focus on five factors which are academic support, organization and management of programs, teaching quality and library service to influences student satisfaction in United Arab Emirates. However, to the best of the researcher's knowledge no similar study has examine accommodation, cafeteria food service, transportation and teaching quality collectively particularly within the context of Malaysian higher institutions.

Considering the current enrolment of international students in Malaysia, there are 32,842 international students studying in public universities, 74,996 studying in private higher education and 27,812 of international students are currently enrolled in post-graduate programs (The sundaily,2015). Therefore, Malaysia has turn out to be a strong force in international education and they need to focus on satisfying their international students in order to retain existing one and attract more international students (Njie, Asimiran, & Baki, 2012).

In this regards, as there is rapid increase in the number of international students, their needs and requirements increases in terms of having sufficient facilities such as transportation, restaurants, accommodations and other facility services as well (Kasim, Abubaka, & Ishiyaku, 2014). Thus, to ensure that international students are satisfied, these facilities have to be aligned regularly (Kasim *et al.*, 2014).

Accommodation, transportation, cafeteria food services and teaching quality in Malaysia are found to be associated with some issues. For instance, due to increment in the number international students each year in both public and private in Malaysian universities, have increases the demands for having more cafeteria food services in Malaysia universities. Moreover, there are problems facing university food service management in Malaysia as students are dissatisfied with cafeteria 's food services particularly with food quality, price and value of food (Mansor, 2012). Hence, there is a need to improve and increase number of cafeteria in Malaysian universities to be able to cater student's requirements and satisfy their needs.

In Malaysia, there are limited studies that had examined students feeling and their satisfaction with hostel facilities provided (Amole, 2009; Khozaei,, Hassan & Khozaei, 2010). Most of the studies focused more on factors that influences residential satisfactions towards their neighborhood and studies on how student's hostels are managed and administrated (Sawyerr & Yusof, 2013). With regards to transportation, for Malaysia to achieve its goal of becoming a regional education hub and enhances higher education, its critical for Malaysian universities to ensure that campus infrastructure such as transportation is in place to handle increasing population as students living inside campuses exclusively depends on public transportation to move from one place to another (Yusof, Misiran, Pei & Tian, 2014).

Similarly, the aim of Ministry of Higher education (MOHE) in 2004 is making Malaysia a center of educational excellence in producing skilled human workforce. Achieving this goal requires qualified lectures and comfortable learning environment (Zakaria& Yusoff, 2011). Hence, as higher learning institutions is seeking to build a comfortable learning environment that produces highly qualified candidate Therefore, highly competent and professional lectures are essential for providing effective teaching which will results in producing highly qualified graduates (Surman, 2015). Moreover, the availability of qualified lectures in various fields is required especially with increasing number of students (Aziz, & Yasin, 2013).

Consequently, student satisfaction had become the most important element to compete in today's competitive environment. Even though student satisfaction is a significant factor in higher education institutions, less attention has been given to satisfaction of students in Malaysia tertiary institutions. For instance, most of the studies done on

student satisfaction have been conducted in western countries (Parahoo, Harvey & Tamim, 2013) such as, United States of America, United Kingdom (Li, 2005; Maggs, 2014), Netherlands (Kleijin, Pilot & Brekelmans, 2013; Mainhard, Rijst & Tartwijk, 2009) Australia (Arambewela & Hall, 2013) and in Gulf Region (Parahoo *et al.*, 2013) respectively.

Besides, limited studies have been conducted in relation to international postgraduate student satisfaction in Malaysian higher institution (Memon *et al.*, 2014). Thus, this study extends the body of research by examining the influence of Accommodation, cafeteria food services, teaching quality and transportation on student satisfaction among international postgraduate student in University Utara Malaysia. This is important because the quality of service provided by UUM will affect the perception of international student satisfaction towards the institution. Referring to the aforesaid problems, the present study addressed the following questions:

1.4 Research Questions

Responding to the above problem, this study intended to examine the influence of accommodation, Cafeteria food service, teaching quality and transportation on student satisfaction. Therefore, the research attempted to answer the following questions.

1. Do accommodation facilities influence student satisfaction?
2. Do cafeteria food services influence student satisfaction?
3. Does teaching quality influence student satisfaction?
4. Does transportation influence student satisfaction?

1.5 Objectives of the Study

The objective of this study were to examine the factors that influence international student satisfaction in University Utara Malaysia, thus the objectives of this study were stated as follows:

1. To examine the influence of accommodation facilities on student satisfaction
2. To examine the influence of Cafeteria food services on student satisfaction
3. To examine the influence of teaching quality on student satisfaction
4. To examine the influence of transportation on student satisfaction.

1.6 Significance of the Study

1.6.1 Practical / Social importance

The results of this research would provide better insights to administration and management of the university in understanding the most significant factors that influences and increases student satisfaction. Besides, the results of this study will present a road map for managing student satisfaction. Consequently, this will be helpful to management of the university in identifying services that satisfies student needs. For instance, the administration of this institution should offer students better accommodation facilities, good quality of cafeteria food services, effective teaching quality and adequate transportation. Additionally, the finding of this research will help in expanding the knowledge on the factors that will positively affect student satisfaction.

1.6.2 Knowledge Contribution

This study was considered important as it would show postgraduate international students expectations concerns and perception of services provided. For instance, the

university management will get feedback from international students regarding their expectations, needs and requirement concerning the services provided through regular meeting with the student or through suggestion box as students express their feeling, ideas and suggestions concern university services. Feedback from international students will assist university management to understand the needs of their students and enhance quality of service provided in order to meet student's expectations and fulfils their needs and thus enhance student satisfaction.

Moreover, this study will act as guidance for future researchers in the field of management and organization through building on the existing knowledge on the influence of accommodation facilities, good quality of cafeteria food, effective teaching quality and adequate transportation on student satisfaction not only in UUM but others universities as well.

1.7 Scope of Study

This study focused on the influence of accommodation facilities, cafeteria food services, teaching quality and transportation on student satisfaction in University Utara Malaysia Sintok, Kedah. The researcher focused on these four variables because to the best of the researcher knowledge no similar study has examined accommodation, cafeteria food service, transportation and teaching quality on student satisfaction collectively in Malaysian higher institutions. This study is limited to active postgraduate international students in the Universiti Utara Malaysia. This was done because of the decreasing rate of international postgraduate students in the university. Besides, very few studies had been conducted on postgraduate international student satisfaction in Malaysian higher institution (Memon *et al.*, 2014).

1.8 Definition of Key Terms

Student satisfaction

It is an emotional state of feeling reaction where by student's desire, requirements and expectations of service is being meet or exceeded (Abdullah, 2006).

Accommodation

It involves bedroom unites including other shared utilities such as bathroom, laundry, kitchen, toilets and recreational room allocated on each floor or between certain numbers of room (Sawyer & Yusof, 2013).

Transportation

It is the movement of people from one place to the another (Yusof, Misiran, Pei & Tian, 2014)

Cafeteria food services

It is the noncommercial and on site food service in which food is provided on the premises of the organization. (Liang & Zhang, 2009).

Teaching Quality

It is the academic qualification and professional skills of the teacher which optimize his ability to delegate a proper quality of teaching to his students that facilitate their learning process (Toland & DeAyala, 2005).

1.9 Organization of Thesis

This Thesis consists of five chapters. Chapter one involves a brief discussion of the background of the study, problem statement, research questions, and objectives of the study, the significance of the study, the scope of the study and organization of all the chapters included in the study. Chapter two involves review of related literature relevant to student satisfaction, accommodation, quality of teaching, food and cafeteria service and transportation services. Chapter three shows the research methodology used for this study. It involves research framework, hypothesis of the study, measurement selection, sampling design, data collection procedure and techniques. The results of the study as well as data analysis are discussed in chapter four. Chapter five involves conclusion and discussion of finding and recommendation for future research.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Student satisfaction is critical for higher learning institutions to compete, success and survive in today's competitive education market. Reviewing relevant literature helped in providing comprehensive understanding of the work that has been conducted on the topic under study. The review of literature has also assisted the researcher in developing a conceptual framework in this study. For that reason, literature of that chapter includes definitions on student satisfaction and reveals it's important. Additionally, this chapter also highlights some of factors that have significant impact on student satisfaction such as accommodation, cafeteria food service, teaching quality and transportation.

2.2 The Conceptual of Customer Satisfaction

In Today's competitive business environment customer satisfaction became a key strategic issue to organizations. This is because customer satisfaction has an impact on customer's trust and their future behavior to organizations (Omar, Nazri, Abu, & Omar, 2009; Clemes, Gan, Kao, & Choong, 2008). In addition, increment in customer satisfaction has a significant impact on economic returns such as profitability, return on investment and market share (Anderson, Fornell, & Lehmann, 1994).

The literature on customer satisfaction is based on different definitions turning around concepts as perceived value and consequent assessment of service, expectation of service and quality of service or experience (Ali & Amin, 2014). For example, one of the earliest definitions of satisfaction is through expectancy-disconfirmation paradigm (Arambewela & Hall, 2005; Halstead, Hartman, & Schmidt, 1994). Based on this

method, customer satisfaction is a result of comparison between expected services customers willing to receive and service they already received. If customer's expectation of service is met, it is referred as confirmation. On the other hand, if services offered didn't met customer expectation it is referred as disconfirmation (Churchill & Surprenant, 1982; Ennew, Reed, & Binks, 1993; Oliver, 1981; De Ruyter, Bloemer, & Peeters, 1997; Tse & Wilton, 1988; Woodruff, Cadotte, & Jenkins, 1983). Thus, based on Expectancy-Disconfirmation approach, satisfaction could be defined as an attitude resulted from not only service experience but also comparing service received to prior expectation.

Moreover, according to Arif and Ilyas (2013); Kotler and Clarke (1987) defined satisfaction as a state felt by an individual who has experience an outcome or performance that satisfy his desire and expectations. Similarly Hunt (1977) mentioned that satisfaction is purchaser post buy assessment of general service experience involving outcome as well as the process. Moreover, satisfaction is defined by various researchers as judgement on specific service perceived (Cronin & Taylor, 1992; Bolton & Drew, 1991). Additionally, Sumaedi Bakit and Metasari (2011) referred satisfaction as emotional assessment that indicates how far consumers' confidence and believe that the utilization of services will foster positive feeling. Moreover, according to Fronell (1992) indicated that satisfaction is individual overall feeling or satisfaction with transaction elements. Based on above mentioned definition satisfaction can be said to be a function of consumer's expectations as well as their experience with varieties of services outcomes (Ramdane, 2015)

2.3 Overview of Student Satisfaction

In spite of fact that satisfaction has been an acknowledged worldwide, the term is also well- accepted and known in academic research (Parahoo, Harvey, & Tamim, 2013). According to Ravindran and Kalpana (2012) in higher learning institutions students are customers of institution. This is because they are the direct recipients of service provided and expecting value for their payment of tuition fees (Brochado, 2009; Douglas, Douglas & Barnes, 2006). This is in aligned with Grossman (1999) argued that the customers of higher learning institutions are students and it's the duty of education providers to priorities their needs and meet their expectations.

Hence student satisfaction is referred as short term attitude resulting from student's experiences with educational services obtained (Elliott & Healy, 2001). Moreover, according to Elliot and Shin (2002) student satisfaction is defined as the favorability of a student subjective assessment of different experiences as well as outcomes related to education services so student satisfaction is being formed constantly by student's frequent experiences in campus.

Similarly, student satisfaction is being defined by Sumaedi, Bakti, and Metasari (2011) as student's emotional assessment towards different experiences and outcomes that are related to education services which students received contrast to their earlier expectation. Moreover, student satisfaction is defined as an emotional state of feeling in which student's desire, requirements and expectations of service is being met or exceeded. (Abdullah, 2006) Similarly Wiers-Jenssen, Stensaker, and Grgaard (2002) mentioned that student satisfaction is based on student's evaluation with overall services provided by college and universities. Further it was argued by Huang and

Wang that satisfaction of students is attitude or views regarding learning environment. For instance, when students are happy and adopt positive attitude this indicates that students are satisfied on hand when students are not happy and adopts negative attitude, this indicates that students are dissatisfied. In this research, the researcher referred to definition of Abdullah (2006) as researcher focused on international students and usually international students have high feeling when entering universities in foreign countries as they usually aim that their desires, expectations and requirements of services delivered meet or exceed their expectations.

In this regards satisfaction of students is said to be subjective to students themselves, in terms how university learning environments post students' academic achievement (Lo, 2010). According to Letcher and Neves (2010) satisfaction assists students in building self-confidence which will consequently leads to enhancement in student's skills and increment in their knowledge. Moreover, student satisfactions result in reducing attrition rates and improving student's learning experience (Fearn & Marcus, 2008; Trotter & Roberts, 2006). On the other hand, dissatisfaction of students results in negative outcomes such as disagreeable relationship between students, lectures, staff, Colleagues and friends (Letcher & Neves, 2010). According to Huang, *et al.*, (2012) stated that satisfaction of students can be gained and achieved by delivery high service quality to students. This is in a line with Schertzer and Schertzer (2004) mentioned that one of the most critical elements that results in satisfaction of students is their positive perception of quality of services provided, increment in student satisfaction will enhance public perceptions towards quality of services of the institution.

2.3.1 Importance of Student Satisfaction

Student satisfaction is critical to be discussed for various of reasons. For instance, large portion of satisfied students represents a competitive advantage for institution with beneficial outcomes as positive word of mouth communication, loyalty and student retention (Kolter & Fox ,2002). As satisfied students will engage in positive word of mouth spreading good news about university which will affect reputation of the university, encouraging and motivating others to join and retaining existing ones. On the other hand, dissatisfied students will talk negatively about institutions to their friends, lose their loyalty and intends to withdraw or transfer to other university (Farahmandian, Minavand & Afshardost, 2013)

Moreover, the role of student satisfaction is crucial in investigating the quality and precision of the educational services and system as well (Sapri *et al.*, 2009). This is due to the fact that a higher level of student satisfaction results in better course comprehension, improved mental grooming and enhanced skills development (Muhammad *et al.*, 2010). Hence, student satisfaction is considered vital as it is considered as performance indicator of service quality provided in higher learning institutions (Barnett, 2011). Furthermore, Student satisfaction acts as significant indicator examining response of higher learning intuition for student's needs and expectations. For instance, student satisfaction data is used by universities as well as collages in order to understand, improve and change the environment of the institution, thus making more conducive environment for the development and satisfaction of the students. (Ahmed, Khairuzzaman, Mohamad & Islam, 2014). Student satisfaction could be measured through periodic surveys that tracks student satisfaction level and also through observing student's attribution rates (Kotler, Keller, & Lu, 2009).

2.3.2 Factors That Influences Student Satisfaction

There are varieties of factors that have impact on student satisfaction. For instance, DeShields, Kara and Kaynak (2005) looked at factors such as Faculty, advising staff and class as determinates on student satisfaction in United States. Additionally, Arambewela & Hall (2009) studied factors such as education, social, technology, economic consideration, accommodation, safety, image and prestige as factors that influences international student satisfaction in Australia. Besides, Ngamkamollert and Ruangkanjanases (2015) looked at factors like academic quality, image and prestige, administration support, environment and safety, personal influence and financial consideration as factors influences student satisfaction in Thai universities. Also, Gamage, Suwanabroma, Ueyama, Hada and Sekikawa, (2008) factors such as quality of academic staff, quality of academic programs, University's reputation, financial assistance and tuition fees, Counseling and support services, Job placement services, Grievance procedures, Library and computer facilities, and recreational facilities as influencing factors on student satisfaction in Japanese and Thai private universities.

Moreover, Ali, Zhou, Hussain,, Nair,& Ragavan (2016) looked at factors such as academic aspects , nonacademic aspects , program issues , reputation and access as factors influencing student satisfaction in Malaysia .Furthermore Malik , Chaudhry and Imdadullah (2011) focused on ten factors which are quality of teaching , sports facilities , administration support , transportation , library facilities , prayer facilities , medical facilities , accommodation facilities , class room and computer labs as determinates of student satisfaction in Pakistan . Additionally, Poturak (2014) studied factors as administration staff, campus environment, programs, academic staff, cafeteria food services, personal development and education services as factors effects

student satisfaction level with private universities in Europe. Also, Fernandes, Ross and Meraj (2013) focused on five factors which are academic support, organization and management of programs, teaching quality and library service as influences factors on student satisfaction in United Arab Emirates.

2.4 Accommodation

2.4.1 Importance of Accommodation

In today's learning environment, there is high demand for modern students housing (Najib & Yusof, 2009; Khozaei, Ayub, Hassan & Khozaei, 2010). This is because modern student housing facilities plays a critical role in fulfilling students housing needs (Susilawati, 2001; Hassanain, 2008; Najib & Yusof, 2010). According to Amole (2009) student satisfaction with student housing is an essential indicator in evaluating the quality of student living environment. Because student housing is one of the important facilities that students consider before making the decision to study in a particular university (Price, Matzdorf, Smith & Agahi, 2003). This is consistent with Bekurs (2007) that high quality accommodation facilities in the universities campuses have a significant and positive effect on student's enrolment. Therefore, it is critical for universities to place student housing among top priorities while enhancing university reputation.

2.4.2 Definition of Accommodation

According to Najib and Yusof (2009), accommodation is a place that provides privacy and safety for students by which university housing administration are able to fulfill student's expectation and requirement through providing them with these hostels. While Sawyer and Yusof (2013) defined accommodation as study bedroom unites

including other shared utilities such as bathroom, laundry, kitchen, toilets and leisure room allocated on each floor or between certain numbers of rooms.

Study bedroom is an important factor provided in all student's hostels because of its multi-purpose nature such as study, living and sleeping (Amole, 2005; Hassanain, 2008; Schenke, 2008). Most of the study-bedrooms are prepared to accommodate up to three people for psychological, social, academic and economic reasons. For instance, Mellor, Stokes, Firth, Hayashi and Cummins (2008) claimed that staying alone in the room causes loneliness that may lead to negative effect on student mental health. In addition, double bed room prevents students from isolation and stimulates intellectual socialization as well as communication (Sawyer & Yusof, 2013). Moreover, the structure of double bedroom is cost saving this is because students study, live and sleep in the same place opposite to setting study-living area separated from sleeping area.

