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**DETERMINANTS OF STUDENTS' LOYALTY IN THE  
MALAYSIAN PRIVATE HIGHER EDUCATION  
INDUSTRY**



**DOCTOR OF BUSINESS ADMINISTRATION  
UNIVERSITI UTARA MALAYSIA  
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**DETERMINANTS OF STUDENTS' LOYALTY IN THE MALAYSIAN PRIVATE  
HIGHER EDUCATION INDUSTRY**



Thesis Submitted to  
**Othman Yeop Abdullah Graduate School of Business,  
Universiti Utara Malaysia,  
in Fulfillment of the Requirement for the Degree of Doctor of Business Administration**

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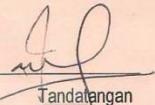
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## ABSTRACT

The competitive private higher education industry in Malaysia indicates that the profitability and the viability of private higher education institutions (Private HEIs) are compromised by uncertain levels of students' loyalty. The objectives of this study were fourfold: (a) to determine the level of students' loyalty in Private HEIs in Malaysia, (b) to determine the relationships between service quality (academic quality, program quality and administrative quality), reputation (university management and academic and media reputation), relationship benefits and students' loyalty, (c) to determine the significant effects of the independent variables on students' loyalty and lastly, (d) to determine the mediating effects of satisfaction on these relationships. This quantitative cross sectional study used the proportionate stratified sampling design. 400 students from various Private HEIs participated in this study. The data was collected via a personally administered questionnaire and was analysed using various statistical techniques such as correlation, multiple regression and mediation analyses. This study found that the loyalty levels of students in Malaysian Private HEIs are moderate. All the independent variables have positive relationships with students' loyalty. Empirical evidence concludes that administrative quality, university management and relationship benefits have significant effects on students' loyalty, whilst academic quality, program quality and academic and media reputation did not. Satisfaction was found to mediate the relationship between all the independent variables and students' loyalty. The main significance of this study is the empirical confirmation of the positive direct effect of relationship benefits on students' loyalty and the mediating effect of satisfaction on this relationship in the Malaysian private higher education context. The findings in this study can be used by managers of Private HEIs in Malaysia for managing their students' loyalty.

**Keywords:** service quality, reputation, relationship benefits, satisfaction, student loyalty.

## ABSTRAK

Industri pendidikan tinggi swasta yang kompetitif di Malaysia menunjukkan bahawa keuntungan dan daya maju institusi pengajian tinggi swasta (IPTS) dikompromikan oleh tahap kesetiaan pelajar yang tidak menentu. Terdapat empat objektif yang dikemukakan dalam kajian ini. Objektif yang pertama adalah untuk menentukan tahap kesetiaan pelajar IPTS di Malaysia. Manakala, objektif yang kedua pula adalah untuk menentukan hubungan antara kualiti perkhidmatan, iaitu kualiti akademik, kualiti program dan kualiti pentadbiran. Juga dari segi reputasi iaitu pengurusan universiti dan reputasi akademik dan media, serta faedah hubungan dan kesetiaan pelajar. Objektif yang ketiga adalah untuk mengetahui kesan signifikan pemboleh ubah bebas ke atas kesetiaan pelajar dan objektif yang terakhir adalah untuk menentukan kesan pengantara kepuasan ke atas hubungan-hubungan ini. Kajian ini telah menggunakan keratan rentas kuantitatif dengan mengaplikasi reka bentuk pensampelan berstrata mengikut nisbah. Seramai 400 orang pelajar daripada pelbagai IPTS telah mengambil bahagian dalam kajian ini. Data dikumpul melalui kaedah soal selidik yang ditadbir secara peribadi dan telah dianalisa dengan menggunakan pelbagai teknik statistik seperti korelasi, regresi berganda dan analisis pengantaraan. Kajian ini mendapati bahawa tahap kesetiaan pelajar IPTS di Malaysia adalah sederhana. Kesemua pemboleh ubah bebas mempunyai hubungan yang positif dengan kesetiaan pelajar. Bukti empirikal menyimpulkan bahawa kualiti pentadbiran, pengurusan universiti dan faedah hubungan mempunyai kesan signifikan ke atas kesetiaan pelajar. Sementara itu, kualiti akademik, kualiti program dan reputasi akademik dan media tidak mempunyai kesan yang signifikan. Manakala kepuasan pula didapati menjadi pengantara dalam hubungan antara pemboleh ubah bebas dengan kesetiaan pelajar. Kepentingan utama kajian ini adalah pengesahan empirikal terhadap kesan positif faedah hubungan kepada kesetiaan pelajar dan pengesahan kesan pengantara kepuasan ke atas hubungan ini dalam konteks pendidikan swasta di Malaysia. Penemuan dalam kajian ini boleh digunakan oleh pengurus-pengurus IPTS di Malaysia untuk mengurus kesetiaan pelajar mereka.

**Kata kunci:** kualiti perkhidmatan, reputasi, faedah hubungan, kepuasan, kesetiaan pelajar.

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*“An education which does not cultivate the will is an education that depraves the mind”*

*Anatole France*

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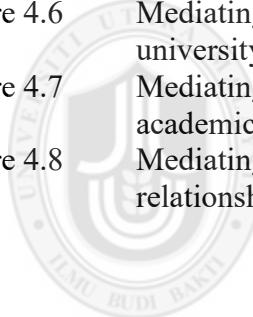
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## LIST OF ABBREVIATIONS

HEI	Higher Education Institution
MOHE	Ministry of Higher Education
WOM	Word of Mouth
HEDPERF	Higher Education Performance
SERVPERF	Service Performance
SERVQUAL	Service quality scale
SET	Social Exchange Theory
SPSS	Statistical Package for Social Sciences
SL	Student loyalty
SQ	Service quality
REP	Reputation
RB	Relationship benefits
SAT	Satisfaction
ACQ	Academic quality
PQ	Program quality
ADQ	Administrative quality
UM	University management
ACMR	Academic and media reputation
KMO	Kaiser-Meyer-Olkin
MSA	Measure of sampling adequacy
VIF	Variance inflation factor



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# CHAPTER 1

## INTRODUCTION

### 1.0 Background of the study

As the Malaysian higher education industry becomes more and more competitive, higher education institutions will need to understand their students' need to ensure that they come up with successful marketing strategies to attract and retain students.

Students' loyalty is a major goal of education institutions. According to Thomas (2011), a higher education institution will have a competitive advantage in the market if they can cultivate a pool of students who are loyal to them. The positive outcome could include retention, repeat and positive word of mouth communication.

Aritonang (2014) and Rojas- Mendez et al. (2009) share similar views. Students' loyalty is a competitive advantage because it would be more expensive for an education institution to recruit new students' than to keep existing ones.

Due to its many benefits, students' loyalty is the main goal for many higher education institutions. Tuition fees are the primary source of revenue for most private higher education institutions. Thus, retaining existing students and ensuring repeat patronage means a steady and solid stream of income for the running and profitability of the higher education institution (Hennig-Thurau, Langer & Hansen, 2001).