Furthermore, laundry room, pantries are important requirement in accommodation needed by students in their hostels (Beitenhaus, 2009). Students always demand for extra convenient laundry facilities. Therefore, it is essential that laundry rooms in student housing is large enough to accommodate students (Najib, Yusof & Osman, 2011). Pantry room is referred to kitchen with a dining room. Having a good kitchen in students housing creates feeling of home-like environment. In this regards, some researchers affirmed that equipping this facility in student's hostel is essential (Olujimi & Bello, 2009; Taha & Sulaiman, 2010). Leisure rooms including television room which fulfils student's recreational and social needs, study areas meeting rooms and computer room are significant factors for student satisfaction (Najib *et al.*, 2011).

Besides, it is essential to provide sufficient water supply, CCTV cameras, fire safety and 24 hours on duty security guard in students housing, because they help the students to feel comfortable and safe (Curley, 2003; Bello & Bello, 2007; Staff, 2007; Hassanain, 2008; Abramson, 2009; Khozaei *et al.*, 2010).

Apart from the above facilities, there are other facilities that enhance the quality of student satisfaction such as support facilities which involves ATM machines, parking lots, mini markets, bookstores and cafeterias around student's accommodation. According to Torres-Antonina and Park, 2008; Abramson, (2009) and Khozaei *et al.*, (2010), the availability of these advanced student housing facilities results to high satisfaction level among students. Because students require adequate parking places for parking their cars or motorcycle (Wallace, Maier & LA chance, 2004; Bello & Bello, 2007), which also prevent them from parking in lecturers parking area. Moreover, the availability of mini market, cafeteria and ATM machine around hostels is essential (Abramson, 2009). Even though availability of these support services results to higher level of satisfaction, in majority of the developing countries it is hard to equip student's hostels with these advanced facilities because it is extremely expensive (Najib *et al.*, 2011).

2.4.3 Different Perspective of Accommodation

Different names have been ascribed to student housing by various researchers. For instance, Amole (2005); Wiens (2010) asserted that western world view student housing as halls of residence, while Khozaei *et al.*, (2010) referred to it as student housing hostels. Meir, Mozaki., Kruger, Mosheim, Fundaminsky and Oshry (2007) referred to student housing as student accommodation units and Abramson (2010)

called student housing as college housing. Regardless, student housing is one of the most significant facilities considered by higher education.

2.4.4 Purposes of Students Housing

The major purpose of students housing is to provide shelter for students and protecting them from weather elements such as wind, rain, dust and sun however, it goes beyond than that to include social aspects as students are able to interact and socialize with their friends (Sawyer & Yusof, 2013). This is consistent with Willoughby, Carroll, Marshall and Clark (2009) asserted that appropriate housing facilities helps in promoting sense of sharing and togetherness between students. Moreover, appropriate housing facilities helps the students in performing well in their academic studies (Najib & Yusof, 2009; Khozaei *et al.*, 2010; Hassanain, 2008; Najib & Yusof, 2010). Thus, students housing amenities have to be designed in a way that provides comfortable in door environment criteria that affects student's productivity and efficiency (Sawyer & Yusof, 2013). Hence, it can be concluded that students housing plays a critical role in student's academic success as it fulfills the physical and psychological needs for the students.

According to Sitar and Krajnc (2008) assessing and remodeling is essential in increasing residential living standards and repairing any defects in hostel facilities. Therefore, student satisfaction towards accommodation facilities have to be checked frequently in order to fulfill student's needs (Sitar & Krajnc, 2008). Students are satisfied staying in hostel based on perceiving high quality facilities, having good roommate relationships and the availability of comfortable study environment in their hostels (Najib & Yusof, 2010). However, Amole (2005) asserted that residential satisfaction depends on privacy feeling and crowding level in their room. Besides, Kaya

and Erkip (2001) stated that student satisfaction with accommodation is based on having brighter and extensive rooms with fewer stress and noise in hostels. Thus, student satisfaction with their accommodation is subject to their own evaluation of perceived quality of hostels services and facilities (Khozaei *et al.*, 2010).

2.4.5 Relationship Between Accommodation and Student Satisfaction

Numerous studies have been conducted on the relationship between accommodation and student satisfaction. For example, a study by Alkandari (2007) in Kuwait found that a positive relationship between hostels facilities and student satisfaction. Another study by Najib *et al.*, (2011) investigates the level of resident satisfaction with student housing facilities at one of the leading universities in Malaysia. The result showed that hostel facilities have a positive relationship with student satisfaction. Similarly, Ayub (2010) sampled 288 students in University Sains Malaysia. The results show that university's hostel facility has a positive relationship with student satisfaction.

Contrarily, a study by Sawyerr and Yusof (2013) in the Nigeria Polytechnic and University in Nigeria to access student satisfaction with hostel facilities, found that hostels facilities have a negative impact on student satisfaction. A similar study by Nwosu and Ajani (2015) examining student satisfaction with accommodation facilities in the federal university of technology in Nigeria, also found a negative relationship between hostel facilities and student satisfaction. Another study by Abbasi, Malik, Chaudhry and Imdadullah (2011) in Pakistan found that hostel facilities have a significant negative impact on student satisfaction.

However, various studies have been conducted to examine numerous forms of satisfaction involving, residential satisfaction, job satisfaction, customer satisfaction and environment satisfaction. nevertheless, there is limited studies on student satisfaction with hostel facilities particularly in Malaysia (Amole, 2009; Khozaei *et al.*, 2010). Most of the study conducted only focused on factors that affects residential satisfaction towards their homes as well as neighborhood (Amole, 2009) and studies on how student's hostels are managed and administrated (Sawyerr & Yusof, 2013). For instance, Mohammed (2010) payed no attention on students feeling towards their accommodation facilities but only focuses on administration of hostel structures and building. Thus, this study will have helped to fill in this gap by examining the relationship between accommodation and student satisfaction within the Malaysia high education context.

2.5 Cafeteria Food Services

2.5.1 Importance of University Cafeterias

Currently, there is high demands for food services especially in universities because of continues increment of student's number (El-Said & Fathy, 2015). Presently, Malaysia is facing the same issue because of the increasing number of students in both private and public higher learning institution (Mansor, 2012). In addition, university food service management in Malaysia is facing problems such as student dissatisfaction with cafeteria 's food services especially with food quality, price and value of food (Mansor, 2012). Thus, there is a need to improve and increase number of cafeteria in Malaysian universities to be able to cater student's requirements and satisfy their needs. This is because student's judgment is critical for the success of universities cafeterias (Chang, Suki, & Nalini, 2014). As university cafeteria food services are a significant element

that influences student's life quality in the universities (Klassen, Trybus and Kumar, 2005) In this regards, it is important to evaluate universities food services as students will go outside campus if their needs and requirement are not met inside campus (Eckel, 1985).

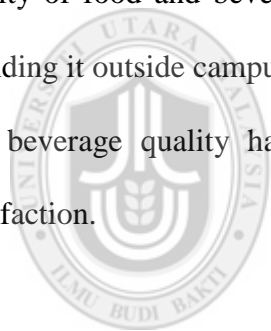
2.5.2 Definition of Cafeteria Food Services

Cafeteria food services are established in child care centers, hospitals, nursing homes senior care centers, schools and university campuses (El-Said & Fathy, 2015). University cafeteria food services are the noncommercial and on site food service in which food is provided on the premises of the organization (Liang & Zhang, 2009).

2.5.3 Factors That Influence Student satisfaction and University Foodservice Cafeterias

Following the reviewing of extant literature, many factors were found to influence student satisfaction with university cafeteria food service such as food quality, price fairness, staff performance (Suki, 2014). According to McWilliams (2000) and Imrssam (1999), food quality is referred to as the quality of food characteristics that is acceptable by customers such as appearance, smell, taste and texture of the food. Appearance of food involves various sensory attributes like gloss, visual structure, visual texture, opacity, perceived flavor and color (Imram, 1999). According to Gifford and Clydesdale (1986), the color of the food is a significant element in the initial judgment of food because it influences rejection or acceptance of food from customers. Thus, the overall satisfaction with university cafeteria's food services is subject to the quality of food such as the eye appeal, taste and food freshness (Ng, 2005).

The quality of food is important in shaping and achieving customers and student satisfaction. For instance, Pettijohn, Pettijohn & Luke (1997); Qu, (1997); Oh, (2000) asserted that the quality of food is one of most critical factors that influences customer satisfaction and affect their decision to return to the same restaurant. In addition, Mattila (2001) also found that customers choose specific restaurant because of food quality of the restaurant. Moreover, a study by Lee (2004) found that the quality of food has significant influence on student satisfaction. Besides, Ng (2005) affirmed that the quality of food plays a critical role in attaining customer satisfaction and influences their decision to return to the same restaurant. Moreover, Andaleeb and Caskey (2007) argued that students prefer to eat in universities cafeteria if there is improvement in the quality of food and beverage offered and spend their money more on campus than spending it outside campus. This is consistent with El-Said and Fathy (2015) that food and beverage quality have a significant and positive impact on overall student satisfaction.



UUM
Universiti Utara Malaysia

According to Meanwhile, Bolton and Lemon (1999), price fairness is known as perceived fairness of usage trade-off or price. Usually, customers consider price fairness when the price paid is low, because of lower perceived sacrifice by customers (Xi & Shuai, 2009). Soriano (2003) also avowed that customer expectations of the service or quality received depends on the price they pay. For instance, if the price customers paid is high, their expectation of the quality or service perceived will increase as a result, customers always seek superior value for the money they pay. A study by El-Said and Fathy (2015) ranked price as second most important that influences student satisfaction. Thus, to ensure students are satisfied with price and value of the university cafeteria food service have to put more emphasis on the value of price, the portion size

and reasonable price for their students (Mansor, 2012). This is because students have limited budgets which influence their decision in deciding the cafeteria to go because they constantly in search of cafeterias with reasonable prices (Li, 2008). This is consistent with Klassen, Trybus, and Kumar (2005) that the most critical factor that students with limited funds consider when considering choosing cafeteria is the price of food.

In the same vein, Nadzirah, Ab-Karim, Ghazali, and Othman (2013) stated that students buy food on limited budget that's why price of food is students first concern in university cafeteria food service. In addition, they asserted that students prefer to go outside the campus to get cheaper prices if the food prices inside campus are too high. As such, Nadzirah *et al.*, (2013) recommended that a menu of food and beverage items with reasonable prices have to be prepared by food service operators and they have to focus more on food prices as it is significant determinate of student satisfaction. Moreover, food service operators have to lower food prices so that students would be able to buy food from campus rather than going outside campus.

According to Yuksel and Yuksel (2002) one of the significant factors that motivate customer to patronize cafeterias is receiving the value for the money they paid. Nadzirah *et al.*, (2013) asserted that food prices have to be reasonable with amount of food served so that students will feel the price paid worth the product and services they receive resulting in student satisfaction. Similarly, the interaction between the students and cafeteria staff such as greeting, quick service, smiles and high level of responsiveness have significant impact on student satisfaction (Barlett & Han, 2007). A study by Story, Kaphingst, Robinson-O'Brien, and Glanz, (2008) also found that

cafeteria design, lightening, noise and cleanness have a significance effect on student satisfaction.

2.5.4 Relationship Between University Cafeteria Food Services and Student Satisfaction.

A study by El-Said and Fathy (2015) surveyed 543 respondents to access undergraduate students' satisfaction with on campus cafeteria services in Egyptian university. The results indicated there is a positive relationship between cafeteria food services and student satisfaction. Similar study by Mahmood, Dangi and Ali (2014) revealed a positive relationship between cafeteria food services and student satisfaction. Another study by Mansor (2012) distributed 300 questioners to determine student satisfaction towards university cafeteria food services in one of Malaysian university. The result showed that a negative relationship exists between cafeteria food service and student satisfaction. Furthermore, Xi and Shuai (2009) also examined student satisfaction with cafeteria food service. The results also indicated that cafeteria food services have a negative impact on student satisfaction.

2.6 Teaching Quality

2.6.1 Overview of Teaching Quality

The success of higher learning institutions depends on its ability to produce highly qualified graduates that will meet market demands and gives good contribution to the society (Aziz & Yasin, 2013). Therefore, highly competent and professional lectures are essential for providing effective teaching which will results in producing highly qualified graduates (Sunman, 2015). Quality of teaching at higher learning institutions is one of major things that students consider when entering college. This is because

quality of teaching plays a major role in influencing student satisfaction and performance (Aziz & Yasin, 2013). Therefore, key development of higher education currently is quality of teaching (Robiah, 2000).

2.6.2 Definition of Teaching Quality

According to Marsh and Hocevar (1990), quality of teaching is defined as teaching effectiveness conducted by instructor and quality of interaction and communication between instructor and his students that involves the way instructor transfer information and knowledge to students and how lecturer motivates students to learn and facilitates learning process. Moreover, Suarman (2015) defined quality of teaching as the ability of lecturer to use his/her teaching skills in delivering course contents in a memorable and fun way that can be easily understood by students.

2.6.3 Importance of Teaching Quality

Teaching quality plays a critical in enhancing student satisfaction level. For instance, if the quality of teaching is good, the satisfaction of students will increase. On the contrarily, if the quality of teaching is poor, the satisfaction of students will decrease. In this regards, improving the teaching quality in higher learning institution requires more attention from the lecturers and their teaching methods (Chen, Chen & Chen, 2014). In a study by Shahadan (2006) argued that instructor teaching quality would vary depending on his/her professional qualification. For instance, lectures without professional education background will be unable to use various teaching methods to deliver information and knowledge to students and enhances student satisfaction with teaching process.

Teaching methods used by instructor is very critical in learning process as it can make learning process enjoyable, impressive and raises student satisfaction level with teaching process. Thus, during classes' lectures have to use effective and creative methods in delivering course content that will help students to easily understand and enjoy the course content and have fun (Suarman, 2015). Moreover, lecturers should provide and manage activities in classroom and should deliver course content through a planned timeframe, which means course content have to be delivered by lecturer in appropriate pace and smart manner (Suarman, 2015).

Moreover, the relationship between lecturers and their students is significant in determining the quality of teaching in classroom and is correlated with student satisfaction level (Shea, Pickett & Pelz, 2003; Jasmi, 2010). For instance, having good lecturer and student relationship helps lecturers to perform well, deliver effective teaching and assist students in understanding the lesson and enhances student satisfaction. In contrast, if lecturer-student's relationship is bad it will result in poor lecturer performance and students will psychologically decline lecturer attendance in classroom and also dissatisfied with their lecturers (Jasmi, 2010). According to Theall and Franklin (2001), poor performance of students in classroom and high rates of failure is caused by poor teaching quality.

Successful and effective interaction between students and their lecturers would occur when there are two way communications through student's questions and questions from lecturers to students (Jasmi, 2010). According to Zeng and Perris (2004), students become disappointed and dissatisfied when lecturers failed to respond to their questions

and failure to encourage class discussions. This disappointment may affect students' performance and satisfaction level leading to poor learning outcome.

According to Noor (2015) lectures plays a major role in student satisfaction level and learning process. As such, lectures have to be professional and competent in performing their jobs. For instance, lecturers should have sufficient knowledge of subject they are teaching (Matzler & Woessmann, 2010). This is because without knowledge of the subject, lecturers would not be able to transfer to student's relevant knowledge and information required to understand the subject (Matzler & Woessmann, 2010). Therefore, lectures knowledge of subjects is significant in establishing desired learning outcome and achieving student satisfaction with learning process (Long, Ibrahim & Kowang, 2014). Similarly, lectures have to use various teaching methods in delivering information and knowledge to students. A study by Roediger, Thorsten and Isabelle (2007) in Europe found that students need their instructor to be friendly, enthusiastic, knowledgeable and friendly. This indicated that students in higher learning institutions are satisfied with their lectures when they take a serious responsibility in delivering high quality education through applying effective and creative teaching methods to deliver information and knowledge to them as well as upgrading their knowledge (Noor, 2015).

Thus, in order to maintain teaching quality in educational institutions, higher learning institutions have to recruit highly qualified lecturers to teach students. This is because high educational quality cannot be achieved unless there are constant efforts in improving lecturers' performance as well as their teaching method to deliver information to students in classroom (Noor, 2015). In this regards, highly qualified and

competent lecturers is need in enhancing student satisfaction level in higher leaning institutions (Shin, Jonassen & McGee, 2003).

2.6.4 Relationship Between Quality of Teaching and Student Satisfaction

A study by Aziz and Yasin (2013) found there is a significance positive relationship between teaching quality and student satisfaction. For instance, if the quality of teaching is good, the satisfaction of students will increase. On the contrarily, if the quality of teaching is poor, the satisfaction of students will decrease. Furthermore, other researchers have also examined the quality of teaching and student satisfaction. For instance, a study by Abbasi Malik, Chaudhry and Imdadullah (2011) examined student satisfaction towards service in Pakistani universities using a total of 401 questioners. The results showed that teaching quality has a significant negative impact on student satisfaction. Furthermore, a study by Fernandes Ross and Meraj (2013) examined the factors that influence student satisfaction in United Arab Emirates University. The result indicated that a significant positive relationship exists between teaching quality and student satisfaction. Similarly, Suarman (2015) also examined 450 respondents the findings showed that teaching quality has a significant positive effect on student satisfaction.

2.7 Transportation

2.7.1 Overview of Transportation

Students mobility is a significant priority to university administrators in public universities, existence of good infrastructure is not sufficient until it is supported by transportation system (Dell'Olio, Ibeas & Cecin, 2011). According to Yusof, Misiran, Pei and Tian (2014), transportation is the movement of people from one place to other.

Following this, Hashim, Mohamad, Haron, Hassan and Hassan (2013) argued that to become a regional education hub and reinforcing higher education, Malaysian universities have to ensure that campus infrastructure such as transport system need to be in place in order to handle increasing population, because students living inside campuses solely depend on public transportation.

2.7.2 Importance of Transportation Services in Universities

Effective transport services are critical in universities as it facilitates movement of students from one place to another due to long distances between faculties (Noor, 2015). Thus, poor bus service quality will result in student's time wastage, effort and class missing. Additionally, other uncomfortable element such as safety problems, late arrival of buses and unpleasant rides will result to negative impression of campus bus services. These will inherently discourage students to use bus services (Hashim *et al.*, 2013). Dissatisfaction with bus service will results to student's use of personal cars, motorcycle in the campus which in some cases cause traffic congestion. For instance, Universiti Teknologi MARA in Malaysia is facing this issue (Hashim *et al.*, 2013). This is because of the yearly increase in the number of students and majority of the students drive their personal cars and motorcycle to classes. Besides, the limited number of parking spaces aggravates the situation hence there is need for universities to plan for an efficient and effective bus system (Hashim *et al.*, 2013).

Transportation services is a significant element for students because availability of transportation services makes students feel comfortable and enhances student satisfaction (Price, Matzdorf, Smith & Agahi, 2003). For instance, buses services ease student's life and results to student satisfaction because students use buses to move

around the campus, to classes, library and sport center and also movement of students outside campus. A study by Noor (2015) also affirmed that transportation services has significant influence on student satisfaction and enable them to attend class without time delay. The researcher further emphasized that the behavior of bus driver such as honesty, friendliness, kindness and good communication with student's influences student satisfaction (Noor, 2015). Thus the more effective and good transportation services provided to students the more they will be satisfied.

2.7.3 Relationship Between Transportation Services and Student Satisfaction

Number of studies has been conducted by various researchers on transportation. Among numerous studies is a study conducted by Hashim *et al.*, (2013) which examined student satisfaction towards campus bus services in UiTM Shah Alam, Malaysia. The results showed that bus services have significant positive relationship with student satisfaction. Another study by Khorasani and Zeyun (2014) used a sample of 400 respondents to examined student satisfaction towards USM Bus transit system. The results showed there is a positive relationship between student satisfaction and bus service because majority of the students are satisfied with bus transit system in the university. Similarly, Abbasi Malik, Chaudhry and Imdadullah (2011) sample 401 respondents in examining student satisfaction towards service offered in Pakistani universities, the results indicated that transportation services have a significant positive influence on student satisfaction. Additionally, Manzoor (2013) accessed factors that influence student satisfaction in Pakistani universities. Results showed that transportation and sport facilities have a significance positive relationship with student satisfaction in universities.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter discussed the research methodology used in this study. It starts with presenting research framework and research hypothesis generated from literature review in the previous chapter. This chapter elucidates research design, operational definition, population and sample of research, sampling method used, layout of questionnaire, pilot test, measurement of variable and instrument and data collection technique. The chapter ended with a summary

3.2 Research Framework

The following diagram was an explanation of dependent and independent variable of the research study. The study examined the influence of accommodation, cafeteria food service, transportation and teaching quality on international student satisfaction in University Utara Malaysia. In this study the dependent variable was student satisfaction while independent variables were accommodation, cafeteria food service, teaching quality and transportation. The research framework of this study was adopted from Abbasi, Malik, Chaudhry and Imdadullah (2011), Fernandes Ross and Meraj (2013) and a study by Poturak (2014).

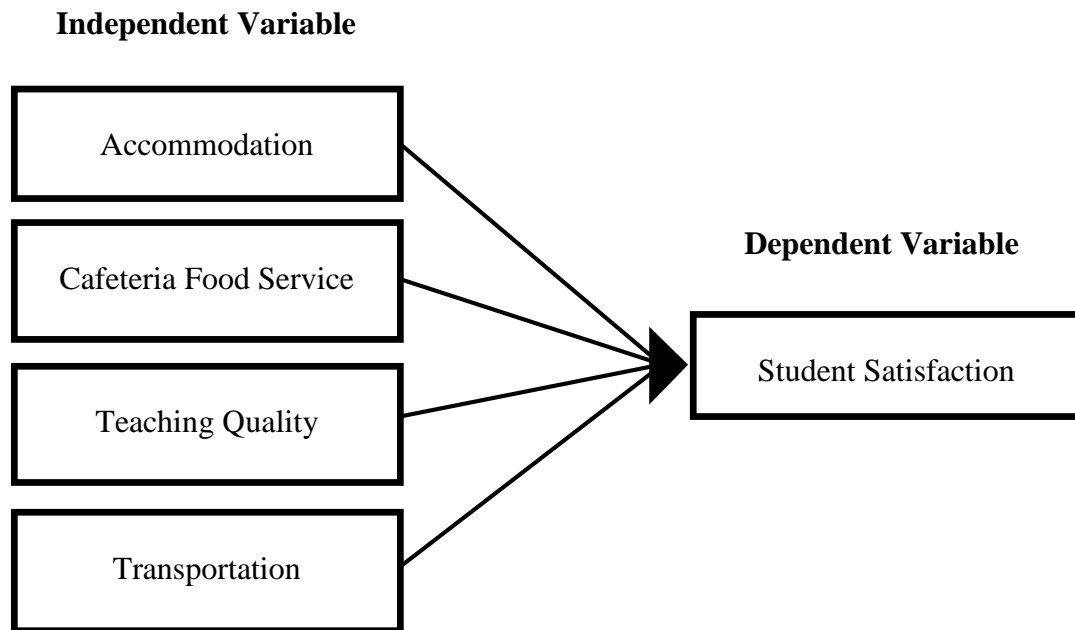


Figure 3.1

Research Framework

3.3 Research Hypothesis

This study intended to examine the relationship between accommodation facilities, cafeteria food service, transportation service and teaching quality and student satisfaction in Universiti Utara Malaysia. Statistical Package for Social Science (SPSS) version 20.0 was used to test this relationship; consequently, a variety of decisions would be made. Some studies showed that there was positive relationship between accommodation and student satisfaction (Ayub, 2010). Also a study by Manzoor (2013) showed that accommodation and transportation has a positive relationship with student satisfaction. Another study explains that there is positive relationship between cafeteria food services and student satisfaction (El-Said & Fathy, 2015). Moreover, other studies had also showed that there is a positive relationship between teaching quality and student satisfaction (Aziz & Yasin, 2013). Hence, the following research hypothesis will be tested in this study.

H1: Accommodation has a positive relationship with student satisfaction.

H2: Cafeteria food service has a positive relationship with student satisfaction.

H3: Teaching quality has a positive relationship with student satisfaction.

H4: Transportation has a positive relationship with student satisfaction.

3.4 Research Design

In a study, Neil (2009) defined research design as a method of investigation used by researchers in order to collect and analyze data. Generally, there are two types research methods used in conducting research which are quantitative and qualitative (Neil, 2009).

Understanding and choosing the correct research approach was important for all researches. According to Zikmund (2003), qualitative research is a research approach used by researchers in order to have a deep and detailed understanding about the phenomena without relying on any numerical measurement. This method was usually used by researchers through conducting oral interview with respondents to collect data and information regarding their feeling and their views on certain circumstances (Uma & Roger, 2009). On the other hand, quantitative research method is based on analyzing data that is not qualified and descriptive in nature (Uma & Roger, 2009).

Quantitative research method is used to establish the relationship between dependent and independent variables in a given population (Zikmund, 2003). The researcher further highlighted that both approaches were of equal importance and the usage of approach in the research depends on interest of researcher as well as scenario (Zikmund, 2003).

Hence, this study used quantitative approach to collect data through questioner distribution to test relationship the relationship between accommodation facilities, cafeteria food service, transportation service, teaching quality and student satisfaction in Universiti Utara Malaysia. Quantitative approach was used because is less time consuming and less expensive than other research strategies (Sekaran & Zikmund, 2013). Moreover, it allowed the researcher to analyze large sample which could easily be generalize to the entire population. This study was a cross section study because data was collected from target sample only once. According to Uma and Roger (2009), cross section study is a study where data is collected only one time. Additionally, this study was descriptive in nature. This is because it described the role of accommodation facilities, cafeteria food service, transportation service and teaching quality on student satisfaction in Universiti Utara Malaysia

3.5 Unit of Analysis

The unit of analysis used for this study was individual. This was because the main objective of this research was to examine the factors that had influenced postgraduate international students in universiti Utara Malaysia. As such, the data collection would be from each postgraduate student in UUM.

3.6 Population and Sampling Design

3.6.1 Population

Populations refer to a group of people who have or share common characteristics (Zikmund, 2003). Similarly, Uma and Roger (2009) defined population as the total number of people, things or events that the researcher desires to investigate. Hence, based on information collected from Academic Affair Department in Universiti Utara

Malaysia, the population of this study was 1184 postgraduate international students studying in UUM (Hea, 2016).

3.6.2 Sample

A sample is a subset of population (Zikmund, 2003; Uma & Roger, 2009) examined by researcher in order to make a generalization to the entire population (Creswell, 2008). Because it is totally unrealistic to collect data from all population, hence, it is important to decide the sample size of the study (Zikmund 2003). In order to determine the actual sample size, it was recommended by Roscoe (1975) that sample size above 30 and smaller than 500 are suitable for conducting a research. Following Krejcie and Morgan (1970) population and sample size table a sample size of 291 was suitable for this study.

3.6.3 Sampling Technique

Sampling is a critical element in any research which entails in depth investigation (Zikmund, 2003). Sampling function in academic research is estimating unidentified population characteristics (Zikmund, 2003). There are various sampling techniques used in research. They are mainly classified into two probabilities and non-probability sampling technique (Zikmund, 2003; Uma & Roger, 2009). The most popular sampling techniques are systematic sampling, cluster sampling, stratified sampling and simple random sampling. Simple random sampling is referred to randomization, where by each and every element in population have an equal chance of being selected (Oladele, 2007). Systematic random sampling is suitable technique to be used when population is large. Using stratified sampling requires researcher to divide whole population into two groups known as “strata” relevant to researcher study (Oladele, 2007) while cluster

sampling is used when population is widely spread and large and it involves selecting group instead of individual.

In this study simple random sampling was used by the researcher to select the sample from the whole population. The researcher desired to use simple random sampling in order to provide opportunity and equal chance for each and every element in population to be selected in the study (Zikmund 2003; Oladele, 2007; Uma & Roger, 2009). This is consistent with Sekaran (2013) that through simple random technique every element in population has an equal chance to be chosen in the study.

The researcher got the list and the names of all postgraduate's international students from the academic affair department (HEA) in the Universiti Utara Malaysia. The list contained the number of postgraduate's students, mobile number as well as their emails. Thus, the researcher dropped all names into the basket and continuously stirred the basket then picked up names randomly until the researcher reached the required sample of 291 international postgraduate students which were involved in the study.

3.7 Structure of the Questionnaire

Questionnaires were administrated to postgraduate international students in University Utara Malaysia. These students were involved in this study because they would be able to provide the researcher with information regarding their satisfaction with the universiti services provided.

The questionnaire was made of seven point Likert scale from 1 strongly disagree to 7 strongly agree with respondents indicating their level of agreement. The researcher

decision to use this scale is related to empirical results by Zikmund (2003) that testing attitude as well as behavior, it is appropriate to use the scale as a result of simple nature of the administration. Furthermore, based on a study by Garland (1991), the use of scale will help in guiding the respondents to convey their perceptions and opinions regarding survey. Meanwhile, majority of the researchers suggested that appropriate scale is content based, which is the objective of study.

The decision of utilizing four, five and seven points Likert scale is an unending contest due to the problem of evaluating the mid-scale, because a number of researchers consider neutrality responds is insignificant in a survey. In line with this disagreement, Dawis (1987) asserted that in designing a survey scale, there is no singular best measure. The researcher further illustrated that one scale would be good in one issue but problematic in another (Dawis 1987).

Hence, the abovementioned example illustrated and justified the desire of the researcher to use seven point Likert scale as it will not only increase the consistency level of the responds in the study but also enhance the reliability of the scale. Additionally, it reduced errors which might occur from rater's tendency. Overall, the researcher was expected to obtain a minimum of 120 questioners in order to validate the study (Sekaran, 2003).

3.8 Operational Definitions and Measures

The data collected in this study were obtained through survey questionnaire distributed to postgraduate's international students in UUM and the questioners used was developed in English as it the generally acceptable language between international

postgraduate students. The questionnaire consists of two sections. Section one involves demographic characterizes of the respondents. Section two focuses on the measures of student satisfaction with universiti services provided such as accommodation, transportation, cafeteria food services and teaching quality. All questions used in section two were on a seven point Likert Scale because it reduced the chances of cognitive loading on the respondent (Preston & Colman, 2000) and all of these measures were adapted from the previous researchers.

3.8.1 Student Satisfaction

Student satisfaction was operationalized as an emotional state of feeling reaction where by student's desire, requirements and expectations of service is being meet or exceeded. In this study five items were used to measure student satisfaction adapted from Abdullah (2006). The items of these instrument had been validated and has internal consistency (Cronbach alpha 0.7) (Ali, Zhou, Hussain, Nair, & Ragavan, 2016).

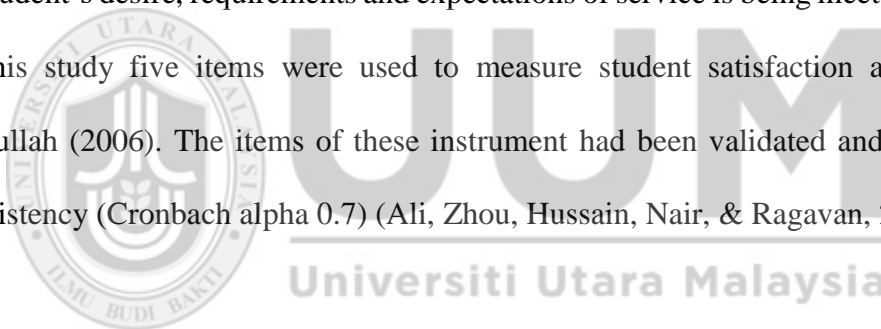
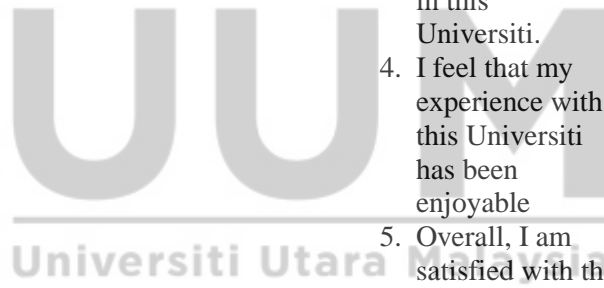


Table3.1

Student Satisfaction

Variable	Operational Definition	Items	Modification	Authors
Student satisfaction	An emotional state of feeling where by student's desire, requirements and expectations of service is being meet or exceeded	<ol style="list-style-type: none"> 1. I am satisfied with my decision to register at this Universiti. 2. My choice to choose this Universiti was a wise one. 3. I think I did the right thing when I chose to study in Universiti. 4. I feel that my experience with this Universiti has been enjoyable 5. Overall, I am satisfied with this Universiti 	<ol style="list-style-type: none"> 1. I am satisfied with my decision to register at this Universiti. 2. My choice to choose this Universiti was a wise one because it fulfils my expectation of service provided. 3. I think I did the right thing when I chose to study in this Universiti. 4. I feel that my experience with this Universiti has been enjoyable 5. Overall, I am satisfied with the services provided in this Universiti. 	Abdullah (2006)

**3.8.2 Accommodation**

Accommodation was operationalized as study bedroom unites including other shared utilities such as bathroom, laundry, and kitchen, toilets and leisure room allocated to each floor or between certain numbers of room. In this study nine items were used to measure accommodation adapted from Sawyer& Yusof (2013). This instrument was used in this study because it had high internal consistency (Cronbach alpha, 0.7).

Table 3.2

Accommodation

Variable	Operational Definition	Items	Authors
Accommodation	It involves study bedroom unites 0including other shared utilities such as bathroom, laundry, kitchen, toilets and leisure room allocated on each floor or between certain numbers of room	<ol style="list-style-type: none"> 1. I am satisfied with studying in my room. 2. I am satisfied with sleeping in my room. 3. I am satisfied with the number of person I am sharing my room with. 4. I am satisfied with the amenities provided in my room. 5. I am satisfied with the location of bathroom from my room. 6. I am satisfied with the number of people I am sharing the bathroom & toilet with. 7. I am satisfied with the cleanness of bathroom And toilets. 8. I am satisfied with the water supply and garbage disposal. I am satisfied with the location of laundry room from my room. 	Sawyer & Yusof (2013)

3.8.3 University Cafeteria Food Services

University cafeteria food service was operationalized as the noncommercial and on site food service in which food is provided on the premises of the organization. In this study seven items were used to measure cafeteria food services adapted from (Liang & Zhang ,2009). This instrument was used because it had high internal consistency (Cronbach alpha 0.7). Table 3.3 below demonstrates the items on university cafeteria food services.

Table 3.3

Universiti Cafeteria Food Services

Variable	Operational definition	Items	Modification	Authors
University Cafeteria food services	The noncommercial and on site food service in which food is provided on the premises of the organization	<ol style="list-style-type: none"> 1. An adequate number of food choices is available in the Universiti cafeteria's 2. The choices of food available allow me to meet my cultural preference 3. The food always has the same quality. 4. I consider the food prices are acceptable 5. I consider the food prices are reasonable for the amount of food served 6. I am satisfied with the opening hours of the Universiti cafeteria's 7. The quality of food in the Universiti cafeteria is good 	<ol style="list-style-type: none"> 1. I am satisfied with the varieties of food choices available in the Universiti cafeterias. 2. I am satisfied with the choices of food available which allow me to meet my cultural preference. 3. I am satisfied with the quality of food as it is always the same. 4. I am satisfied with the food prices. 5. I am satisfied with the price I pay for the amount of food served. 6. I am satisfied with the opening hours of the Universiti cafeterias. 7. I am satisfied with the quality of food in the Universiti cafeterias 	(Liang & Zhang, 2009)

3.8.4 Transportation

Transportation was operationalized as the movement of people from one place to the another. In this study six items were used to measure transportation adapted from Yusof, Misiran, Pei and Tian (2014). The instrument was used because it had high internal consistency (Cronbach alpha 0.8)

Table 3.4

Transportation

Variable	Operational definition	Items	Authors
Transportation	The movement of people from one place to the another	<ol style="list-style-type: none"> 1. I am satisfied with the waiting time at the bus stop of respective hostel. 2. I am satisfied with time taken for bus to reach lecture hall 3. I am satisfied with time taken of buses to depart during off peak hours. 4. Buses are always available at bus stations during peak hours. 5. Detailed bus schedule is pasted on every bus stop. 6. I am satisfied with the attitude of the drivers towards students during peak hours. 	(Yusof, Misiran, Pei & Tian, 2014).