Loyal students will also influence teaching quality in a positive way. Hennig-Thurau et al. (2001) believes that loyal students will influence the teaching standards and quality positively through committed behaviour and active participation in the classroom. This in turn will increase the lecturer's motivation and involvement levels in

the course, creating a teaching atmosphere that stimulate and encourage learning. Lecturers and students that are motivated will contribute positively to research activities in the higher education institution by conducting research projects and writing theses.

Even after graduating, students that are loyal are more inclined to support his/her education institution through various means. Loyal students may support their education institution financially by giving donations or financial support to the university. Or through positive word of mouth (WOM) to potential, current or former students. Or via some form of collaboration like offering internship, job placement, giving lectures, etc. (Hennig-Thurau et al., 2001).

The rapid expansion in the higher education industry in Malaysia has been largely due to the development of privately owned higher education institutions. (Private HEI) The passing of the Private Higher Educational Institutions Act.1996 (Act 555) has opened the floodgates to the growth of privately owned higher education institutions. The passing of this act was an official move by the government to fulfil the rising demand for tertiary education through the privatization of the education sector (Wee & Thinavan, 2013).

The Private Higher Educational Institutions Act, 1996 (Act 555) provides establishment, registration, management and supervision of privately owned higher education institutions. The act is used to manage the quality of education in privately owned higher education institutions and all matters pertaining to it (Nasional Malaysia Berhad, 2006).

Prior to 1996 before the passing of the act, there were only nine public universities and no private universities, As at November 2015, the latest statistics indicate that there

are now 20 public universities, 111 private universities and university colleges, 402 private colleges, 34 polytechnics and 94 community colleges with an estimated student population of 1.2 million. Out of that figure, there are 540,638 students enrolled in Public HEIs and 580,928 students enrolled in Private HEIs, and the balance at polytechnics and community colleges (Tapsir, 2016).

Since 2009, the Malaysian Government has been granting permission to foreign based private universities to set up their campuses in Malaysia. This change has brought about more options and choices for students and has made the competition fiercer for Private HEIs in Malaysia (Mansori, Vaz & Mohd. Ismail, 2014).

The positive side effect of the growth in the Malaysian education industry is that it has provided more chances for prospective students to pursue their tertiary education at institutions of higher education. Overall, it is both beneficial for the students and Malaysia as well. For Malaysia, she will have an educated, knowledgeable and skilled labor force who can contribute towards her economic development and her aspiration to be a developed nation by 2020.

However, this is not good for the Private HEIs who have to compete for students. Students now have more choices to choose from to pursue their studies. This gives students extra “bargaining power” in comparison to their predecessors prior to the growth of private education institutions.

The positive growth in Malaysia’s economic and financial indicators has resulted in more Malaysian parents being able to send their children to study overseas. To aggravate the situation further, Private HEIs are offering similar popular programs, thus add

additional pressure on these organizations to create a competitive advantage (Mansori et al., 2014).

All these create a competitive force as contended by Michael Porter's Five Forces. Collis (n.d.) state that buyer power is high with students having more and more choices to choose from. Threat of substitutes is high as well due to the rise of technology which has brought about online/distance learning options for students.

Therefore, the growth of the Malaysian private higher education industry and its accompanying effects has created a major problem for its players: pressure on their organization's bottom line/profitability and ultimately their survival/viability.

As Private HEIs do not receive any funding from the Government, they are very much dependent on student's fees to run the institution. Profitability and the bottom line are very much on the minds of the management of Private HEIs. As a private organization, Private HEIs are dependent on the movements, interactions and mechanisms of the market (Hasan et al., 2008).

Most Private HEIs usually offer courses/programs which are driven by profitability, in high demand and popular. They also serve as another possible gateway for students who were not able to secure entrance into a course/program in a public higher education institution (Wan, 2007).

Most of these Private HEIs are clustered in the major towns where the biggest market for students is found (Wee & Thinavan, 2013).

In a study conducted by the Penang Institute on the profitability of selected Malaysian Private HEIs, the researchers found that 46% of the Private HEIs made losses after taxes for the year 2013. Around 46% of Private HEIs have insufficient assets to

cover their current liabilities. More than 71% are below the average of all institutions, which hold twice as many current assets as liabilities. 64% have debts exceeding their paid up capital (Lim & Williams, 2015).

Albukhary International University (AiU) announced in January 2014 that it would be closing down. AiU is owned and operated by the billionaire, Tan Sri Syed Mokhtar Albukhary's foundation, which also provides scholarships for the students. Business publications are speculating that the billionaire closed down the university to cut losses, as the university had become a "drag" on the health of his finances (Zakaria, 2014).

Another example is the closure of Allianz University College of Medical Sciences. They closed their doors at the end of 2014 with a relocation of their 200 students and the retrenchment of around 500 staff. Closure was attributed to the small number of students and the high wages of academic staff. Staff lamented the inability of the university's management to pay their salaries and students complained about lack of facilities, prior to the closure (Samy et al., 2014).

Private HEIs will have to step up their marketing programs to draw in potential students and keep current ones. Thus, the issue of students' loyalty becomes paramount if they wish to exist and prosper in the aggressive private higher education market.

This level of competition is expected to increase in the future and it will be critical for managers in Private HEIs to determine suitable strategies to overcome this problem. An institution's success in creating loyal students will be dependent on its ability to adapt to a competitive marketplace or succumb to its pressure.

## 1.1 Problem statement

Loyalty is an important component for a higher education institution's success, profitability and viability (Hennig-Thurau et al., 2001; Thomas, 2011; Yang, Alessandri & Kinsey, 2008). As the level of competition intensifies in the Malaysian private higher education market, it is imperative that management of Private HEIs identify factors that drive their students' loyalty.

The situation in Malaysia indicates that Private HEI's profitability and viability are being compromised by uncertain levels of student loyalty. Student attrition is an important issue related to student loyalty, as high attrition levels signal problems with loyalty.

Similar to poor loyalty levels, high student attrition can cause serious negative impact for a higher education institution. It causes financial loses because of unremunerated enrolment, interruption of organization management, exhausted operating expenses and loss of profits (O'Keefe, 2013).

Recruiting potential students would be a problem and enrolment would be affected. The enrolment would decrease because student attrition would likely spoil the status and image of an education institution (O'Keefe, 2013)

This can become a serious problem for education institutions which are locked in a highly competitive environment equipped only with limited general and financial resources to survive. Similar to low loyalty, high attrition would exacerbate the situation further.

Table 1.1 presents the overall attrition rates of Private HEIs in Malaysia for the period from 2010 to 2015. The figures indicate that the attrition rates fluctuate, from a

high of 68% in 2011 to a low of 21% in 2015. The exceptionally high attrition rates in 2010 and 2011 could be due to existing low loyalty levels being exacerbated by the spillover of the 2008 global financial crisis into Malaysia. This could have resulted in Malaysian parents unable to afford to pay the tuition fees for their children to continue on with their studies in private HEIs, thus resulting in many students dropping out.