3.8.5 Teaching Quality

Teaching quality was operationalized as the academic qualification and professional skills of the teacher by optimizing his ability to delegate a proper quality of teaching to his/her students to facilitate their learning process. In this study nine items were used to measure transportation adapted from Toland and DeAyala (2005). The items had been validated and have internal consistency (Cronbach alpha 0.8) (Aziz & Yasin, 2013). Table 3.5 below demonstrates the items on teaching quality

Table 3.5

Teaching quality

Variable	Operational definition	Items	Modification	Authors
Teaching Quality	It is the academic qualification and professional skills of the teacher which optimize his ability to delegate a proper quality of teaching to his students that facilitate their learning process	<ol style="list-style-type: none"> 1. lecturer's explanations of course content were clear 2. lecturer's in this Universiti uses varieties of approaches when delivering the information 3. Lecturers in this Universiti increased my interest in course subject matter. 4. lecturer's in this Universiti encourage class discussion 5. Lecturers in this Universiti encourage me to share my knowledge about the course. 6. Lecturers in this Universiti can be contacted outside of class time. 7. lecturers in this Universiti provides activities in class that helps in understanding course materials 8. Lecturer's n this Universiti are knowledgeable in the course 	<ol style="list-style-type: none"> 1. I am satisfied that lecturer's explanations of course content was clear. 2. I am satisfied with varieties of approaches used by lecturer's in delivering the information 3. I am satisfied that lecturer's in this Universiti increase my interest in course subject matter. 4. I am satisfied that lecturers encourage students to take part in class discussion. 5. I am satisfied that lecturer's in this Universiti encourage me to share my knowledge about the course 	Toland & DeAyala (2005)

9. The lecturers provide feedback on assignments that helped me to learn from my previous mistakes

6. I am satisfied with lecturer's consultation hours outside class.

7. I am satisfied that lecturer's in this Universiti provides relevant activities during teaching and learning process.

8. I am satisfied that lecturer's in this Universiti are knowledgeable in the course content area.

9. I am satisfied that the lecturer's provide feedback on assignments which helped me to learn from my previous mistakes.



UUM
Universiti Utara Malaysia

3.9 Procedure for Data Collection

Gathering data is a fundamental process of any research. The procedures provide guideline for collecting, processing, analyzing and also reporting information regarding facilities and services provided in the Universiti Utara Malaysia. Generally, there are two fundamental methods of collecting data which are primary and secondary data collection (Uma & Roger, 2009). In this research, the researcher used primary data

directly gathered from the field. Some of the primary data was collected through checking postgraduate's student's numbers based on list obtained from HEA and calling them. Then arrange for a meeting so that the researcher could distribute questioner by hand to respondents.

The researcher also collected data through email using the Google documents online questionnaire administered by the researcher and send the online questionnaire to postgraduate international student's emails as these respondent didn't have the enough time to settle a meeting due to their busy schedule so online questionnaire was send to them to fill at their leisure time. According to McDonald (2003) online survey methods provides flexibility to respondents to compete the survey at their free time. Moreover, data gathering by email allows researcher to distribute the questioners to large population in a very short time (Wilson & Laskey, 2003). Also this survey method helped in reducing cost of data collection (Ilieva, Bacon & Healey, 2002). Once respondent fill the questionnaire, the questionnaire was automatically recorded and a nonfiction was send to the researcher showing number of people responded to questionnaire as well as their answer on excel spreadsheet.

The data collection was done in two phases. In the first phase researcher distributed questionnaire to 20 respondents for pilot test while in the second phase the actual distribution was done for 291 respondents based on the sample size. The 20 questionnaire for pilot test was distributed by hand to 20 international students in order to check reliability and validity taking a period of one week. The researcher then proceeded with actual data collection after modifying questionnaire based on

respondent comments. The actual data was distributed to 291 international postgraduate students taking a period of 3 weeks.

3.10 Techniques for Data Analysis

The leading instrument in collecting data from respondents is questionnaire. This was because it helped in facilitating collection of quantitative data in a standardized manner so that data is internally consistent and also reliable for the analysis. A survey is a prearranged set of questions to be replied by the respondents (Uma & Roger, 2009). Researcher understanding, innovation as well as professionalism have a significant impact on designing questionnaire.

The items used in this questionnaire were adopted from Abdullah (2006), Sawyer and Yusof (2013), Yusof, Misiran, Pei and Tian (2014), Liang and Zhang (2009) and Toland and DeAyala (2005). The researcher made some modifications to instrument in order to make questions clearly understandable to respondents. All changes were strictly kept under control in order to ensure validity of questions to the constructs tested.

3.10.1 Data Screening / Cleaning

Before statistical analysis, data screening was carried out. The normality of the data, missing data detection and the detection of outliers were carried out in data screening. In order to examine the response of the respondents whether the questions were answered properly and to examine if the data fulfill the basic statistical assumption, transformation of the data was also carried out (Mayers *et al.*, 2006). Before data processing, it is crucial to detect the outliers (Hair *et al.*, 1998). According to Mayers *et al.*, (2006), strange values on a singular disparity or a mixture of discrepancy are

considered as outliers. Multivariate outlier detection was conducted in present research. Moreover, in recognizing possible outliers, it is critical to test the possibility underling huge number of multivariate techniques

3.10.2 Data Analysis

Analysis of data refers to the techniques and procedures that assist researchers in explaining the collected information in particular categorized patterns, developing explanations and testing developed hypotheses (Joel, 1996). Moreover, data analysis offers tools to inspect, clean, transform and model the collected data for drawing logical conclusions from the collected information related to the issue under discussion, so that appropriate recommendations can be suggested.

After data collection, the researcher coded the collected information and keyed in the data in SPSS Version 20. After entering the collected data, data screening and cleaning process was carried out.

Standard deviation, mean and other descriptive statically tools was used in order to describe the basic characteristics of the sample. The researcher utilized statistical package for social science (SPSS) version 20 for the analysis of main study and demographic characteristics.

3.10.3 Descriptive Statistics

Descriptive statistics assist in summarizing the observations and sample which researcher made and it can be presented in graphical and tabulated form. According to Janes (1999), descriptive statistics are the fundamental descriptive measures that

attempt to sum up data by giving a few numerical measures of where the center of the data is set also how the rest of value fall away from center.

Descriptive statistics are not meant to draw conclusions that will widen the analyzed data however it provides concise and precise descriptive coefficients that compile the collected data which represents the whole sample and population. Measure of center tendency and measures of variability describes data, mean, mode and median are some of examples of measures of center tendency while standard deviation, maximum, minimum and normality tests are examples of measures of variability. Therefore, descriptive statistics is used in the present research to describe important characteristics of the collected data and in order to allow the researcher to summarize sample and also measures.

3.10.4 Inferential Statistics

Inferential statistics refers to the techniques and procedures that enable a researcher to draw inferences and conclusion from the collected data in order to generalize those conclusions to the whole population. For instance, these statistics helped researchers in making conclusions about the differences in the results of the survey whether the difference is by chance or statistically significant difference exists between the groups. Generally, the averages are compared between diverse groups of the collected sample such as between male and female students or between two diverse groups. Probably researcher would compare satisfaction level between male and female in a single measure in order to know if significant difference exists between male and female.

Inferential statistics offers the best techniques to compare and examine the average performance between two or more groups. Generally, inferential statistics are used to examine the cause and effect relationships or when the analysis involves prediction despite the fact that it does not address causality. It is crucial to state related theories before formal data analysis using inferential statistics in order to enable the researchers to contextualize the research findings with existing theories. In this study, Pearson correlation and multiple regression were discussed which are commonly used in inferential analysis for analyzing data.

3.10.5 Pearson Correlation Coefficient

Correlation refers to the degree of mutual linear association between two or more quantitative variables. If two variables move in the same direction, it means positive correlation exists between those two variables. On the other hand, if they move in opposite direction, it indicated negative correlation between variables involved. Pearson correlation coefficient is very popular among researchers for examining the mutual linear association among variables and this is denoted by r . The value of correlation coefficient varies between positive 1 to negative - 1. Positive 1 reflects perfect positive linear association while negative 1 represents perfect negative linear association among variables (Salking, 2009). A value of zero indicated no correlation. In a graphical representation, if plotted points of two variables fall very close to each other, they represent strong correlation, if they fall far from each other, they present weak correlation. The following table shows an explanation of the strength correlation coefficient based on Salking (2009). Thus, the closer r is to +1, the stronger the positive correlation and the closer r to -1 the stronger the negative correlation (Salkind , 2009)

Table 3.6

Strength of Correlation Table

Very Weak	Weak	Moderate	Strong	Very strong
0.0 and 0.20	0.30 and 0.40	0.40 and 0.60	0.60 and 0.80	0.80 and 1.0

3.10.6 Multiple Regression Analysis

Multiple regression helped in facilitating the progress of the correlation between two variables through appropriating a linear equation to experimental data. It helped in analyzing the relationship between various independent variables with dependent variable. The present study used multiple regressions in ascertaining the link between independent and depended variable.

3.11 Pilot Test

Prior to collecting actual data, it was critical that researcher test reliability and validity of instrument developed (Lucky, 2011). To do pilot test researchers have to administer the instrument to small group of target respondent and then evaluating the information and data gathered from respondent (Sekaran, 2003). The main purpose of conducting questionnaire was ensuring that respondents understands the instrument provided. Conducting pilot test assists the researcher to modify and the questionnaire after pilot study (McIntire& Miller, 2007; Lucky, 2011) and remove any unsatisfactory items from questionnaire before proceeding with data collection (Sekaran, 2003).

A pilot test was carried out to check the reliability and validity of the instrument used and to confirm the understanding of the respondent about the instrument. Lucky (2011) asserted that pilot tests determine the instrument reliability as well as validity. For instance, the researcher can identify the questions which wasn't suitable for the study

and those goes beyond respondent understanding so that researcher can make some modifications.

Within the environment of this study, the instrument was pretested in order to detect any weakness point in the process of forming the questionnaire. Twenty international students were selected to involved in pilot test, taking a period of one week. The selection of twenty respondents was based on simple random sampling, so that every respondent has an equal chance of being included in the study. The questionnaire distribution was done by giving questionnaire by hand to selective respondents. Based on respondents comments last CGPA and having disability were removed from the demographic factors as they were referred by respondents as personal questions.

According to Zikmund (2003) reliability is referred as the consistency of result of measuring instrument. High reliability shows that the instrument has a minimum error discrepancy. Measuring the reliability, Cronbach Alpha value was computed and the values less than 0.6 indicates poor consistency while the value 0.7 and above is accepted.

This study used Cronbach alpha of 0.7 as a minimum limit for the pilot test that involve 20 respondents. The rational for conducting a pilot study as mentioned before is to indicate reliability of the instruments use. However, Hair, Black, Babin and Anderson (2010) Cronbach alpha of value 0.60 or above could be acceptable as a significant in an exploratory study. In measuring attitudes, a Cronbach alpha value 0.5 is considered significant (Tuckman, 1999). Base on the above mentioned argument an internal reliability from 0.50 and above is deemed satisfactory in this study.

Table 3.7

Reliability for Pilot Test

Variables	No of Items	Cronbach Alpha
Accommodation	9	0.857
Cafeteria food services	7	0.805
Transportation	6	0.801
Teaching quality	9	0.963
Student satisfaction	5	0.968

3.12 Goodness of Measure

Validity and reliability were the two criteria usually used in order to determine the goodness of a measure. Reliability referred to the internal consistency of a measurement instrument. That is, if the measurement instrument really measures that which it intends to measure. According to Schindler and Cooper (2003), reliability indicates the internal consistency which shows the homogeneity of an item in a particular measure measuring the latest variable. Measurement of the internal consistency, Sekaran (2003) recommended Cronbach's Alpha, which is a most popular measure in the research literature. A reliability test was conducted on the scales used to measure accommodation, cafeteria food service, transportation and teaching quality. Also dependent variable student satisfaction was tested for reliability as well. A value of Cronbach Alpha less than 0.70 is usually considered acceptable proposed by Nunnally (1978).

On the other hand, a value equal to 0.60 or above is considered good in the research as recommended by Hair *et al.*, (1998). Items with satisfactory Cronbach alpha were used

for father analysis in this study. According to Sekaran and Bougie (2009) the validity of an instrument is how well an instrument measures the same concept the way it was designed to measure.

3.13 Summary of Chapter

All the information provided in this chapter is about the methods used for this study. The chapter explained the research framework, hypothesis development, it also described the population, how the sample was generated, operationalisation of the variable, pilot testing, layout of the questionnaire and the method used for data collection. The chapter also explained various analysis such as correlation and regression analysis in order to test the research hypothesis. The result of this study was presented in the next chapter.



CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

This chapter present the results of data collected from 291 postgraduate students in the Universiti Utara Malaysia. The data was analyzed using statistical package for social sciences (SPSS) version 20. Specifically, the data were analyzed according to the following sections: It begins by discussing the response rate from the field. Subsequently, description of the study profile of the respondents was analyzed. The second part of the analysis, reports the multivariate assumption tests which include data screening and cleaning, treatment of outliers, the normality, linearity and. Multicollinearity. Finally, the factor analysis, correlation and the multiple regression analysis results were also reported.

4.2 Response Rate

This study administered a total of 291 questionnaires to international postgraduate's students in the Universiti Utara Malaysia. To achieve high response rate, the respondents were given three to five days to fill the questionnaires in order to reduce response bias. Besides, phone calls were also put across to the students by the researcher for reminder.

Thus, the result of the aforesaid effort yielded a response of 192 returned questionnaires out of a total of 291 questionnaires that were administered, which gave an effective response rate of 65.9 %. Following Sekaran (2003), a response rate of 30% and above is acceptable for a survey. Hence, a response rate of 65.9% is considered satisfactory in this study. The breakdown is presented in table 4.1 below.

Table 4.1

Response Rate of the Questionnaires

Response	Frequency/Rate
Number of distributed questionnaires	291
Returned questionnaires	192
Number of Questionnaires not returned	99
Response rate	65.9%

4.3 Descriptive Analysis

After descriptive analysis, data screening and cleaning was conducted. According to Pallant (2007), descriptive analysis helps to explain the demographic characteristics of the respondents in a research. Descriptive analysis does not only describe the sample demographic characteristics but also addresses certain issues of the research such as gender, age, marital status, program of study, semester of study, school, student residential hall, nationality and studying abroad. The information on the demographic characteristics of the respondents is presented in Table 4.2.

Table 4.2

Demographic Profile of the Respondents

Demographic profile	Category	Frequency	Percentage %
Gender	Male	143	74.5
	Female	49	25.5
Age	Under 25	19	9.9
	25-45	155	80.7
	46-55	16	8.3
	Over 55	2	1.0

Marital Status	Single	101	52.6
	Married	89	46.4
	Others	2	1.0
Program of study	Master	82	42.7
	PHD	110	57.3
Semester of study			
	Semt1	29	15.1
	Semt2	58	30.2
	Semt3	41	21.4
	Semt4	33	17.2
	Semt5	15	7.8
	Semt7	6	3.1
	Semt8	4	2.1
	Semt9	2	1.0
	Semt10	4	2.1
School	OYSGSB	109	56.8
	AHSGS	53	27.6
	GSGSG	30	15.6
Student Residential Hall	Tradewinds	87	45.3
	Proton	54	28.1
	Maybank	26	13.5
	Others	25	13.0

Nationality	Nigerian	37	19.3
	Pakistani	23	12.0
	Jordanian	14	7.3
	Iraqi	20	10.4
	Yemeni	10	5.2
	Algerian	20	10.4
	Indonesian	8	4.2
	Chinese	11	5.7
	Palestinian	7	3.6
	Sudan	2	1.0
	Bangladeshi	6	3.1
	Egyptian	3	1.6
	Libyan	6	3.1
	Mauritanian	1	.5
	Syrian	1	.5
	Somalia	14	7.3
	Saudi	3	1.6
	Thai	4	2.1
	Philippines	1	.5
	Tanzanian	1	.5
Have u studied abroad before	Yes	41	21.4
	No	151	78.6

The above table was the demographic profile of respondents that participated in this survey. The respondents were postgraduate international students in the Universiti Utara Malaysia. With deep respect to the gender of the respondent it was evident from

the above (Table 4.2) that 74.5% of the respondents were male while 25.5% represent female. This indicated that majority of the respondent were male.

With regard to the age of the respondents, Table 4.2 showed that majority of the postgraduate's student involved in this study fall within the age bracket 25-45 represented (80.7%), followed by 46-55 (8.3%), while respondents under the age of 25 years represented 9.9. % made up the third position, while 55 years and above represented 1.0% in this study. The result also revealed that 52.6% of the postgraduate's students that taken a part in this survey were single, 46.4% married, while 1.0% represented others such as divorce.

The descriptive result (Table 4.2) also showed that a high percentage of the respondents were doctorate degree students which accounted for 57.3 % while 42.7 % represent 42.7 master degree students. Therefore, the data used in this study were provided by students from different program of student. The respondent came from different semester ranging from semester 1, 2, 3, 4, 5, 6 and above. 15.1% represented semester one, semester two (30.2%) semester 3(21.4%), semester 4 (17.2%), semester 5(7.8%), semester 7(3.1%), semester 8(2.1%), semester 9 (1.0%) and semester 10 (2.1%). Moreover, Table 4.2 showed that the respondent was distributed among various schools in the Universiti. The data showed that 56.8% of the respondents were in OYAGSB, 27.6. % in AHSGS and 15.6 % in GSGSG.