Table 1.1  
*Student attrition rates in Private HEIs*

Year	Student intake (2007)	Student output (2010)	Student dropout/leave/transfer	Attrition rate (%)
<b>2010</b>	180,077	91,008	89,069	49
	Student intake (2008)	Student output (2011)	Student dropout/leave/transfer	
<b>2011</b>	199,038	63,673	135,365	68
	Student intake (2009)	Student output (2012)	Student dropout/leave/transfer	
<b>2012</b>	180,218	116,933	63,285	35
	Student intake(2010)	Student output (2013)	Student dropout/leave/transfer	
<b>2013</b>	172,106	94,528	77,578	45
	Student intake (2011)	Student output (2014)	Student dropout/leave/transfer	
<b>2014</b>	137,735	106,203	31,532	23
	Student intake (2012)	Student output (2015)	Student dropout/leave/transfer	
<b>2015</b>	169,925	134,374	35,551	21

Source: National Education Statistics: Higher Education Sector, Ministry of Education, Malaysia

Even though the attrition rates are slowly declining, the double digit numbers are still alarming. This indicates that Private HEIs are facing problems in retaining and keeping their students until graduation. This unhealthy attrition rate could be a sign of disloyalty amongst students, as it indicates that students are willing to leave their current education institution to take up similar offers from competing education institutions (Gengeswari et al., 2013; Hasan et al., 2008).

Sangodiah et al. (2015), state that one of the main reasons why students in Malaysian higher learning institutions leave/drop out/transfer, is to take up another more attractive offer from another education institution, from the many available in the market.

In a similar vein, Bean and Metzner (1985) found that the opportunity to transfer to another educational institution was a direct factor considered most important in their student attrition model. They concluded that when students have more opportunities, the attrition rate would increase.

Govindarajo and Kumar (2012) state that the reason for increased student attrition rates in Malaysia was due to the increased competition amongst private colleges and institutions. They state that one private university in Malaysia reported having an attrition rate exceeding 14 % in just 6 month in the year 2012.

Recently, in May 2017, UNITAR International University had to close down their Architecture and Design Faculty, citing reasons for the closure as lack of students and revenue (Landau, 2017). The university was unable to retain current students in the program, indicating that students had left/transferred out/dropped out of the programme.

Table 1.2 presents the figures for postgraduate students in Public and Private HEIs. The figures indicate that postgraduate intakes in Public HEIs are on the rise as compared to Private HEIs for the years 2010 to 2015. Postgraduate intake in Private HEIs is far behind that of Public HEIs. This indicates the Private HEIs are facing a problem in re patronage, an indicator of poor loyalty levels, in which their own undergraduate students are not continuing on with their postgraduate studies at their current university. These

students would rather pursue their post graduate degrees at Public HEIs or at the other many Private HEIs available in the market.

This is a problem for private universities that offer postgraduate degrees as they would have to compete aggressively for postgraduate students from their own undergraduate students as well as undergraduate students from other education institutions. If an education institution had a pool of loyal undergraduate students, they would not be facing this problem.

Table 1.2  
*Comparison of Postgraduate students (PhD and Masters Level) at Public and Private HEIs*

Year	PUBLIC HEI			PRIVATE HEI		
	Undergraduate (Output)	Postgraduate (Intake)	Comparison (%)	Undergraduate (Output)	Postgraduate (Intake)	Comparison (%)
2009	65,756	23,036	35	40,535	5,828	14
2010	66,445	24,490	37	26,562	5,730	21
2011	66,372	28,739	43	25,524	4,570	18
2012	66,421	26,082	39	48,369	16,907	35
2013	68,025	28,445	42	35,521	4,879	14
2014	71,273	30,174	42	22,861	4,706	21
2015	68,558	28,721	42	49,169	11,572	24

Source: National Education Statistics: Higher Education Sector, Ministry of Education, Malaysia

Even though loyalty is a form of competitive advantage, management of Private HEIs seems to be neglecting it. Managers of Private HEIs go to extreme measures to ensure that recruitment and retention strategies are paramount in their organization's marketing strategies, neglecting the all important loyalty.

Managers of these organizations are myopic and only looking at the short term when they consider recruitment and retention as the main priority. Recruitment will bring in the students, retention will help keep the students until they finish, but ultimately loyalty will be the one bringing the student back to support the Private HEIs in terms of re patronage (to continue with their post graduate studies), to recommend (positive word of mouth to current or prospective students) and supportive behavior (financially, by giving donations or financial support to the university or through some form of cooperation like offering internship, job placement, giving lectures, etc.).

In summary, the above discussion and examples support the contention that student loyalty is a problem in the Malaysian private higher education industry. Therefore, it is vital for management of Private HEIs to recognize that poor loyalty levels impacts the financial viability of their organizations and ultimately their survival. In order to mitigate the problems related to poor loyalty, Private HEIs need to understand the factors that influence it. Based on the review of literature, service quality, reputation, relationship benefits and satisfaction have been recognized as important determinants of students' loyalty.

Numerous studies have been conducted in Malaysia as well as in foreign countries on the efficacy of service quality on students' loyalty. However the relationship between service quality and students' loyalty is still unclear and some ambiguity still exists as there have been inconsistencies in the findings in past research. Although these studies conducted have confirmed the direct positive effect of service quality on students' loyalty (De Macedo Bergamo et al., 2012; Fares, Achour & Kachkar, 2013; Leonnard et al., 2013; Munizu & Hamid, 2015; Usman, Mokhtar & Balewa, 2016), others have

found that service quality had no direct effect on students' loyalty (Brown & Mazzarol, 2009; Dib & Alnazer, 2013; Mohammad & Awang, 2009). At the same time, there are studies that have found that service quality had an indirect positive effect on students' loyalty when mediated by satisfaction and trust (Sultan & Wong, 2013); mediated by satisfaction, trust and commitment (Rojas-Mendez et al., 2009); mediated by commitment only (Lin & Tsai, 2008) and satisfaction only (Ali et al., 2016; Mansori et al., 2014; Mohammad & Awang, 2009).

There is a lack of empirical findings on the direct and indirect effect of service quality on students' loyalty in private institutions of higher learning, specifically in Malaysia, as most of the research conducted on service quality in Malaysia was conducted in public institutions of higher learning. The findings in this area are mixed, with no conclusive affirmation of the relationship between service quality and students' loyalty. Therefore, it would be beneficial and essential to further research the effect of service quality on students' loyalty in private institutions of higher learning in Malaysia.

Corporate reputation has been examined in industries such as banking (Beh & Faziharudean, 2010; Gao & Rehman, 2014; Nguyen, Leclerc & LeBlanc, 2013; Shahsavari & Faryabi, 2013); telecommunication (Ali, Alvi & Ali, 2012); food (Gorondutse & Nasidi, 2014); energy (Walsh et al., 2009); apparel (Gul, 2014); restaurants (Chang, 2013) and hotels (Christou, 2003).

However, the review of literature reveals that there is a lack of research in the education industry. Most research in the education industry has focused on reputation as a determinant of student's choice of a higher education institution (Joseph & Joseph, 2000; Munisamy et al., 2014; Shah, Nair & Bennet, 2013).