The result (Table 4.2) also revealed different hostel of the respondents, majority of the students stays inside campus represented 86.9%, 45.3% stayed in Tradewind, 28.1% stay in Proton and 13.5% in Maybank, while others stayed outside the Universiti such

as Changlun, Penang, Taman Sisiran and Taman Uni represent 13%. With respect to the nationality of the respondents in descending order, majority of the respondent were from Nigeria (19.3%) and Pakistan (12.0%), Iraq (10.4%), Algeria (10.4%), Jordan (7.3%), Somalia (7.3%), Yemen (5.2%), Indonesia (4.2%), China (5.7%), Palestinian (3.6%), Bangladesh (3.1%), Libyan (3.1%), Thai (2.1%), Egypt (1.6%), Saudi (1.6%), Sudan (1.0%), Mauritanian (0.5%), Syrian (0.5%), Philippians (0.5%) and Tanzanian (0.5%). Table 4.2 also showed that majority of the respondent didn't study abroad prior coming to Malaysia represented 78.6% while 21.4 % initially study abroad. they had studied in countries like Sudan, Egypt, UK, Russia, Spain, Jordon, Kenya, Korea, India, Singapore, Canada and Australia before coming to study in Malaysia.

4.4 Data Screening and Cleaning

The next step after keying in the data into SPSS version 20 was data screening and cleaning. This step involved checking if any error and inaccuracy occurred during data collection process (Pallant, 2007). Any mistakes that occurred during the process of keying in the data, was considered as missing data and out of range data (values that falls out of range). This study used SPSS to check the error through plotting the minimum as well as the maximum number of all variables. By doing this, the researcher was capable of detecting the missing data and also out of range data. Notwithstanding checking the result of the preliminary analysis, it was showed that a total of 15 missing data were detected and 8 were found to be out of range. This consequently gives way to the next step.

4.4.1 Treatment of outliers

According to Pallant (2007), outliers were carried out through utilizing the box plot as well as histogram. The initial examination of data used these techniques demonstrated that there were outliers. As a result, data with outliers that was detected were directly taken out from data set as suggested by Pallant (2007) that one of means of treating outliers is deleting the data. A total of 8 cases were deleted from main data out of 192 questionnaire received. After this histogram and box plot were plotted again in order to see if there were any cases of outlier. Subsequently, checking the histogram and box plot again showed that there were no outliers. For detail see Appendix.

4.4.2 Normality test

Normality assist in checking whether data is positioned in the normal distribution or not. According to pallant (2007), normality test is one of the basic assumptions in the process of running regression analysis. Thus, it is a part of the data screening before correlation analysis, regression analysis, factor analysis and others can be used. The normality test should be carried out in order to test if the variables are following normal distribution (Hair, Sarstedt, Ringle & Mena, 2012). Normality can be tested using graphic as well as numerical methods (Razali & Wah, 2011). The present study used graphic method to test the normality of the data set in order to know whether the collected data follow normal distribution (Hair, Anderson, Tatham, & Black, 1992). Figure 4.1 and for rest see Appendix.

Figure 4.1

Normality

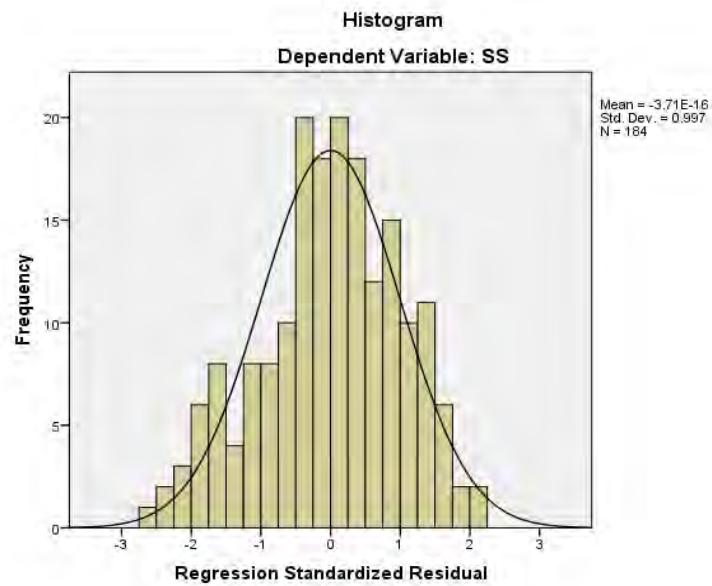


Figure4.2

Scatterplot

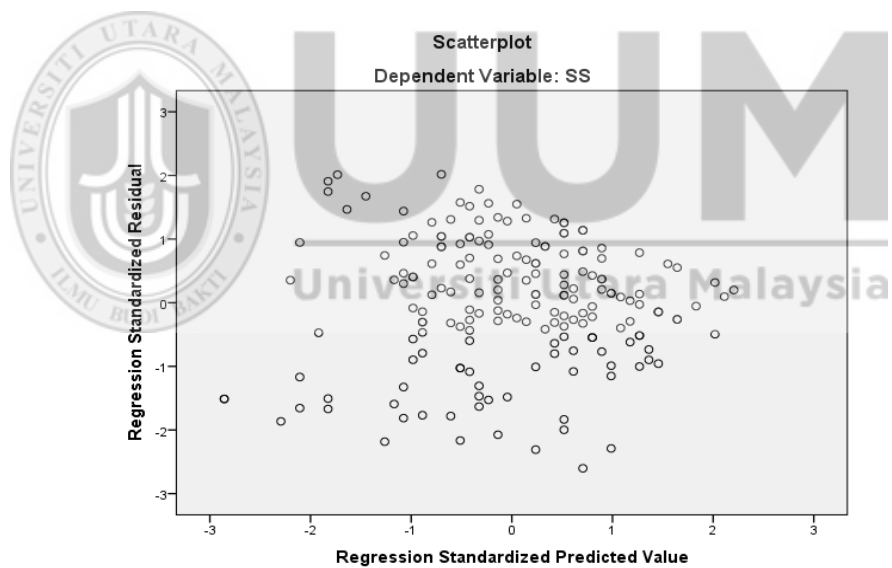
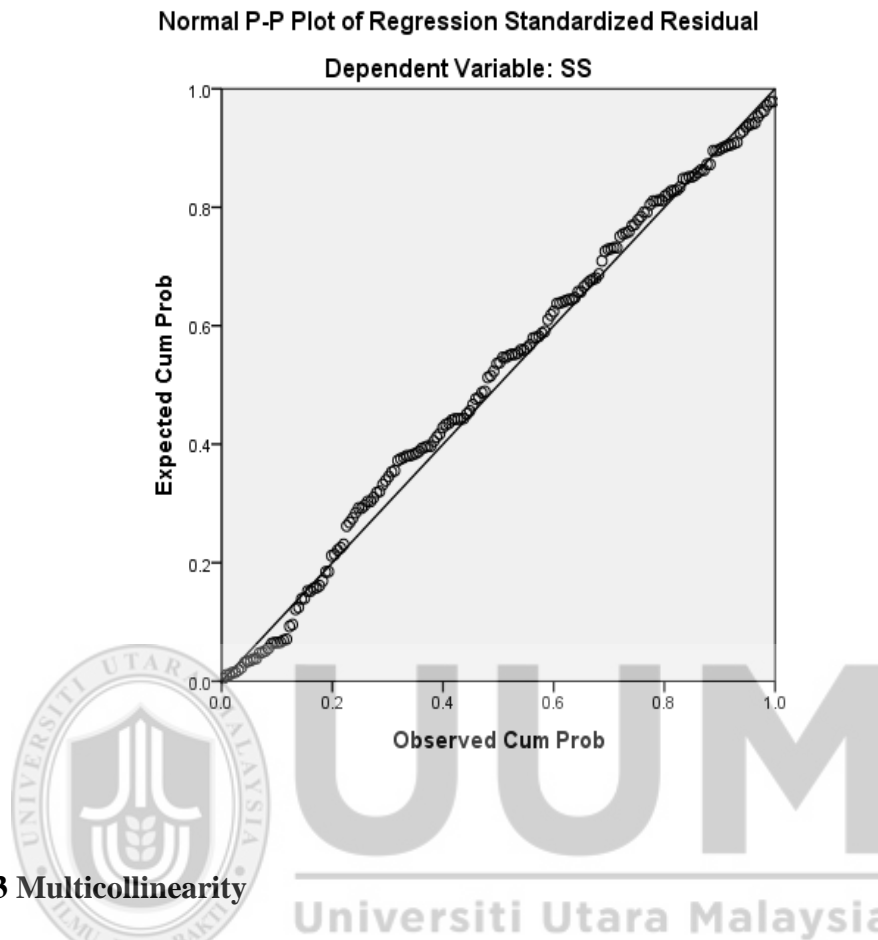


Figure 4.3

Normal P-P Plot



4.4.3 Multicollinearity

Multicollinearity was another data checking process needed before further analysis can be conducted bivariate correlations of all the independent variables were used to check the multicollinearity problem. The values of Pearson's correlation are an approach for identifying multicollinearity in this study (Meyers *et al.*, 2006). According to Cooper and Schindler (2003), no precise standard for the level of correlation that make up a serious multicollinearity problem but, a correlation of 0.8 above shows there is multicollinearity problem. The general rule of thumb is that it should not go beyond .75.

In view of the above, the present study had checked the multicollinearity between the variables using Pearson's correlation, as revealed in Table 4.6 below. The results in

the correlation table showed that no multicollinearity exist between independent variables because the Pearson's correlation indicators for all the exogenous constructs are less than 0.8. It indicates that the variables were independent. Therefore, this study didn't not face any issue of multicollinearity (see table 4.6). This showed that this study meted the requirement for further analysis.

4.4.4 The Reliability Analysis

A reliability test was conducted for the whole construct after conducting pilot test for this study. The reliability of any study was measured through the Cronbach's alpha statistic. According to Zikmund (2003), Cronbach's alpha is considered as a measure of internal consistency of a research instrument. Reliability acts as the best representation of the population of a study and also measures the degree to which results are consistent with time (Golafshani, 2003). According to Sekaran (2003), performing reliability test will assist the researcher in evaluating the information gathered from large sample. The reliability was conducted using statistical package for social science (SPSS) version 20. A high reliability result showed that the instrument had a minimal error discrepancy. In order for the items to become valuable in the main analysis, it was important for the loading of such items to have a bigger construct on what they intend to measure than other constructs. The results of the reliability analysis were shown in table 4.3 below.

Table 4.3

Reliability Analysis

Variables	No of Items	Cronbach Alpha
Accommodation	8	0.827
Cafeteria food services	7	0.892
Transportation	6	0.894
Teaching quality	9	0.944
Student satisfaction	5	0.944

The Cronbach's Alpha from the reliability result presented above (Table 4.3) was found to be above 0.827 and above, this indicated a satisfactory value (Sekaran, 2003). Therefore, all variables were considered strong, reliable and acceptable to go further for the next analysis due to the high Cronbach alpha they have demonstrated. Consequently, it is unnecessary to delete any of the items. Again, even though the items were found to be reliable, it is not a guarantee to decide the complete reliability and validity of the items in this study. Therefore, it was essential to conduct another analysis called factor analysis in an effort to determine the factor loading.

4.5 Factor Analysis

In order to examine if the items were actually measuring what they intended to measure and to test the construct validity of the items, factor analysis was conducted. This study conducted a factor analysis, with principal component analysis and a varimax rotation. Prior conducting factor analysis specific requirement need to be met. According to Hair *et al.*, (2010); Coakes and Steed (2003), for FA to be conducted, there should be a minimum of five respondents in every variable under examination. Hair, Anderson,

Tatham, and William (1995) specifically suggested for a sample size of 100 and above as suitable for FA.

The first priority of the present study was to confirm the Keiser-Meyers-Oklin (KMO) in the factor analysis. This proceeded Anti Image Matrices' and by analyzing the anti-image correlation values with an 'a-square'. The value of an 'a-square' for each item below 0.5 was deleted. Afterwards, the cumulative variance is examined for determining the dispersion level of items in each dimension. Under normal circumstances the higher value of cumulative variance indicated a better correlation between items in each variable.

In conducting the factor analysis, under the items on student satisfaction, accommodation, cafeteria food services, transportation and teaching quality, the first priority was to verify its KMO (Keiser- Meyers- Oklin) before the factor analysis. According to Hutcheson and Sofroniou (1999) a KMO values between 0.5 and 0.7 are considered as average, 0.7 and 0.8 are good, 0.8 and 0.9 as very good, whichever value higher than 0.9 is excellent. Thus, value of KMO (0.9) was considered as very good for the present research. Afterwards, Anti image was checked. For any item to be included in any factor in present research, a minimum loading factor of 0.50 for anti-image is considered as the requirement (Atyeo, Adamson & Cant, 2001). If the factor loading for anti-image is below 0.50, it would lead to the deletion of the item.

Table 4.4
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	5120.484
	Df	630
	Sig.	.000

The above result specified the fitness of the data in this study. The KMO obtained from all variables is 0.910, with a sig. of 0.000. Afterwards, all variables were put into factor analysis, the factor analysis data identified 5 components and all items showed to be above 0.5. According to Hair, Black, Babin, Anderson and Tatham, (2006), and Pallant (2007) items with a loading factor that is greater than 0.50 should be chosen. Hui *et al.*, (2009) suggested that any item that loads below 0.50 should not be retained. Before conducting factor analysis, the Anti-image was first checked and all items was above 0.5 as recommended by researchers (Atyeo, Adamson & Cant, 2001). For factor analysis all nine items for teaching quality were above 0.5, for cafeteria food service all seven items were above 0.5 but for accommodation all items were above 0.5 except one item (ACC8) that was below 0.5 as such, it was deleted. For transportation, all 6 items were above 0.5. The total variance was 64.712 % which was above recommended value of 60 % (Hair, Anderson, Tatham & Black, 1995).

able 4.5

Rotated Component Matrix

Rotated Component Matrix^a					
	Component				
	1	2	3	4	5
QTY3	.806				
QTY2	.801				
QTY8	.781				
QTY5	.768				
QTY4	.762				
QTY7	.762				
QTY9	.703				
QTY1	.667				
QTY6	.609				
CAFE4		.765			
CAFE2		.759			
CAFE5		.753			
CAFE1		.744			
CAFE6		.727			
CAFE3		.714			
CAFE7		.711			
ACC4			.747		
ACC2			.717		
ACC6			.610		
ACC5			.584		
ACC1			.561		
ACC3			.555		
ACC7			.551		
ACC9			.537		
ACC8					
TRANS2				.811	
TRANS1				.764	
TRANS3				.763	
TRANS6				.673	
TRANS5				.639	
TRANS4				.626	
SS4					.715
SS1					.688
SS3					.664
SS5					.648
SS2					.643

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations

4.6 Hypotheses Testing

In this study, correlation analysis was conducted through multiple regressions. Prior conducting the regression analysis, the Pearson correlation analysis was conducted in order to examine and offer a more understanding of the strength of the relationship between accommodation facilities, cafeteria food service, transportation service and teaching quality and student satisfaction. Likewise, Multiple regression analysis was performed to determine the direct relationships between the dependent and the independent variables.

4.6.1 Correlation Analysis Test

For the sake of comparing and examining relatedness of the items, correlation analysis was performed. The result of the correlation analysis showed in table 4.6 revealed that accommodation had a value of .531 with a significant level of 0.000. This demonstrated that, there is a positive relationship between accommodation and student satisfaction. Again, the result of the correlation analysis showed that university cafeteria food services has a correlation coefficient of .472 at 0.000 a significant level. This suggests that, there is a positive relationship between university cafeteria food services and student satisfaction.

Moreover, it was evidence in the correlation analysis result in Table 4.6 that the transportation was correlated with student satisfaction at a value of .545 with 0.000 significant levels. Finally, the result demonstrated a correlation of .737 between teaching quality and student satisfaction at 0.000 significant levels. It signified that there is a positive relationship between teaching quality and student satisfaction. Table 4.6 showed the analysis summary of the correlation between accommodation facilities,

cafeteria food service, transportation service and teaching quality and student satisfaction

Table 4.6

Correlation Analysis Summary between Variables

	1	2	3	4	5
1	1				
2	.503**	1			
3	.494**	.437**	1		
4	.543**	.358**	.622**	1	
5	.531**	.472**	.545**	.737**	1

Note. **. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

1=Accommodation, 2= Cafeteria food service, 3= Transportation, 4=Teaching quality
5= student satisfaction.

According to Zikmund (2003), correlation does not involve cause and effect no matter how satisfactory significance it is. As such, multiple regression analysis should be performed.

4.6.2 Multiple Regression Analysis

The multiple regression analysis was carried out in order to determine the variable that has stronger or weaker relationships to student satisfaction. The regression analysis in Table 4.4 showed that 56.8 % (R square =0.568) of the variance of student satisfaction have been significantly explained by Accommodation, cafeteria food service, transportation and teaching quality. This is due to the high value of beta they enclose in explaining student satisfaction. Teaching quality seems to have the highest contribution to the overall postgraduate international student satisfaction level with beta value of ($\beta=0.548$: Sig.= 0.000), followed by accommodation ($\beta=0.428$: Sig. =0.001),

cafeteria food services ($\beta=0.297$: Sig.=0.004), and transportation ($\beta=0.057$: Sig.=0.398) contributing the least value to postgraduate international student satisfaction level. The result had showed in Table 4.7 below.

Table 4.7

Regression Analysis

Variables	Beta (β)	Sig
Teaching quality	0.548	0.000***
Accommodation	0.428	0.001**
University Cafeteria services	0.297	0.004**
Transportation	0.057	0.398

$R^2 = 0.568$ F= 57.501

*P<0.10, **<0.05, ***p<0.001, Sig =Significant, NS = Not Significant

Table 4.8 above demonstrated the multiple regression analysis of accommodation facilities, cafeteria food service, transportation service and teaching quality to student satisfaction. In order to confirm the model presented in this study, via testing of the main hypothesis, a multiple regression analysis results were presented at the significant level of $p < 0.05$. The next subsection showed the hypothesis decision from the regression result.