In the seminal study done by Nguyen and LeBlanc (2001a), they found that reputation had an effect on loyalty in the education industry. In the intervening years since this study, researchers have yet to ascertain the exact nature of the relationships that exists between reputation and the understanding of their effect on loyalty still remains unclear.

Researchers such as Fares et al. (2013); Helgesen and Nessel (2007) and Sung and Yang (2009) have found reputation to have a direct and significant effect on students' loyalty. However, researchers such as Barusman (2014) found it had no effect at all, whilst Thomas (2011) found that reputation had no direct effect on students' loyalty, but only had an effect on students' loyalty when mediated by student satisfaction.

It is clear that the review of existing empirical evidence with regards to the effects of reputation on students' loyalty has been mixed. There is also a paucity of research on the effect of reputation on students' loyalty in private or even public institutions of higher learning in Malaysia. There is also a lack of empirical studies conducted on the effect of university reputation on students' loyalty in the West as well. Therefore, there are still large gaps in this area of study which should be researched further.

Relationship marketing has permeated academic studies, marketing methods and processes, in various field and industries. However, it is still largely ignored by education institutions. There is a lack of research which has approached students' loyalty from the relationship building standpoint (Bowden & Wood, 2011; Helgesen, 2008; Hennig-Thurau, et al., 2001).

Gwinner, Gremler and Bitner (1998) was one of the earliest researchers to empirically examine the effects of relationship benefits on loyalty in the service industry

in the USA, in which they found that relationship benefits had a significant positive relationship with customer loyalty. This was followed up by a study by Hennig-Thurau et al., (2002) in Germany which expanded on the earlier study by Gwinner et al. (1998). The results were similar, and relationship benefits were found to have an effect on customer loyalty in a wide range of organizations in the service industry. However, both these studies did not cover higher education institutions.

There is a dearth of studies in the education industry with relationship benefits as the independent variable and student loyalty as the dependent variable. Those few that have, they have been from Western countries. It is important for researchers not to rely on empirical research originating from Western and developed cultures, but instead construct reliable and original models of how students' loyalty is determined in developing economies like Malaysia.

A student loyalty model which incorporates relationship marketing variables would contribute valuable information to the body of knowledge with regards to the study of the relationship between private higher education institutions and their students. Furthermore, the findings in this area is mixed, with no conclusive affirmation of the relationship between relationship benefits and loyalty (whether customer or student). Researchers such as Chen and Hu (2010); Dagger, David and Ng, (2011) and Holford and White (1997)) have found that relationship benefits to have a direct and significant effect on loyalty. However, researchers such as Dimitriadis (2010) found that relationship benefits had no direct effect and only had an effect on loyalty when mediated by satisfaction. Auruskeviciene et al. (2010) found that relationship benefits had

not effect on loyalty at all. This reinforces the fact that there are still large gaps in this area of study which should be researched further.

Satisfaction has been a variable heavily examined in higher education research. Satisfaction has been used as a dependent variable in higher education studies (Abd. Manaf et al., 2013; Chuah & Ramalu, 2011; Oluseye et al., 2014; Vander Schee, 2010); as an independent variable (De Macedo Bergamo et al., 2012; Fares et al., 2013; Soedijati, 2014; Thomas, 2011) and as a mediating variable (Ali et al., 2016; Mansori et al., 2014; Munizu & Hamid, 2015; Usman et al., 2016).

As can be seen from the review of the literature, there has been numerous studies carried out on the relationship between satisfaction and students' loyalty. However, there is a dearth of studies whether in the West or Malaysia, which has incorporated all three variables of service quality, reputation and relationship benefits into an integrated framework with the mediating effect of satisfaction into a model explaining students' loyalty in the private higher education context.

Therefore, it would be beneficial and essential to further knowledge in this area by researching the mediating effect of satisfaction on the relationships between service quality, reputation and relationship benefits with students' loyalty in Private HEIs in Malaysia.

In summary, this study hopes to fill the following research gaps as indicated in the literature: the paucity and inconsistencies in the relationships between service quality, reputation, relationship benefits and students' loyalty, as well as to address the paucity of research on the mediating effect of satisfaction on service quality, reputation and

relationship benefits on students' loyalty in the Malaysian private higher education context.

## **1.2 Research questions**

To date, researchers have yet to reach a consensus on the relationships between service quality, reputation, relationship benefits and students' loyalty. Similarly, the significant effects of service quality, reputation and relationship benefits on students' loyalty have also not been determined, what more in the private higher education setting. The review of existing empirical evidence with regards to the effects of service quality, reputation and relationship benefits on students' loyalty is mixed. Some studies have linked some of these variables to positive student loyalty whilst others have results to the contrary. Furthermore, none have incorporated all three variables with the mediating effect of satisfaction into a model explaining students' loyalty in the Malaysian private higher education context.

Therefore, this study attempts to answer the following questions:

- 1) What is the level of students' loyalty in private higher education institutions in Malaysia?
- 2) What are the relationships between service quality, reputation, relationship benefits and students' loyalty in private higher education institutions in Malaysia?
- 3) What are the significant effects of service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia?

- 4) Does satisfaction mediate the relationships between service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia?

### **1.3 Research objectives**

The research objectives for this study are:

- 1) To determine the level of students' loyalty in private higher education institutions in Malaysia.
- 2) To determine the relationships between service quality, reputation, relationship benefits and students' loyalty in private higher education institutions in Malaysia.
- 3) To determine the significant effects of service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia.
- 4) To determine the mediating effects of satisfaction on the relationships between service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia.

### **1.4 Significance of the study**

In today's highly competitive education industry, factors that assist private higher education institutions to draw in and keep students should be researched in depth.

Private HEIs like most businesses need income to operate and profits to survive. This study could provide valuable information to the management of Private HEIs in Malaysia for strategy planning. From a managerial perspective, looking at the service quality and reputation of the Private HEIs as well as the relationship benefits between

them and their students could provide valuable information to the management of these organizations for their marketing efforts in retaining and recruiting students. The success of these marketing efforts would result in profitability for the education institution.

It is vital for the continuance and success of the Malaysian private higher education industry as it has a key role to play in Malaysia's economic growth and development (Chai, 2007; Husain et al., 2009). The private higher education industry provides employment, educating future leaders and meeting the manpower needs of the nation. Education is an important component in Malaysia's quest to achieve developed status by 2020. To this end, the Private HEIs help the Malaysian Government meet the burgeoning demand for higher education. Private HEIs also help with bringing in foreign currency by bringing in international students from overseas. This has helped with Malaysia's gross domestic product and gross national income. In 2020, Malaysia is targeted to become the education hub of Asia with a target of 200,000 international students (Jahari et al., 2015). Therefore, findings in this study can be used by Private HEIs in Malaysia for establishing the best marketing strategies for continued success, ensuring their continuance to the positive economic development of Malaysia.

From a theoretical perspective, the findings of this study will contribute to the pool of knowledge on the predictors and mediators of students' loyalty. According to Hennig-Thurau et al. (2001), there is yet to be any generally accepted, let alone empirically confirmed conceptual model of students' loyalty. In the intervening years since then, this premise has held true. Therefore, such a model would be important and essential to the development of theoretical knowledge towards this area of research. Thus, the model

introduced in this study hopes to fill the research gap and add to the theoretical knowledge in this area of study.

The review of existing empirical evidence with regards to the effects of service quality, on students' loyalty has been mixed. Some studies have linked it to positive students' loyalty whilst others have results to the contrary. There is also a lack of empirical findings on the effect of service quality on students' loyalty in private institutions of higher learning, specifically in Malaysia, as most of the research conducted on service quality in Malaysia was conducted in public higher education institutions. Thus, it would be beneficial and essential to further research the effect of service quality on students' loyalty in private higher education institutions in Malaysia.

The findings in this study would be beneficial from the managerial as well as the theoretical perspective. From the managerial perspective, it would provide Private HEIs in Malaysia better input on the management of their service quality in view with increasing their students' loyalty. Whilst from a theoretical perspective, the findings would address the paucity and inconsistencies on service quality's efficacy as well as contribute to the knowledge pool of this area of research, specifically in the Malaysian private higher education context.

The majority of research on reputation in the education context has focused on this variable as a determinant of student's choice of a higher education institution (Joseph & Joseph, 2000; Munisamy et al., 2014; Shah et al., 2013). In the intervening years since Nguyen and LeBlanc's research in 2001 which postulated the importance of reputation on loyalty in the education industry, subsequent researchers have yet to empirically ascertain the relationship between reputation and students' loyalty. There is a paucity of

research on the effect of reputation on students' loyalty in private or even public higher education institutions in Malaysia. There is also a lack of empirical studies conducted on the effect of university reputation on students' loyalty in the West as well. Therefore, there are still large gaps in this area of study which should be researched further. As such, from the theoretical perspective, the findings would add to the literature on reputation's efficacy on student loyalty, especially in the Malaysian private higher education context. Whilst from a managerial perspective, by knowing what factors influence their students' loyalty, relevant reputational measures can be instituted by management of Private HEIs' towards that end.

According to Bowden-Everson and Moore (2012), the concept of strong relational bonding has substantial importance for the higher education industry: it may reduce the rate of student attrition and increase the students' loyalty towards the institution. Therefore, given the significance of the student-institution relationship, an investigation of the role it plays in the construction of student loyalty should be a priority especially to marketers in the highly competitive private higher education industry of Malaysia.

From a managerial perspective, it would be helpful to Private HEIs who might be interested to utilize relationship marketing as a means to increase their students' loyalty. From a theoretical perspective, this study addresses the gap and dearth of research connecting relationship benefits with loyalty in the higher education industry, specifically in the Malaysian Private HEIs context.

Satisfaction has been a variable heavily researched in marketing and has been identified as a key determinant of loyalty (Ali et al., 2016; Leonnard et al., 2013; Mansori et al., 2014; Schlesinger et al., 2016; Thomas, 2011). Students can be satisfied

without being loyal, but it is hard to be loyal without being satisfied. As such, it is a worthy construct to be used as a mediator because it has the greatest effect on loyalty. From a theoretical perspective, this study aims at providing some preliminary empirical evidence regarding the mediated beneficial effects of the independent variables in this study. From the managerial perspective, marketing managers of Private HEIs need to know whether there are variables likely to clarify the nature of the relationship between service quality, reputation, relationship benefits and students' loyalty, thus this study will provide that knowledge.

Lastly, to date, researchers have yet to reach a consensus on the relationships and effects between service quality, reputation and relationship benefits on students' loyalty, whether in Malaysia or in the West. Furthermore, none have incorporated all three variables into a model explaining students' loyalty in the private higher education context. There is also no empirical studies done on the mediating effects of satisfaction on all the aforementioned variables in the education industry, whether in the Western or Asian countries as well as in Malaysia. Thus, this study would serve as the basis for further expansive research in this area.

### **1.5 Scope of the study**

This study covered the education industry and primarily focused on private higher education institutions (Private HEIs) in Malaysia. The unit of analysis was individuals and comprised of students enrolled with Private HEIs in Malaysia. A cross sectional study was conducted. This study used the proportionate stratified sampling design and a

personally administered questionnaire was used to collect data for quantitative analysis using Statistical Package for the Social Sciences (SPSS) software.

This study proposed to determine the level of students' loyalty in Private HEIs in Malaysia, to identify the relationships and effects of service quality, reputation, and relationship benefits on students' loyalty and at the same time to examine the moderating effect of satisfaction on these relationships.

### **1.6 Definitions of key terms**

The definitions of the main variables and terms used in this study are as follows:

**Private Higher Education Institution (Private HEI):** To encompass Private Higher Education Institution with University Status, Private Higher Education Institution with Foreign University Branch Campus Status, Private Higher Education Institution with University College Status and Private Higher Education Institution with College status (Ministry of Higher Education, n.d.).

**Student:** A person who is studying at a university or other place of higher education (Oxford dictionaries, n.d.).

**Student loyalty:** Loyalty of a student during and after his/her time at an education institution. It is usually demonstrated by re patronage, positive word of mouth and supportive and committed behaviour towards the education institution (Kunanusorn & Puttawong, 2015).

**Student attrition:** The failure of or missing students at an education institution, such as through withdrawal, stoppage from their study either voluntarily or involuntarily, and transferring to other similar institutions (Bean & Metzner, 1985)

**Student retention:** The student's ability to finish his/her entire course of study until he/she graduates within the prescribed number of years (DeShields, Ali & Kaynak, 2005)

**Service quality:** The comparison between what the customer perceive the service should be and what was the actual performance offered by the service provider (Parasuraman, Zeithaml & Berry, 1988).

**Reputation:** The collective picture of an organization's previous behaviour and outcomes. It depicts the organization's capability to provide the desired results to its numerous constituents. It calibrates an organization's internal position with its employees and externally with its other constituents. To sum it up, reputation is a collective assessment of an organization's capability to deliver the desired results to a representative group of constituents (Fombrun, Gardberg & Sever, 2000).

**Relationship benefits:** The quality of services and goods relative to other suppliers. Relationship benefits are the superior benefits provided to customers which are highly valued by customers (Morgan & Hunt, 1994).

**Satisfaction:** A student's fulfilment response. It is the student's overall subjective evaluation and experiences of the university's product/services, the product/services itself and between what was received and what is expected from the university to date (Jurkowitsch, Vignali & Kaufmann, 2006).

## 1.7 Organization of the thesis

This thesis is divided into five chapters, introduction, literature review, methodology, results and discussion and conclusion and recommendation.

Chapter 1 provides the overall introduction which covers the background of the study, problem statement, research questions, and research objectives, significance of study, scope of study as well as definitions of key terms used.

Chapter 2 covers the review of literature relevant to the area of study. The literature review provides an overview of reported relationships between the main variables of the study. The underpinning theory is also explained and discussed in this chapter.