4.7 Hypothesis Decision

Table 4.8

Summary of The Hypotheses Testing

Hypothesis	Statement	Decision
H1	Accommodation has a positive relationship with student satisfaction.	Supported
H2	Cafeteria food service has a positive relationship with Student satisfaction	Supported
H3	Teaching quality has a positive relationship with student satisfaction.	Supported
H4	Transportation has a positive relationship with student satisfaction.	Not Supported

4.8 Summary

In summary, this chapter gave details of the response rate in the data collection, the process of data screening and cleaning, the treatment of outliers, testing the normality, validity and reliability, factor analysis and the descriptive analysis of the data collected. Afterwards, hypothesis testing using correlation and regression analysis has been carried out. The discussion of the result would be presented in the following chapter which is followed by theoretical and knowledge contribution of the research, conclusion, limitations and recommendation for future research.

CHAPTER FIVE

DISCUSSION AND RECOMENDATION

5.1 Introduction

This chapter discusses the results of study, limitation as well as recommendation for future study. Lastly the chapter also highlights the managerial implication and the study limitation followed by conclusion.

5.2 Summary of the Results

The aim of this study was to examine the relationship between accommodation, cafeteria food services, transportation, teaching quality and student satisfaction. Overall the results indicated that accommodation, cafeteria food services and teaching quality have significant positive relationship with student satisfaction except for transportation which shows no significant relationship with student satisfaction.

Among other factors presented in this study, teaching quality had the highest contribution to the overall student satisfaction. Other important factor in descending order was accommodation, cafeteria food service and transportation which occupy the least position.

5.3 Discussion

5.3.1 The Relationship Between Accommodation and Student Satisfaction

The results of this study showed that accommodation has a significant a positive impact on student satisfaction. The result is consistent with previous researches which found that accommodation plays a significant role in improving student satisfaction (Alkandari, 2007; Najib *et al.*, 2011; Ayub, 2010).

This result might have been influenced by the Universiti management understanding that providing students with good and comfortable accommodation will make the Universiti more attractive to potential students through words of mouth. This is consistent with Bekurs (2007) that high quality accommodation facilities in the universities campuses have a significant and positive effect on student's enrolment. Besides, this result also brings to the understanding that the hostel is the second home of the international student as such providing better accommodation remained a mandatory requirement for the Universiti. Therefore, it's important for accommodation to be equipped with high quality modern facilities because it plays a significant role in fulfilling students housing needs and enhancing their satisfaction.

Another possible reason is the availability of unlimited internet service in each floor. For instance, in UUM hostels are provided with unlimited internet access as two Wi-Fi routers is placed in each floor. Hence, the availability of internet makes international students feel comfortable and enhances their satisfaction with the hostel. This is because unlimited internet services will promote their learning and life endeavor as they can easily talk to their family, love ones and do their assignment and research comfortably in their rooms without constraint or hindrances. Similarly, with the availability of internet service in the hostel, students can enjoy internet during their spare time.

Apart from the above, the availability of modern kitchen in UUM hostels creates feeling of home-like environment and enhances international student satisfaction because international students are able to cook their own traditional food, gathering and celebrating with their friends. Again, having laundry rooms in the hostels saves students time and effort in washing their clothes by hand, as such make them comfortable and

satisfied. Moreover, bathrooms at UUM hostels are always clean and there is high hygiene preventing transmission of diseases and students to have healthy problems. The issue of safety in UUM hostels may also have influences the result of this study. This premise possibly enhances international student satisfaction with the hostels. For instance, in each hostel there is a residential assistant whose responsible to take charge of any emergency case, thus these creates feeling of safely and tranquility.

Another possible reason was the availability of vending machine, cafeterias, mini markets, sport area around hostels which consequently results to high satisfaction among international students but also makes students feel comfortable. For instance, availability of cafeteria's and mini markets around hostels facilitates students' life because it makes food available to student at any given time. Besides, availability of sporting area at hostel proximity so that students enjoy playing basketball and football without going to sport center also raises student satisfaction with the hostels environment. This facility reduces the stress students undergo during their research pursuit and make them more energetic.

Thus, the aforesaid justification resulted in having a comfortable and satisfactory hostile environment that help international students excellently perform their academic studies. Besides, all postgraduates' students are identified in a particular hostel (Tradewinds, Proton and Maybank) separated from degree student. This helps them to share and exchange knowledge, information and culture which promote sense of sharing and togetherness between students which consequently raises their satisfaction.

Apart from the above, the results might have been influenced by most postgraduate's student's choice of staying inside campus hostels. For instance, the result showed that 45.3 % respondents in this study stay at Tradewinds, 28.1% stays at proton and 13.5% stays at Maybank. The entire above-mentioned hostel has close proximity with the library which makes students more satisfied. This is consistent with Ayub (2010) that the nearer the distance from hostels to library the more students will be satisfied.

5.3.2 The Relationship Between Cafeteria Food Services and Student Satisfaction

Another important finding of this study was the linkage between university cafeteria food service and student satisfaction. In the analysis, university cafeteria food service was found to have positive relationship with student satisfaction. Therefore, this result confirms the findings by previous studies that university cafeteria food service has a positive relationship with student satisfaction (El-Said & Fathy, 2015; Mahmood, Dangi & Ali, 2014).

This result might have been influence by the awareness of the university management that providing students with good food quality at reasonable prices plays a significant role in enhancing international student satisfaction. For example, in UUM cafeterias, the quality of food is acceptable and satisfactory for international students as such, they do not have to go outside the campus to buy food. In the same vein, the prices of food in UUM cafeterias are reasonable to international student satisfaction. That is, the price of food is within the limited budget of international student's. Besides, the amount of food received is acceptable and fair with the price paid. Thus, these raises international student satisfaction level with the university cafeteria food services as they feel the

prices they pay worth the food they receive as such they do not have to go outside the campus losing their time to buy food.

Another reason that might have giving rise to this result is the issue of varieties of food choices in university the cafeteria. Choice of food plays a significant role in satisfying international students with university cafeteria food services. This is because international students come from different background and cultures thus, their food needs and requirements are different from each other. In UUM most of cafeteria has various types of food that meets these needs.

Apart from the above, the results might have been influenced by the cleanness of the university cafeterias. Having good design and friendly staff who have the capacity to understand and speak English to limit communication barriers between cafeteria staff and international students play an important role in enhancing international student satisfaction with the university cafeteria food services.

5.3.3 The Relationship Between Teaching Quality and Student Satisfaction

Teaching quality was also found to have a significant positive relationship with student satisfaction. The results demonstrate consistency with past studies which found that quality of teaching has a significant positive relationship with student satisfaction (Aziz & Yasin, 2013; Fernandes Ross & Meraj, 2013; Suarman, 2015).

The result might have been influence by management awareness of the effective role of lecturers in the learning process as lecturers are agent that can effectively transform knowledge and information to students. In view of this understanding, the university

management endlessly sends the academic staff for training and development, seminars and conferences in order to enhance lecturer's skills and knowledge to effectively deliver quality of teaching, build excellent relationship with the student, doing so enhances the student's ability to acquire knowledge and feels satisfied with their lectures and learning process. This is consistent with Sharma (2007) that lecturers training is a powerful means of professional development.

Another possible reason for the significant relationship between student satisfaction and quality of teaching was lecturer's ability to deliver course content. For instance, if the student are they are satisfied with the lecturer's knowledge, experience and ability to uses various methods in delivering lectures, they can easily understand their subjects and enjoy their classes. Besides, students may also satisfy with their relationship with lecturers who make them feel more comfortable and motivated to learn which subsequently result to their satisfaction.

Another reason that could have been attributed to this result is the university management high concern of having highly qualified and competent academic staff and thus it is very strict in recruitment and selection process of academic staff in university ensuring that all the academic staff is professional and capable of transforming course content effectively to students. This is because the major interest of international students to study abroad is to gain high quality education.

5.3.4 The Relationship Between Transportation and Student Satisfaction

The Result of this study shows that transportation has no significant relationship with student satisfaction. Thus, the result is contrarily to the finding by (Hashim *et al.*, 2013:

Khorasani & Zeyun 2014; Abbasi Malik, Chaudhry & Imdadullah, 2011; Manzoor, 2013) which found that transportation has a significant impact on student satisfaction.

Thus, the result is not surprising as most of the postgraduate international students have their own cars or motorcycles as such they are not relying on the bus services provided by the university. Besides, the student may not be satisfied with the bus services possibly because of the late arrival of the bus to the stations these will result to student dissatisfaction because of student's time wastage, effort and miss their classes so they would prefer to use other means to move from one place to another either through using cars, motorcycle, bikes or even walking than using the bus services.

Another reason that could have been attributed to this finding is the issue of bus time schedule. For instance, postgraduate's students time is very limited, they are too busy with their own work schedule and want to easily and quickly move from one place to another. Using bus services will force them to wait for the bus pending its arrival as a result losing their time as such they prefer not to use bus service instead they use their cars, motorcycle, bikes or even walking to their destination.

5.4 Implication of Study

5.4.1 Knowledge Contribution

The findings of this study have remarkable knowledge contribution. First, this study has contributed to the body of knowledge in relation to accommodation, cafeteria food service, transportation, teaching quality and student satisfaction literatures. By further revealing the relationship between accommodations, cafeteria food service, transportation, teaching quality and student satisfaction within the Malaysia higher

education sector. Since majority of the study on student satisfaction have been conducted in the western context (Parahoo, Harvey & Tamim, 2013) such as, United States of America, United Kingdom (Li, 2005; Maggs, 2014), Netherlands (Kleijin, Pilot & Brekelmans, 2013; Mainhard, Rijst & Tartwijk, 2009) Australia (Arambewela & Hall, 2013) and in Gulf Region (Parahoo *et al.*, 2013) respectively. Thus, their findings may not be generalized in Asia context because of difference in the environment and culture. Therefore, this study has helped to bridge the gap specifically in the Asia context.

5.4.2 Managerial Implication

This study opens a new direction in understanding the relationship between accommodation, cafeteria food service, teaching quality, transportation service and international student satisfaction particularly among postgraduate international students in UUM. More specifically, this study has brought to light that transportation services have not really been effective in enhancing international student satisfaction in UUM. Hence, this study serves as an eye opener for management of the university in this context. As such, the result of this study serves as a clarion call for management of the university in UUM to improve the transportation services because transportation services are a critical factor to influence international student satisfaction. The University management should consider increasing the number of buses to cater for the increasing number of students during peak hours. Moreover, the management should also ensure bus arrives at the bus station at the designated time in order to prevent student time wastage and class missing. One important implication of this result is the mobility challenge international students encounter during holidays. Therefore, this study therefore suggested for management to provide special bus service during school

holidays. Failure to provide good transportation service may hinder current student satisfaction with the university services and subsequent opportunity for the management to attract prospective student.

This study also gives insight that enhancing international student satisfaction in UUM requires the management of the university and government to continuously improve UUM hostels with the understanding that international students doesn't have any other place in Malaysia than their hostel as such, they consider the accommodation provided by the university as their homes whereby they stay there for years until they complete their studies. Thus, ensuring that UUM hostels are equipped with high quality modern facilities helps in creating indoor comfortable environment for international students to stay and study. Besides, the management should provide means to fasten the communication with student by making available suggestion box in each hostel to enable the students freely express their feelings regarding hostels services and facilities.

Moreover, university cafeteria food managers may use the finding of this study in operating their cafeteria as they should always consider differences in student background and culture by providing quality and variety of food at affordable prices for international students. Similarly, cafeterias managers should also see hygiene as the most important factor they should entrench in order to sustain the health of the students. Thus, sustaining this suggestion will encourage students to spend their money buying food from inside campus than outside the campus which subsequently increases the revenue generation for cafeteria owners as well as university. In addition, cafeterias managers should consider serving students quickly without student's time wastage at the cafeterias. Alternatively, cafeterias managers may increase the number of staff in

their various cafeterias. The cafeterias managers should also consider flexible cafeteria operating hours by extending the working hours of the cafeteria till midnight. Issue of food availability during semester break is another important suggestion that management need to give utmost priority by consider opening more cafeterias during semester break.

Furthermore, the management of the university should pay high attention to the quality of teaching because it represents high contribution to international student satisfaction. Failure to continuously improve the quality of teaching will decrease the number of international student attracted by the university. As such, providing frequent training, seminars and workshops to academic staff is important in enhancing teaching quality. This study also highlights the need for the management of the university to pay attention and understands international student's needs through regular meeting with international students or through suggestion box so that management can clearly understands international student's expectation from the management. Doing this, will enhances international student satisfaction because international student's perception of the services provided has a strong impact in enhancing the university reputation

5.5 Limitations of The Study

Although the study had provided significant findings for management research knowledge development, however, the study is not without limitation. The first limitation of this study is the scope of the study. For the reason that this study focuses only on postgraduate international students in University Utara Malaysia (UUM), the result may not be generalized to all the students in UUM. Additionally, the study examined the postgraduate international students only at UUM. Thus, no comparison

has been made between other institutions because the study was specifically focus only on the international student in UUM.

Another limitation is that this study used only quantitative method. Qualitative method using interviews to collect data were not part of the study, though interviews could have provided insight from different perspectives and additional information could have brought significant results. Moreover, this study is cross sectional study that only captures the student's opinion at one point in time. Furthermore, the study examines only four variables which are accommodation, cafeteria food services, transportation, teaching quality and their effect on student satisfaction in the model, in fact there are many other factors that may have significant influence on student satisfaction which have not been considered in this study.

5.6 Suggestions for Future Study

The researcher therefore recommended that further study should enlarge the sample of a study of this nature by including both postgraduate and undergraduate international students. Doing this may provide different results. Moreover, this study was done in one of public university the researcher therefore recommended that future studies should include private university of a study of this nature and make comparison between them. Moreover, it is suggested in this study that future research should extend these variables by the inclusion of administration support, culture, technology and safety.

5.7 Conclusion

This study helps in understanding the role of accommodation, cafeteria food service, teaching quality and transportation service on postgraduate international student satisfaction in one of public universities University Utara Malaysia (UUM). Thus the result of the study is significant and applicable to the public universities or other institutions that have similar characteristics. The results provide evidence that accommodation, cafeteria food service, teaching quality and transportation service is associated with international postgraduate student satisfaction in UUM. In this regards it is imperative to note that university management awareness on accommodation, cafeteria food service, teaching quality, transportation service and the ability to promote and rise international student satisfaction is vital in achieving competitive advantage and competing in today's dynamic and competitive environment. Hence, this study recommended that management of university have to clearly understand and listen to postgraduate's student's needs, requirements and finding ways to satisfy them through regular meeting or through suggestion box as a mean for international students to express their feeling, ideas and suggestions concern university services. This is because international student satisfaction plays a critical role in achieving competitive advantage through attracting more international students, keeping existing ones and enhances university reputation.

REFERENCES

- Abbasi, M. N., Malik, A., Chaudhry, I. S., & Imdadullah, M. (2011). A study on student satisfaction in Pakistani universities: the case of Bahauddin Zakariya University, Pakistan. *Asian Social Science*, 7(7), 209. doi:10.5539/ass.v7n7p209
- Abdullah, F. (2006). The development of HEDPERF: a new measuring instrument of service quality for the higher education sector. *International Journal of Consumer Studies*, 30(6), 569-581. doi: 10.1111/j.1470-6431.2005.00480.x
- Abramson, P. (2009). Downsizing residence halls: space and costs. *Living on Campus, 2009 College Housing Report*, 12(5), 20.
- Abramson, P. (2010). Green & Growing: Sustainability and amenities are increasing in new residence hall projects. *Living on Campus, 2010 College Housing Report*, 13(5), 22.
- Ahmed, I., Khairuzzaman Wan Ismail, W., Mohamad Amin, S., & Islam, T. (2014). Role of perceived organizational support in teachers' responsiveness and students' outcomes: Evidence from a public sector University of Pakistan. *International Journal of Educational Management*, 28(2), 246-256. doi :10.1108/IJEM-02-2013-0031
- Ajayi, M., Nwosu, A., & Ajani, Y. (2015). Students 'satisfaction with hostel facilities in federal university of technology, Akure, Nigeria. *European Scientific Journal, ESJ*, 11(34).

Ali, F., & Amin, M. (2014). The influence of physical environment on emotions, customer satisfaction and behavioral intentions in Chinese resort hotel industry. *Journal for Global Business Advancement*, 7(3), 249-266.

Ali, F., Zhou, Y., Hussain, K., Nair, P. K., & Ragavan, N. A. (2016). Does higher education service quality effect student satisfaction, image and loyalty. A study of international students in Malaysian Public Universities. *Quality Assurance in Education*, 24(1).doi: <http://dx.doi.org/10.1108/QAE-02-2014-0008>

Alkandari, N. (2007). Students 'perceptions of the residence hall living environment at kuwait university. *College Student Journal*, 41(2), 327.

Amole, D. (2005). Coping strategies for living in student residential facilities in Nigeria. *Environment and Behavior*, 37(2), 201-219. doi: 10.1177/0013916504267642

Amole, D. (2009). Residential satisfaction in students' housing. *Journal of Environmental Psychology*, 29(1), 76-85. doi :10.1016/j.jenvp.2008.05.006

Andaleeb, S., & Caskey, A. (2007). Satisfaction with food services: Insight from a college cafeteria. *Food Service Business Research Journal*, 10(2), 51–65. doi:10.1300/j369v10n02_04

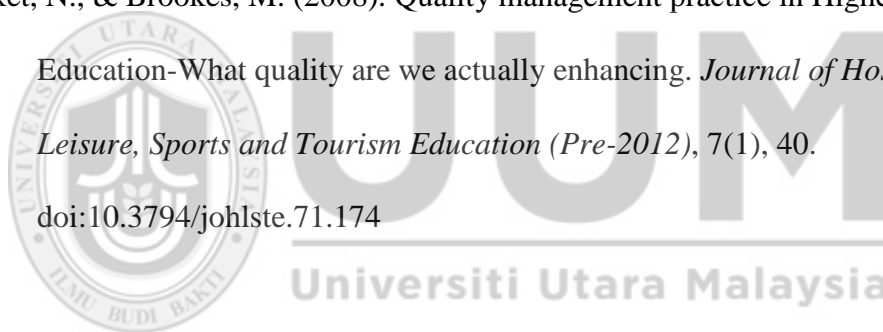
- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. *The Journal of Marketing*, 53-66. doi: 10.2307/1252310
- Arambewela, R., Hall, J., & Zuhair, S. (2005). Postgraduate international students from Asia: Factors influencing satisfaction. *Journal of Marketing for Higher Education*, 15(2), 105-127. doi :10.1300/J050v15n02_04
- Arif, S., & Ilyas, M. (2013). Quality of work-life model for teachers of private universities in Pakistan. *Quality Assurance in Education*, 21(3), 282-298. doi: <http://dx.doi.org/10.1108/QAE-Feb-2012-0006>
- Athiyaman, A. (1997). Linking student satisfaction and service quality perceptions: the case of university education. *European Journal of Marketing*, 31(7), 528-540. doi: <http://dx.doi.org/10.1108/03090569710176655>
- Atyeo, J., Adamson, B., & Cant, R. (2007). Managerial skills for new practitioners in Medical Radiation Sciences in Australia: Implications for the Tertiary Education Sector. *Radiography*, 7(4), 235-247. doi:10.1053/radi.2001.0337
- Ayoubi, R. M., & Massoud, H. K. (2007). The strategy of internationalization in universities: A quantitative evaluation of the intent and implementation in UK universities. *International Journal of Educational Management*, 21(4), 329-349. doi :10.1108/09513540710749546

Aziz, Z., & Yasin, R. M. (2013). The quality of teaching and learning towards the satisfaction among the university students. *Asian Social Science*, 9(12), 252. doi: <http://dx.doi.org/10.5539/ass.v9n12p252>

Barlett, J. E., & Han, F. (2007). Analysis of service quality in restaurants in China: An Eastern perspective. ABR & TLC Conference Proceedings.