Chapter 3 covers the methodology adopted for the study. This chapter discusses the research framework and hypothesis development, research design, operationalization and measurement of variables, population and sample, data collection procedure, data analysis techniques and pilot study.

Chapter 4 presents the results and analyses of the study. The chapter discusses the results of the various statistical analyses done such as descriptive, reliability, factor, correlational, multiple regression and mediation analyses.

Chapter 5 presents the conclusion and recommendation of the study. The last chapter interprets and discusses the key findings according to the research objectives, hypotheses as well as discusses the theoretical and practical implications. The chapter concludes with the limitations of the study, recommendations for future research and the conclusion.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

The main objective of the review of literature is to provide relevant background information and knowledge related to the research constructs of this study, namely student loyalty as the dependent variable and service quality, reputation, and relationship benefits as the independent variables and satisfaction as the mediating variable. The review of literature will provide this study with an examination of the reputed relationships between these constructs.

#### 2.1 Student loyalty

Many researchers have studied customer loyalty in marketing literature. More and more researchers are now turning their sights towards student loyalty. Can students be called customers? According to Brown (2011), one might think twice to label students as “customers” due to the “student-teacher relationship.” However, the truth of the matter is that without students; there would be no need for education institutions. In a similar vein, Ali et al. (2014) state that student can be substituted as the customer in marketing literature. Brown (2011), Helgesen and Nesset (2007) and Hennig-Thurau et al. (2001) have conducted studies in which they have taken into consideration education institutions as “service providers” and students as “customers.”

Therefore, student loyalty is a worthy construct to be studied, what more in today’s highly competitive and globalized education industry. For this study, student loyalty is

defined as loyalty of a student during and after his/her time at an education institution. It is usually demonstrated by re patronage, positive word of mouth and supportive and committed behaviour towards the education institution (Kunanusorn & Puttawong, 2015). Similar to customer loyalty, student loyalty also contains an attitudinal component and a behavioural component (Hennig-Thurau et al., 2001). The attitudinal component consists of cognitive, affective and conative elements, whereas the behavioural component is related to retention or repatronage decisions (Helgesen & Nessel, 2011). In a similar vein, Hennig-Thurau et al. (2001) believes that a loyal student must also have a “positive-emotive-attitude” towards their education institution, for this provides the impetus for the students’ behaviour. The later component provided the impetus for loyalty, retention and repurchase behaviour (Hennig-Thurau et al., 2001).

### **2.1.1 The importance of student loyalty**

In the context of the higher education industry, student loyalty plays an integral part in preventing and circumventing issues in student enrolment and recruitment, image and reputations crises, revenue/income shortage and deterioration in the quality of teaching.

Students can do this through the various roles they play in their education institution: they are customers of educational products and services offered by the education institution, a source of income, future possible benefactors and foundation base as alumni (Yang et al., 2008).

According to Rojas-Mendez et al. (2009), student loyalty is, “The critical measure in the success of higher education institutions that aim at retaining students until graduation and then attracting them back”.

As mentioned in the background of study, student attrition is a pervasive problem affecting higher education institutions. If students are loyal, the likelihood to retain them through graduation is high. Loyal students who want to pursue their post graduate degree will also come back to their higher education institution in which they obtained their undergraduate degree. This is especially important for education institutions that offer post graduate degrees.

Therefore, student loyalty becomes the main goal for numerous education institutions. For private higher education institutions, their major source of income comes from tuition fees. Retaining students would provide a steady and solid stream of income for the running and profitability of the higher education institution (Hennig-Thurau et al., 2001).

In a similar vein, Thomas (2011), state that student loyalty is one of the very important objectives of any higher education institutions. Any education institution which has a large loyal student population could give themselves a competitive advantage. It could bring about such favourable outcomes like student retention and repeat patronage and positive word of mouth communication. Students that are loyal can also influence the quality of teaching in a positive way by active classroom participation and a committed learning behaviour.

Students that are loyal will contribute to a positive classroom atmosphere. This is because the lecturer's involvement in the class will increase once students are highly motivated and interested to participate in the class, contributing to a conducive learning environment. Students that are highly motivated will contribute and participate in

research activities by conducting research and writing theses (Hennig-Thurau et al., 2001).

Subsequently, after graduation, students who are loyal may carry on supporting his/her education institution through various ways. They can support by financial means, such as by giving donations or other forms of financial support, through positive word of mouth recommendation to potential, present or past students or via some medium of collaboration like job placements, internships, giving talks, conducting lectures, etc. (Hennig-Thurau et al., 2001).

By being supportive through such actions, loyal students act as supportive base for enhancing the university's image and reputation to prospective students. Higher education institutions can ensure they have a predictable and secure financial base for their new future activities by developing a strong relationship with their students (Hennig-Thurau et al., 2001).

Even small changes in loyalty can produce correspondingly huge adjustments in profitability for any organization. Reichheld (1993) discovered that an increase of as little as five per cent in customer retention could bring about an increase of as much as twenty to ninety five per cent in an organization's profitability. They found that this result were applicable to fourteen different industries.

## 2.1.2 Defining loyalty

The concept of loyalty has a long history. Thiele (2005) state that the concept and idea of loyalty first emerged in the 1940's. During the early days, loyalty was suggested as a single or one dimension construct only and it was associated to the viewpoint of the researcher who based it on the standard of measures undertaken. Thiele (2005) explains that two independent loyalty concepts emerged. They were “share of market” by Cunningham (1956) that in the ensuing years became behavioural loyalty and “brand preference” by Guest (1944, 1955), which in subsequent years became attitudinal loyalty.

In the intervening years since the emergence of the loyalty construct in academic research and literature, researchers like Day (1969) suggested that the loyalty construct could be more complicated than initially thought. He suggested that it could encompass both attitudinal and behavioural loyalty. This two dimension concept became one and named composite loyalty. One of the earliest researchers to do so was Jacoby (1971).

The three streams of loyalty are depicted in Figure 2.1.

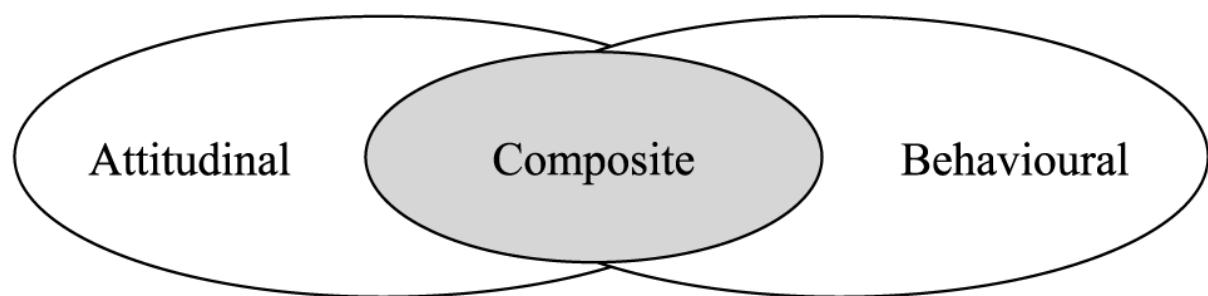


Figure 2.1  
*The loyalty construct (Thiele, 2005)*

### (i) Behavioral loyalty

Behavioral loyalty examines the customer's repetitive buying patterns and is established on a customer's buying history. Past actions instead of future actions of the customers are of significance. These measures provide a clearer and better understanding of the customer's behavior which is based on facts and figures which are easier to attain compared to attitudinal data.