Barnett, R. (2011). The marketised university: defending the indefensible. *The Marketisation of Higher Education and the Student as Consumer*, 39-51.

Becket, N., & Brookes, M. (2008). Quality management practice in Higher Education-What quality are we actually enhancing. *Journal of Hospitality, Leisure, Sports and Tourism Education (Pre-2012)*, 7(1), 40.
doi:10.3794/johlste.71.174



Beitenhaus, C., (2009). The conveniences of home: Campus kitchens and laundry rooms. *CollegePlann.Manage.*, 12:31-32.
http://www.peterli.com/cpm/resources/articles/archive.php?article_id=2294.

Bekurs, G. (2007). Outsourcing student housing in American community colleges: Problems and prospects. *Community College Journal of Research and Practice*, 31(8), 621-636. Doi :10.1080/10668920701428402

Bello, M., & Bello, V. A. (2007). The Influence of Consumer Behavior on Variable Determining Residential Property Values in Lagos, Nigeria.

Bitner, M.J., Brown, S.W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-149.

Bolton, R. N., & Drew, J. H. (1991). A Multistage Model of Customers' Assessments of Service Quality and Value. *Journal of Consumer Research*, 17(4), 375–384.
Retrieved from <http://www.jstor.org/stable/2626833>.

Bolton, R.N. and Lemon, K.N. (1999). A dynamic model of customers' usage of services: usage as an antecedent and consequence of satisfaction. *Journal of Marketing Research*, 36 (2), 171-86. doi:10.2307/3152091

Brochado, A. (2009). Comparing alternative instruments to measure service quality in higher education. *Quality Assurance in education*, 17(2), 174-190. Doi: <http://dx.doi.org/10.1108/09684880910951381>

Browne, B. A., Kaldenberg, D. O., Browne, W. G., & Brown, D. J. (1998). Student as customer: Factors affecting satisfaction and assessments of institutional quality. *Journal of Marketing for Higher Education*, 8(3), 1-14. doi: 10.1300/J050v08n03_01

Butt, B. Z., & ur Rehman, K. (2010). A study examining the student satisfaction in higher education. *Procedia-Social and Behavioral Sciences*, 2(2), 5446-5450. doi:10.1016/j.sbspro.2010.03.888

CBC News (2015, January 4,) Canada wants to double its international student body.

Retrieved from <http://www.cbc.ca/news/canada/britishcolumbia/canada-wants-to-double-its-internationalstudent-body-1.2497819>.

Chang, D., Ling, M., Suki, N. M., & Tam, A. Y. L. (2014). Student satisfaction with the service quality of cafeteria: A structural approach. *International Journal of Business, Economics and Law*, 4(1), 105-111. doi:10.5539/ass. v10n18p202

Chang, M. L. D., Suki, N. M., & Nalini, A. (2014). A structural approach on students' satisfaction level with university cafeteria. *Asian Social Science*, 10(18), 202. Doi: <http://dx.doi.org/10.5539/ass.v10n18p202>

Chen, L. H. (2008). Internationalization or international marketing. Two frameworks for understanding international students' choice of Canadian universities. *Journal of Marketing for Higher Education*, 18(1), 1-33. doi: 10.1080/08841240802100113

Churchill, G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, Vol.19(No.4), pp. 491-504.

Clemes, M. D., Gan, C., Kao, T. H., & Choong, M. (2008). An empirical analysis of customer satisfaction in international air travel. *Innovative Marketing*, 4(2), 50-62.

- Coakes, S. J., & Steed, L. G. (2003). Multiple response and multiple dichotomy analysis. *SPSS: analysis without anguish: Version 11.0 for Windows*, 215-224.
- Cooper, D.R., & Schindler, P.S. (2003). *Business research methods (8th ed.)*. Boston, MA:McGraw Hill.
- Cronin Jr, J. J., & Taylor, S. A. (1992). Measuring service quality: a reexamination and extension. *The journal of marketing*, 55-68. doi: 10.2307/1252296
- Curley, P. (2003). Residence Halls: Making Campus a Home. *American School & University*, 75(12), 146-49.
- De Kleijn, R. A., Meijer, P. C., Pilot, A., & Brekelmans, M. (2014). The relation between feedback perceptions and the supervisor–student relationship in master's thesis projects. *Teaching in Higher Education*, 19(4), 336-349. Doi:10.1080/13562517.2013.860109
- De Ruyter, K., Bloemer, J., & Peeters, P. (1997). Merging service quality and service satisfaction. An empirical test of an integrative model. *Journal of Economic Psychology*, 18(4), 387-406. doi:10.1016/S0167-4870(97)00014-7
- Dell'Olio, L., Ibeas, A., & Cecin, P. (2011). The quality of service desired by public transport users. *Transport Policy*, 18(1), 217-227. doi:10.1016/j.tranpol.2010.08.005

DeShields Jr, O. W., Kara, A., & Kaynak, E. (2005). Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory. *International Journal of Educational Management*, 19(2), 128-139.doi: <http://dx.doi.org/10.1108/09513540510582426>

Douglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education*, 14(3), 251-267.doi: <http://dx.doi.org/10.1108/09684880610678568>

Eckel, P. J. (1985). *College & university foodservice management standards*. AVI Pub. Co.

Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly*, 15(3), 279-301. doi: 10.1002/hrdq.1104

Elliott, K. M., & Healy, M. A. (2001). Key factors influencing student satisfaction related to recruitment and retention. *Journal of Marketing for Higher Education*, 10(4), 1-11. doi: 10.1300/J050v10n04_01

Elliott, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management*, 24(2), 197-209. doi:10.1080/1360080022000013518

El-Said, O. A., & Fathy, E. A. (2015). Assessing university students' satisfaction with on-campus cafeteria services. *Tourism Management Perspectives*, 16, 318-324. doi:10.1016/j.tmp.2015.09.006

Ennew, C. T., Reed, G. V., & Binks, M. R. (1993). Importance-performance analysis and the measurement of service quality. *European Journal of Marketing*, 27(2), 59-70. doi: <http://dx.doi.org/10.1108/03090569310026402>

Farahmandian, S., Minavand, H., & Afshardost, M. (2013). Perceived service quality and student satisfaction in higher education. *IOSR Journal of Business and Management*, 12(4), 65-74.

Fearn, H., & Marcus, J. (2008). Living the dream. *Times Higher Education*, 11(17), 862.

Fernandes, C., Ross, K., & Meraj, M. (2013). Understanding student satisfaction and loyalty in the UAE HE sector. *International Journal of Educational Management*, 27(6), 613-630. doi: <http://dx.doi.org/10.1108/IJEM-07-2012-0082>

Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *The Journal of Marketing*, 6-21. doi:10.2307/1252129

Gamage, D. T., Suwanabroma, J., Ueyama, T., Hada, S., & Sekikawa, E. (2008). The impact of quality assurance measures on student services at the Japanese and Thai private universities. *Quality Assurance in Education*, 16(2), 181-198. doi: <http://dx.doi.org/10.1108/09684880810868457>

Garland, R. (1991). The mid-point on a rating scale: Is it desirable. *Marketing bulletin*, 2(1), 66-70.

Garrett, R. (2014). Explaining International Student Satisfaction: Insights from the International Student Barometer. *igraudate. International Insight*. www.igraudate.org.

Gifford, S. R., & Clydesdale, F. M. (1986). The psychophysical relationship between color and sodium chloride concentrations in model systems. *Journal of Food Protection*, 49(12), 977-982.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597-607.

Grossman, R. P. (1999). Relational Versus Discrete Exchanges: The Role of Trust and Commitment in Determining Customer Satisfaction. *Journal of Marketing Management* (10711988), 9(2).

Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & William, C. (1995). Black. 1995. *Multivariate Data Analysis with Readings*, 4.

Hair, J. F. Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006).

Multivariate Data Analysis (6th ed). US: Prentice-Hall PTR.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1992). *Multivariate Data*

Analysis Macmillan. New York, 47-82.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2010). *Multivariate data*

Analysis, a global Perspective (7th ed.). New Jersey, USA: Pearson Education

Inc.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L.

(2006). *Multivariate Data Analysis* (Vol. 6). Upper Saddle River, NJ: Pearson
Prentice Hall.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use
of partial least squares structural equation modeling in marketing
research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.

Hairstead, D., Hartman, D., & Schmidt, S. L. (1994). Multisource effects on the
satisfaction formation process. *Journal of the Academy of Marketing Science*,
22(2), 114-129.

- Haistead, D., Hartman, D., & Schmidt, S. L. (1994). Multisource effects on the satisfaction formation process. *Journal of the Academy of Marketing Science*, 22(2), 114-129.
- Hasan, L. M., & bin Masri, R (2013). Factors Influence the Satisfaction of International Students at Private Universities in Malaysia. 2319-7064
- Hashim, R., Haron, S., Mohamad, S., & Hassan, F. (2013). Assessment of campus bus service efficacy: An application towards green environment. *Procedia-Social and Behavioral Sciences*, 105, 294-303. doi:10.1016/j.sbspro.2013.11.031
- Hashim, R., Mohamad, S., Haron, S., Hassan, F., Hassan, N. A., & Kasa, A. (2013, April). Student satisfaction with the campus bus services at UiTM Shah Alam, Malaysia. In *Business Engineering and Industrial Applications Colloquium (BEIAC)*, 2013 IEEE (pp. 723-727). doi:10.1109/BEIAC.2013.6560227
- Hassanain, M. A. (2008). On the performance evaluation of sustainable student *housing facilities*. *Journal of Facilities Management*, 6(3), 212-225.doi: <http://dx.doi.org/10.1108/14725960810885989>
- Hemsley-Brown, J., & Oplatka, I. (2006). Universities in a competitive global marketplace: A systematic review of the literature on higher education marketing. *International Journal of Public Sector Management*, 19(4), 316-338.doi: <http://dx.doi.org/10.1108/09513550610669176>

Hidayah, N. (2015). *The factors affecting Student satisfaction in University Utara Malaysia, Kedah* (Doctoral Dissertation, Universiti Utara Malaysia).

Hill, F. M. (1995). Managing service quality in higher education: the role of the student as primary consumer. *Quality Assurance in Education*, 3(3), 10-21.
doi:<http://dx.doi.org/10.1108/09684889510093497>

Hill, R. P., Stephens, D., & Smith, I. (2003). Corporate social responsibility: an examination of individual firm behavior. *Business and Society Review*, 108(3), 339-364. doi:10.1111/1467-8594.00168

Hill, Y., Lomas, L., & MacGregor, J. (2003). Students' perceptions of quality in higher education. *Quality Assurance in Education*, 11(1), 15-20. doi:
<http://dx.doi.org/10.1108/09684880310462047>

Huang, H. T., Binney, W., & Hede, A. M. (2010, January). Strategic marketing of educational institutions. In ANZMAC 2010: Doing more with less: Proceedings of the 2010 *Australian and New Zealand Marketing Academy Conference* (pp. 1-9). ANZMAC.

Huang, K. S., & Wang, T. P. (2012). An Analysis of University Freshman Students' Satisfaction in Using On-line English Practice Exams. *Journal of Global Business Management*, 8(1), 139.

Hunt, H. K. (1977). CS/D-overview and future research directions. *Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction*, 455-488.

Hutcheson, G. D., & Sofroniou, N. (1999). *The multivariate social scientist: Introductory Statistics Using Generalized Linear Models*. Sage.

Ilieva, J., Baron, S., & Healey, N. M. (2002). Online surveys in marketing research: Pros and cons. *International Journal of Market Research*, 44(3), 361.

Imram, N. (1999). The role of visual cues in consumer perception and acceptance of a food product. *Nutrition & Food Science*, 99(5), 224-230.doi:
<http://dx.doi.org/10.1108/00346659910277650>

Jalali, A., Islam, M. A., & Ariffin, K. H. K. (2011). Service Satisfaction: The Case of a Higher Learning Institution in Malaysia. *International Education Studies*, 4(1), 182-192.

James, R., Baldwin, G., & McInnis, C. (1999). Which University. The factors influencing the choices of prospective undergraduates.

Kasim, R., Abubakar, M. A., & Ishiyaku, B. (2014). Assessment of service user's experience on the facilities provision at UTHM Students' Residential Colleges.

- Kaya, N., & Erkip, F. (2001). Satisfaction in a Dormitory Building the Effects of Floor Height on the Perception of Room Size and Crowding. *Environment and Behavior*, 33(1), 35-53. doi: 10.1177/00139160121972855
- Keegan, W. J., & Davidson, H. (2004). Offensive Marketing: gaining competitive advantage.
- Khorasani, G., & Zeyun, L (2014). A study on Student satisfaction towards the campus transit system in Universiti Sains Malaysia, 2(4) , 2347-4572 .
- Khosravi, A. A., Poushaneh, K., Roozegar, A., & Sohrabifard, N. (2013). Determination of Factors Affecting Student satisfaction of Islamic Azad University. *Procedia-Social and Behavioral Sciences*, 84, 579-583. doi:10.1016/j.sbspro.2013.06.607
- Khozaei, F., Hassan, A. S., & Khozaei, Z. (2010). Undergraduate students' satisfaction with hostel and sense of attachment to place: Case study of University Sains Malaysia. *American Journal of Engineering and Applied Sciences*, 3(3), 516-520.
- Klassen, K., Trybus, E., & Kumar, A. (2005). Planning food services for a campus setting. *Hospitality Management*, 24(1), 579–609. doi:10.1016/j.ijhm.2005.01.001

- Kleijn, R. A. M. D., Meijer, P. C., Pilot, A., & Brekelmans, M. (2013). The relation between feedback perceptions and the supervisor-student relationship in master thesis project. *Teaching in higher education*, 1-14.doi: 10.1080/13562517.2013.860109
- Kotler, P. and Fox, K. (2002). *Strategic marketing for educational institutions*. 2nd ed. Upper Saddle River, NJ: Prentice-Hall.
- Kotler, P. C., & Clarke, R. N. (1987). *Marketing for health care organization*, By Prentice-Hall. *Engelwood Cliffs, NJ*.
- Kotler, P. e. (2014). *Marketing management 14/e*. USA: Pearson.
- Kotler, P., Keller, K. L., & Lu, T. (2009). *Marketing management in China*. Pearson.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educ psychol meas*.
- Kwek, and Choon Ling, (2010). The ‘Inside out’ and ‘Outside-in’ Approaches on Students’ Perceived Service Quality: An Empirical Evaluation, 4(2), pp.01-26.
- Lee, M. N. (2015). *Higher Education in Malaysia: National Strategies and Innovative*.

Lee, S. (2004). College students' perception and preference of brand name foodservices in university dining operations. Published Master Thesis, Faculty of the Graduate College of the Oklahoma State University

Letcher, D. W., & Neves, J. S. (2010). Determinants of undergraduate business student satisfaction. *Research in Higher Education Journal*, 6, 1.

Li, G. (2008). Difficulties facing university catering service work and responses. *Science and Technology Information*, 14, 72-73.

Li, W. M. (2005). A comparative study between UK and USA: The student satisfaction in higher education and its influential factors. *Journal of Marketing Management*, 21, 859-878. Doi: 10.1362/026725705774538471

Liang, X., & Zhang, S. (2009). Investigation of customer satisfaction in student food service: An example of student cafeteria in NHH. *International Journal of Quality and Service Sciences*, 1(1), 113-124. Doi: <http://dx.doi.org/10.1108/17566690910945903>

Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The 'Inside-out' and Outside in Approaches on Students' Perceived Service Quality: An Empirical Evaluation. *Management Science and Engineering*, 4(2), 1.

Lo, C. C. (2010). How Student Satisfaction Factors Affect Perceived Learning. *Journal of the Scholarship of Teaching and Learning*, 10(1), 47-54.

- Long, C. S., Ibrahim, Z., & Kowang, T. O. (2014). An Analysis on the Relationship between Lecturers' Competencies and Students' Satisfaction. *International Education Studies*, 7(1), 37.
- Lucky, E. O. I. (2011). Entrepreneurial Performance and Firm Performance. Are they Synonymous: A PhD Experience. *International Journal of Business and Management Tomorrow*, 1(2), 1-6.
- Maggs, L. A. (2014). A case study of staff and student satisfaction with assessment feedback at a small specialized higher education institution. *Journal of Further and Higher Education*, 38(1), 1-18. doi:10.1080/0309877X.2012.699512
- Mainhard, T., van der Rijst, R., van Tartwijk, J., & Wubbels, T. (2009). A model for the supervisor–doctoral student relationship. *Higher education*, 58(3), 359-373. doi: 10.1007/s10734-009-9199-8
- Mansor, N. (2012). Exploring the major determinants of student satisfaction on university cafeteria food services: A Malaysian case. *Education*, 2(7), 62-73.
- Manzoor, H. (2013). Measuring student satisfaction in public and private universities in Pakistan. *Global Journal of Management and Business Research*, 13(3).