Dick and Basu (1994) believe that merely focusing on the behavioral aspects of loyalty could result in an overestimation of the portion of "true loyalty." Customers may be compelled to buy a product again due to a variety of reasons such as channel of distribution, availability of product, apathy and passivity.

Rauyruen and Miller (2007) defined behavioral loyalty as, "The customers' intention to continue purchasing the organization's product/service as well as maintain a long term relationship with the supplier of service provider." This is slightly different from Tucker (1964) train of thought which only took into account past purchases as completely accounting for loyalty. A similar observation was made by Jacoby and Chestnut (1978). They only concentrated on deciphering the consistent arrangements of repetitive buying behavior as an indication of loyalty. Their three categories of behavioral measures were probability, sequence and proportion.

### (ii) Attitudinal loyalty

Attitudinal loyalty is identified by the customer's feelings, moods and frame of mind as opposed to behavioural loyalty which is identified by the customer's repetitive buying action.

Rauyruen and Miller (2007) defined attitudinal loyalty as, “The level of customer’s psychological attachments and attitudinal advocacy towards the service provider or supplier.” “Attitude” can be understood as the extent a customer is positively or negatively disposed towards a product/service offered by an organization.

Zeithmal et al., (1996) posits that attitudinal loyalty can be determined through the customer actions of recommending the product or service to other people and encouraging other people to use the product or service.

Oliver (1999) defined customer’s loyalty as “ A deep held commitment to rebuy or repatronize a preferred product/ service consistently in the future, thereby causing repetitive same brand or same brand set purchasing despite situational influences and marketing effort that have the potential to cause switching behaviour.”

Oliver (1999) believes that in the attitudinal school of thought, loyalty moves through four phases: they move from cognitive, affective, conative and action loyalty.

- 1) Cognitive loyalty. In the first stage, the formation of cognition is solely based on the extrinsic information such as price and attributes of the product/service. Purely superficial and shallow.
- 2) Affective loyalty. Based on accumulated satisfying and fulfilling usage occasions, the customer has established affection and liking towards the product/service. Commitment in the mind of the customer is understood as cognition together with affect.
- 3) Conative loyalty. The customer forms a deep commitment to re patronize or repurchase a service or product. This deeply held commitment is influenced by

numerous occasions of positive affect towards the product/service. However, the customer's intent must be translated to actual action.

4) Action loyalty. In the final stage, the customer will exhibit the action of actually buying the product/service. This will be accompanied with an increased desire to conquer any hurdles or obstructions that could stop the action.

### (iii) Composite loyalty

Rauyruen and Miller (2006) define composite loyalty as the “combination of both attitudinal and behavioural measures.”

Dick and Basu (1994) proposed a customer's loyalty state could be ascertained by the effectiveness of the association between the customer's relative disposition and repetitive buying behaviour, as compared with competitor's offers. They believe that behavioural loyalty does not take into account the factors that contribute to repetitive buying behaviour by customers. They suggest that high repeat purchases could be a result of situational hindrances such as what particular brands are carried by retailers, whereas low repeat purchases could be a result of customers seeking variety, different usage occasions or a dearth of brand preferences in the same product class. They believe that the explanations and interpretations for a customer's repetitive buying behaviour (behavioural measures) only is not enough to explain why and how loyalty is formed and/or changed. Therefore, they conclude that the customer's disposition is what leads to a consistent purchasing behaviour.

Dick and Basu (1994) developed an “attitude-repurchase relationship matrix” which has four categories. There are true loyalty, latent loyalty, spurious loyalty and no loyalty. It is depicted in Figure 2.2.

		Repeat patronage High	Repeat patronage Low
Relative attitude- Strong	True loyalty	Latent loyalty	
	Spurious loyalty	No loyalty	

Figure 2.2

*The Attitude-Repurchase Relationship matrix (Dick & Basu, 1994)*

The following categories of loyalty are established from the “attitude-repurchase relationship matrix”. They are:

- 1) No loyalty. Absence of loyalty is exhibited when the customer has a relatively weak attitude towards a product/service together with low repeat patronage. This frequently happens with products that have been newly launched and the product does not have a proven track record yet. Or when the market is full of similar products which are homogenous in nature.
- 2) Spurious loyalty. Exists when the customer has a relatively weak attitude coupled with high repetitive buying behaviour. This condition is formed by the customer’s customary conduct (routines) and is not connected to any singular positive attitude possessed by the customer. The customer perceives very little differentiation among products/services and repeat purchases based on familiarity, sales promotions or shelf positioning.

3) Latent loyalty. Exists when the customer exhibits a relatively strong attitude together with low repeat patronage towards a product/service. This could happen when the customer is unable to purchase the product/service due to external factors like distribution problems that keeps the product/service out of reach of the customer. For example: customer could have a very strong relative attitude towards a product/service, but because their store does not carry this product/service, the customer will not be able to buy the said product/service.

4) Loyalty (true) Exists when the customer demonstrates a strong relative attitude coupled with high repetitive buying behaviour. A customer with a strong relative attitude would not welcome a substitute product/service regardless of the situation. For example: if a customer could not find the product/service in the store they visited, the customer would most likely go to another store to find the product/service or wait until the product/service is available/in stock. Alternatives would not be considered even though they are cheaper and available.

### **2.1.3 Loyalty dimensions**

In the rich history of academic literature for loyalty, several dimensions and measures of loyalty have been identified. Most academicians have generally agreed upon customer's resistance to switch, their positive word of mouth and their repurchase intentions as indicators of loyalty. (Oliver, 1999; Zeithmal et al., 1996)

Earlier researchers on loyalty such as Jacoby and Chestnut (1978) note that the majority of studies on behavioural loyalty have merely concentrated on analysing and deciphering patterns of repetitive buying behaviour as the demonstration of loyalty.

Tucker (1964) argues that customer's past purchase behaviour of a product/service completely accounts for their loyalty.

Zeithmal et al., (1996) believes that when a customer expresses preference for a business over others, praises a company, increases the amount of their purchases and/or agree to pay a premium price, they are demonstrating via their conduct that they are connecting with the organization. Their study concluded that loyalty could be displayed and demonstrated via both attitudinal and behavioural loyalty. By focusing on both, this could create truly loyal customers. Thus, loyalty can be exhibited through the customer's behaviour, such as positive recommendation (attitudinal loyalty) and repeat patronage (behavioural loyalty).

#### **2.1.4 The model of loyalty**

To date, no consensus has been reached on how loyalty is formed (Dick & Basu, 1994; Jacoby & Chestnut, 1978; Oliver, 1999).

Sawmong and Omar (2004) postulates that Oliver (1999)'s customer loyalty model is the most notable and comprehensive measurement model so far. His model has four stages and follows the cognitive-affective-conation pattern, as seen in Figure 2.3.