- Marsh, H. W., & Hocevar, D. (1990). The multidimensionality of students' evaluations of teaching effectiveness: The generality of factor structures across academic discipline, instructor level, and course level. *Teaching and Teacher Education*, 7(1), 9-18. Doi:10.1080/0309877X.2012.699512
- Mattila, A. (2001). Emotional bonding and restaurant loyalty. *Cornell Hotel and Restaurant Administration Quarterly*, 42(6), 73–79.
- Mayers, L.S., Gamst, G., & Guarino, A.J. (2006). *Applied Multivariate Research Design and interpretations*. Thousand Oaks: sage.
- Mazzarol, T. W., & Soutar, G. N. (2008). Strategy matters: strategic positioning and performance in the education services sector. *International Journal of Non-profit and Voluntary Sector Marketing*, 13(2), 141-151. doi: 10.1002/nvsm.313
- McClelland, G. T., Horne, M., Dearnley, C., Raynsford, J., & Irving, D. (2015). Experiences and Outcomes Among Undergraduate Health Professional Higher Education Students with Protected Characteristics: Disability, Gender, and Ethnicity. *Journal of Psychological Issues in Organizational Culture*, 6(1), 38-64. Doi:10.1002/jpoc.21168
- McDonald, H., & Adam, S. (2003). A comparison of online and postal data collection methods in marketing research. *Marketing Intelligence and Planning*, 21(2), 85–95. doi: <http://dx.doi.org/10.1108/02634500310465399>.

McWilliams, M. (2000). *Foods: Experimental Perspectives* (2nd ed.). New York: Measure consumer satisfaction. *Hospitality Research Journal*, 17(2), 63-74.

Meir, I. A., Motzafi-Haller, W., Kruger, E., Morhayim, L., Fundaminsky, S., & Oshry-Frenkel, L. (2007). Towards a comprehensive methodology for Post Occupancy Evaluation (POE): A hot dry climate case study. In keynote presentation) in M. Santamouris and P. Wouters (eds), *Building Low Energy Cooling and Advanced Ventilation in the 21st Century, Proceedings of the 2nd PALENC and 28th AIVC Conference, Crete, II* (pp. 27-29).doi: <http://dx.doi.org/10.1108/02634500310465399>

Mellor, D., Stokes, M., Firth, L., Hayashi, Y. & Cummins, R. (2008). Need for belonging relationship satisfaction, loneliness and life satisfaction. *Personality and Individual Differences*, Vol. 45, pp. 213-218. doi:10.1016/j.paid.2008.03.020

Memon, M. A., Salleh, R., Baharom, M. N. R., & Harun, H. (2014). Factors Influencing the Satisfaction of International Postgraduate Students in the Malaysian Context-A Literature Review and A Proposed Model. *International Education Studies*, 7(11), 76. doi:10.5539/ies. v7n11p76

Metzler, J., & Woessmann, L. (2010). The impact of teacher subject knowledge on student achievement: Evidence from within-teacher within-student variation. *Journal of Development Economics*, 99(2), 486-496. doi: 10.1016/j.jdeveco.2012.06.002

Mohammed, Y. (2010). An Analysis of Management of Students Hotels: A Case Study of Ahmadu Bello University, Zaria and Kaduna Polytechnic Main Campus, Zaria.doi: <http://dx.doi.org/10.1108/JFM-08-2012-0041>

Morshidi, s. (2008). The impact of September 11 on international student flow into Malaysia: Lesson learned. *The International Journal of Asia Pacific studies*, 4(1), pp.79-95.

Muhammed, E. M., Rizwan, Q. D., & Ali, U. (2010). The impact of service quality on Student satisfaction in higher education institute of Punjab. *Journal of Management Research*, 2(2), 1-11.

Nadzirah, S., Ab-Karim, S., Ghazali, H., & Othman, M. (2013). University foodservice: An overview of factors influencing the customers' dining choice. *International Food Research Journal*, 20(3), 1459–1468.

Najib, N.U. & N.A. Yusof, (2009). A review of student housing facilities in higher learning institution. Proceeding of the 3rd International Conference on Built Environment in Developing Countries (ICBEDC 2009), Dec. 2-3 *School of Housing and Building Planning, Malaysia*, pp: 1817-1831.

Najib, N.U. & Yusof, N. A., (2010). Identifying Factors Affecting Satisfaction with Student Housing: A Research Framework. *Proceeding of the 2nd International Postgraduate Conference on Infrastructure and Environment*, June 11-12, The Hong Kong Polytechnic University, Hong Kong.

Neil, J. (2009). Exploring research: New Jersey: Pearson Education International, Inc.

Ng, Y. (2005). Study of the impact of customer satisfaction on intention to return and return intention, and word-of-mouth endorsement in university dining operations. (Published master thesis) Oklahoma. USA: Graduate College of Oklahoma State University, Stillwater.

Ngamkamollert, T., & Ruangkanjanases, A. (2015). Factors Influencing Foreign Students' Satisfaction Toward International Program in Thai Universities. *International Journal of Information and Education Technology*, 5(3), 170. doi: 10.7763/IJiet. 2015.V5.497

Njie, B., Asimiran, S., & Baki, R. (2012). Perceptions of international students on service quality delivery in a Malaysian public university. *Quality Assurance in Education*, 20(2), 153–163. doi: <http://dx.doi.org/10.1108/09684881211219406>

Noor, M. (2015). *The factors affecting Student satisfaction in University Utara Malaysia, Kedah* (Doctoral dissertation, Universiti Utara Malaysia).

Oh, H. (2000). Diners' perception of quality, value, and satisfaction: A practical viewpoint. *Cornell Hotel and Restaurant Administration Quarterly*, 41(3), 58–66.

Oldfield, B. M., & Baron, S. (2000). Student perceptions of service quality in a UK university business and management faculty. *Quality Assurance in Education*, 8(2), 85-95.doi: <http://dx.doi.org/10.1108/09684880010325600>

Oliver, R.L (1981). Measurement and evaluation of satisfaction processes in retail settings." *Journal of Retailing*.

Olujimi, J. A. B., & Bello, M. O. (2009). Effects of infrastructural facilities on the rental values of residential property. *Journal of Social Sciences*, 5(4), 332-341.doi :10.3844/jssp.2009.332.341

Omar, N. A., Nazri, M. A., Abu, N. K., & Omar, Z. (2009). Parents perceived service quality, satisfaction and trust of a childcare center: Implication on loyalty. *International Review of Business Research Papers*, 5(5), 299-314.

Padlee, S. F., & Yakoop, A. Y. (2013). Service Quality of Malaysian Higher Educational Institutions: A Conceptual Framework. *Research Journal of Applied Sciences, Engineering and Technology*, 2569-2575.

Pallant, J. (2007). SPSS. Survival manual: A step by step guide to data analysis using Spss for windows (version 15). Australia: Allan & Unwin.

- Parahoo, S. K., Harvey, H. L., & Tamim, R. M. (2013). Factors influencing student satisfaction in universities in the Gulf region: does gender of students' matter. *Journal of Marketing for Higher Education*, 23(2), 135-154. doi:10.1080/08841241.2013.860940.
- Pettijohn, L., Pettijohn, C., & Luke, R. (1997). An evaluation of fast food restaurant satisfaction: Determinants, competitive comparisons, and impact on future patronage. Restaurant and Food service. *Marketing Journal*, 2(3), 3–20. doi:10.1300/J061v02n03_02
- Poon, J., & Brownlow, M. (2015). Real estate student satisfaction in Australia: what matters most. *Property Management*, 33(2), 100-132. doi:
<http://dx.doi.org/10.1108/PM-05-2014-0023>
- Poturak, M. (2014). Private universities service quality and Student Satisfaction Global *Business and Economics Research Journal*, 3(2), 33-49.
- Price, I., Matzdorf, F., Smith, L. & Agahi, H. (2003). The impact of facilities on student choice of university". *Journal of Facilities*, Vol. 21 No. 10, pp. 212-222. doi:
<http://dx.doi.org/10.1108/02632770310493580>
- Qu, H. (1997). Determinant factors and choice intention for Chinese restaurant dining: A multivariate approach. *Journal of Restaurant and Food Service Marketing*, 2(2), 35–49. doi:10.1300/J061v02n02_03

- Ravindran, S. D., & Kalpana, M. (2012). Student's Expectation, Perception and Satisfaction towards the Management Educational Institutions. *Procedia Economics and Finance*, 2, 401-410. doi:10.1016/S2212-5671(12)00102-5
- Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of Statistical Modeling and Analytics*, 2(1), 21-33.
- Robiah, S. (2000). Inovasi Kaedah Pengajaran: Pengalaman di Universiti Kebangsaan Malaysia. In *National Conference on Teaching and Learning in Higher Education Proceedings, Universiti Utara Malaysia* (pp. 101-111).
- Roediger, V., Thorsten, G. & Isabelle, S. (2007). Service quality in higher education: The role of student expectations. *Journal of Business Research*, 60 (9), 949. doi:10.1016/j.jbusres.2007.01.020
- Roslina, A. (2009). *A Descriptive Study on Students' Satisfaction towards the Services Provided by Universiti Utara Malaysia* (Doctoral dissertation, Universiti Utara Malaysia).
- Sapri, M., Kaka, A., & Finch, E. (2009). Factors that influence student's level of satisfaction with regards to higher educational facilities services. *Malaysian Journal of Real Estate*, 4(1), 34-51.

- Sawyerr, P., & Yusof, N. A. (2013). Student satisfaction with hostel facilities in Nigerian polytechnics. *Journal of Facilities Management*, 11(4), 306-322.doi: <http://dx.doi.org/10.1108/JFM-08-2012-0041>
- Schenke, J., (2008). Purdue students prefer to go solo. *College Plann. Manage.*, 11: 62-64.
- Schertzer, C. B., & Schertzer, S. M. (2004). Student satisfaction and retention: A conceptual model. *Journal of Marketing for Higher Education*, 14(1), 79-91.
- Sekaran, U. (2003). Research methods for business: a skill building approach. *Journal of Education for Business*, 68(5), 316-317.doi: 10.1080/08832323.1993.10117635
- Sekaran, U., & Bougie, R. (2009). Research method for business. A skill building approach (4thed.). NY: John Wiley and Sons, Inc.
- Shin, N, Jonassenm D., & Mcgee, S. (2003). Predictors of well-structured and ill-structured problem solving in an astronomy simulation, *Journal of Research in Science Teaching*, 40(1), 6-33.doi: 10.1002/tea.10058
- Sitar, M. & K. Krajnc, (2008). Sustainable Housing Renewal. *American Journal of Applied Sciences*, 5(1): 61-66.

- Songsathaphorn, P., Chen, C., & Ruangkanjanases, A. (2014). A Study of Factors Influencing Chinese Students' Satisfaction Toward Thai Universities. *Journal of Economics, Business and Management*, 2(2), 105-111.doi: 10.7763/JOEBM. 2014.V2.107
- Soriano, D. R. (2003). The Spanish Restaurant Sector: Evaluating the Perception of Quality". *The Service Industries Journal*. 23 (2), 183-194.
- Story, M., Kaphingst, K. M., Robinson-O'Brien, R., & Glanz, K. (2008). Creating Healthy Food and Eating Environments: Policy and Environmental Approaches. *Annual Review of Public*, 29(1), 253-272.
- Stromquist, N. P., & Monkman, K. (2014). Globalization and education. Integration and contestation across cultures: *R&L Education*.
- Suarman., (2015). Teaching Quality and Students Satisfaction: The Intermediately Role of Relationship between Lecturers and Students of the Higher Learning Institutes. *Mediterranean Journal of Social Sciences*, 6(2), 2039-2117. doi: 10.5901/mjss.2015.v6n2p626
- Sumaedi, S., Bakit, I. G. M. Y., & Metasari, N. (2011). The effect of students' perceived service quality and perceived price on student satisfaction. *Management Science and Engineering*, 5(1), 88.

- Sumaedi, S., Bakti, I. & Metasari, N. (2011). The effect of students' perceived service quality and perceived price on student satisfaction. *Management Science and Engineering*, 5(1), 88-97.
- Susilawati, C., (2001). Student dormitory development plan with linear programming method. *Proceeding of the PRREs 7th Annual Conference, (PRREsAC' 01), Surabaya, Indonesia*, pp: 1-8.
- Swan, K., Shea, P., Fredericksen, E., Pickett, A., Pelz, W., & Maher, G. (2000). Building knowledge building communities: Consistency, contact, and communication in the virtual classroom. *Journal of Educational Computing Research*, 23(4), 389-413.
- Taha, Z., & Sulaiman, R. (2010). Perceived kitchen environment among Malaysian elderly. *American Journal of Engineering and Applied Sciences*, 3(2), 270-276.
doi:10.3844/ajeassp.2010.270.276
- Tamuri, A. H. (2010). Guru cemerlang pendidikan islam sekolah menengah di Malaysia: satu kajian kes.
- Tham, S. Y. (2013). Internationalizing higher education in Malaysia: Government policies and university's response. *Journal of Studies in International Education*, doi: <http://dx.doi.org/10.1177/1028315313476954>.

The Sundaily (2016). Malaysia has one of highest proportions of international students pursuing higher education. Retrieved at <http://www.thesundaily.my/news/1314991>

Theall, M., & Franklin, J. (2001). Looking for bias in all the wrong places—A search for truth or a witch hunt in student ratings of instruction. *New Directions for Institutional Research*, 109(1), 45-48. doi:10.1002/ir.3

Toland, M. D., & De Ayala, R. J. (2005). A multilevel factor analysis of students' evaluations of teaching. *Educational and Psychological Measurement*, 65(2), 272-296. doi:<http://dx.doi.org/10.1177/0013164404268667>

Torres-Antonini, M. & N.-K. Park, (2008). Sustainable student campus housing in the US Asia Interior Design Institute Association (AIDIA), Seoul, Korea.

Trotter, E., & Roberts, C. A. (2006). Enhancing the early student experience. *Higher Education Research & Development*, 25(4), 371-386. doi: <http://dx.doi.org/10.1080/07294360600947368>

Tse, D. K., & Wilton, P. C. (1988). Models of consumer satisfaction formation: An extension. *Journal of marketing research*, 204-212. doi: <http://dx.doi.org/10.2307/3172652>

Uma, S., & Rogers, B. (2009). Research Methods for Business: a skill building approach. 5th ed, Wiley.

UNESCO (2013). The international mobility of students in Asia and the Pacific.
Retrieved at <http://www.uis.unesco.org/Library/Documents/international-student-mobility-asia-pacific-education-2013-en.pdf>.

University World News (2014). Boosting foreign student numbers to 300,000, 31
January. Retrieved at
<http://www.universityworldnews.com/article.php?story=20140129160918747>.

Wallace, B.B. Maire & A. Lachance, (2004). Aboriginal post-secondary student
housing: research summary. Saskatoon, Bridges and Foundations Project on
Urban Aboriginal Housing. Canada, pp: 1-58.

Wiens, J. (2010). Furniture evolution", *College Planning and Management*, Vol. 13 No.
3.

Willoughby, B. J. (2008). The Decline of in Loco Parentis and the Shift to Co-ed
Housing on College Campuses. *Journal of Adolescent Research*.

Willoughby, B. J. (2008). The Decline of in Loco Parentis and the Shift to Co-ed
Housing on College Campuses. *Journal of Adolescent Research*.

Wilson, A., & Laskey, N. (2003). Internet based marketing research: A serious
alternative to traditional research methods. *Marketing Intelligence and
Planning*, 21(2), 79–84.
doi: <http://dx.doi.org/10.1108/02634500310465380>.

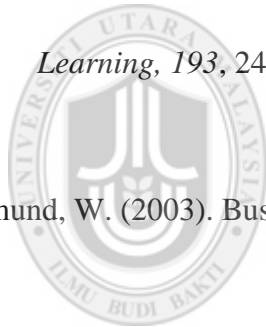
- Woodruff, R. B., Cadotte, E. R., & Jenkins, R. L. (1983). Modelling consumer satisfaction processes using experience-based norms. *Journal of Marketing Research*, 296-304 doi: <http://dx.doi.org/10.2307/3151833>
- Wright, T. A., & Bonett, D. G. (2007). Job satisfaction and psychological well-being as non-additive predictors of workplace turnover. *Journal of Management*, 33(2), 141-160. doi:10.1177/0149206306297582
- Xi, L. & Shuai, Z. (2009). Investigation of Customer Satisfaction in Student Food Service. An example of student cafeteria in NHH. *International Journal of Quality and Service Sciences*, 1(1), 113-124. doi: <http://dx.doi.org/10.1108/17566690910945903>
- Yuksel, A. & Yuksel, F. (2002). Measurement of Tourist Satisfaction with Restaurant Service: A segment-based Approach. *Journal of Vacation Marketing*, 9 (1), 52-68. doi:10.1177/135676670200900104
- Yusof, Z. M., Misiran, M., Pei, L. P., & Tian, H. T. (2014). Factors Affecting Students. *Research Journal of Applied Sciences, Engineering and Technology*, 8(7), 817-820.
- Zain, O. M., Jan, M. T., & Ibrahim, A. B. (2013). Factors influencing students 'decisions in choosing private institutions of higher education in Malaysia: a structural equation modelling approach. *Asian Academy of Management Journal*, 18(1), 75-90.

Zakaria, S., & Yusoff, W. F. W. (2011). Teaching management and its contribution student satisfaction in private higher institutions of learning. *International Journal of Trade, Economics and Finance*, 2(5), 387. doi:10.7763/IJTEF.2011.V2.136

Zeeshan, M., Sabbar, S.D., Bashir, S. & Hussain, R.I., (2013). Foreign Students' motivation for studying in Malaysia. *International journal of Asian Social Science*, 3(3), pp.833-846.

Zeng, W. Y., & Perris, K. (2004). Researching the efficacy of online learning: A collaborative effort amongst scholars in Asian open universities. *Open Learning*, 193, 247-264. doi:10.1080/0268051042000280110

Zikmund, W. (2003). Business research methods 7th ed., Thomson/South-Western.



UUM
Universiti Utara Malaysia