Stage	Identifying marker
Stage 1- Cognitive loyalty	Loyalty to “information”. Information such as price and features are important. Customers are looking at cost and benefit only
Stage 2- Affective loyalty	Loyalty to “liking”. Liking a product/service is important. Satisfaction is derived when using the product/service
Stage 3- Conative loyalty	Loyalty to “intention”. Customer is committed to buy the product. They will recommend and repurchase
Stage 4- Action loyalty	Loyalty to “action” Customer is willing to overcome all obstacles to obtain the product/service

Figure 2.3  
*The Loyalty Stages (Oliver, 1999)*

Stage 1: Cognitive loyalty. The customer's loyalty is controlled and subject to whatever knowledge or information the customer has with regards to the product/service, such as its cost and its attributes and features. Loyalty as this stage is very weak because it is merely directed to the benefits and costs of the product/service. The customer is deciding how to purchase based on the monetary cost of the product (price) and will switch quickly if they find another supplier who can offer them the same product/service at a substantially lower cost (Sawmong & Omar, 2004).

Stage 2: Affective loyalty. The customer's loyalty is associated with a favourable and positive attitude/disposition towards a particular product/service. Customers have built up a brand preference. This attitude/disposition has been constructed over a period of

time based on an accumulation of satisfying and fulfilling usage occasions. Customer is loyal due to both cognition and affect (Sawmong & Omar, 2004).

Stage 3: Conative loyalty. It is imperative that customer loyalty be associated with the inclination to a specific and planned action. The customers will make a solid commitment to re purchase a product or re patronize a service in the foreseeable future. Conation at this stage implies a product/service specific commitment to repurchase. The customer will have good intentions to repurchase or repatronize, but this intention may not be able to be fulfilled due to inertia, apathy and unfulfilled action (Sawmong & Omar, 2004).

Stage 4: Action loyalty. The customer's intent is converted to actual action. The customer will be willing to search, put in considerable effort and overcome all obstacles to repurchase the product or repatronize the service. The customer will go to considerable lengths to ensure they obtain the product/service. Products/services offered by competitors will not be considered as substitutes (Oliver, 1999).

### **2.1.5 Determinants of student loyalty**

The review of past literature pertaining to the determinants of student loyalty have revealed several influencing variables such as image, reputation, service quality, shared values, relationship benefits, satisfaction, trust, commitment and value. This section discusses the various past studies pertinent to this matter.

The construct of student loyalty and the factors influencing it has been studied by many researchers (Ali et al., 2016; Fares et al., 2013; Hashim et al., 2015; Schlesinger et al., 2016; Wong & Wong, 2012). From the review of literature, service quality has

emerged as a determinant of loyalty (Alves & Raposo, 2010; Fares et al., 2013; Hennig-Thurau et al., 2001; Lin & Tsai, 2008).

In their study conducted in various universities in Germany, Hennig-Thurau et al. (2001) incorporated service quality in their relationship quality based student loyalty (RSQL) model and concluded that it was a significant predictor of student loyalty. In their model, service quality was represented as perceived quality of education and consisted of the mix of curriculum, exams, facilities, administrative services and teaching quality. Their model consisted of other important relationship quality components such as trust and commitment, in which trust was found not to have any significant effect on student loyalty.

To further understand service quality's efficacy, Lin and Tsai's (2008) study in a Taiwan university and Alves and Raposo's (2010) study in Portugal divided the service quality construct into two dimensions. In Lin and Tsai's study, service quality was divided into two dimensions: perceived quality of teaching services (QTS) and perceived quality of administration services (QAS), whilst Alves and Raposo's study had service quality as technical quality and functional quality. Both studies concluded that service quality was a determinant of student loyalty. However, in Lin and Tsai's study, they found that perceived quality of teaching services (OTS) had a significant direct effect on student loyalty, whilst perceived quality of administration services (QAS) did not, and had to be mediated by signal of retention (which is akin to commitment). Their findings indicated that the dimension of academic services in service quality was more important than administrative services, which makes sense, as students spend a large amount of their time interacting with their lecturers.

Brown and Mazzarol (2009) wanted to examine whether a model derived from the services marketing literature would be applicable to higher education institutions in Australia. Similar to the studies by Lin and Tsai (2008) and Alves and Raposo (2010), service quality was divided into two dimensions: hardware and software. However, contrary to previous researchers, Brown and Mazzarol's study found that service quality was not a determinant of student loyalty. Of interest in Brown and Mazzarol's study is the introduction of the image construct which was found to be a major antecedent for perceived satisfaction, value and loyalty. This is similar to the study by Alves and Raposo (2010) and Ali et al. (2016) which concluded that image had a direct influence on student loyalty.

Many researchers have studied the factors influencing student loyalty in the Malaysian higher education context (Ali et al., 2016; Fares et al., 2013; Hashim et al., 2015; Mansori et al., 2014). These researchers incorporated variables such as service quality, reputation, image and satisfaction into their loyalty models.

Extending from Brown and Mazzarol (2009) study which found that service quality had no direct effect, both Ali et al. (2016) and Mansori et al. (2014) examined the mediating effect of satisfaction on the relationship between service quality and student loyalty. Both studies found that service quality had an indirect effect on student loyalty when mediated by satisfaction. Student satisfaction was also found to have a direct effect on student loyalty which has been confirmed many times in other studies conducted in the education context (De Macedo Bergamo et al., 2012; Leonard et al., 2013; Mansori et al., 2014; Munizu & Hamid, 2015).

Hashim et al. (2015) and Ali et al. (2016) examined the university image on student loyalty amongst international students in public universities in Malaysia. They replicated the study by Brown and Mazzarol (2009) and found similar results, indicating that image was a strong determinant of student loyalty.

One of the earlier researchers to examine reputation as a determinant of student loyalty was Helgesen and Nesset (2007a). They hypothesized that satisfaction and reputation would have a significant positive effect on loyalty. Their study found that the perception of the reputation of the university and student's satisfaction was positively related to student loyalty. This suggests that the higher the students' positive perception of the university's reputation, the higher would be their loyalty.

Continuing from Helgesen and Nesset's study, other researchers like Fares et al. (2013); Sung and Yang (2009) and Thomas (2011) incorporated reputation into their loyalty models.

The model by Fares et al. (2013) examined university reputation, service quality and student satisfaction as determinants of student loyalty. Their study found all factors had different degrees of importance and they were ranked as follows: service quality, student satisfaction and reputation.

Sung and Yang (2009) in their study in a private university in Korea also confirmed the importance of university reputation. Reputation was confirmed as a significant antecedent of student loyalty, mirroring and supporting Helgesen and Nesset's earlier study. However, Sung and Yang's study had an additional aspect, in which the reputation of the university as perceived by its students was determined by the relational outcomes (trust, control mutuality, satisfaction and commitment), and not the other way

around. The main significant assumptions from this study were that the communication behaviour of students would affect the quality of their educational experience with the university, the students' assessment of the relational outcomes with the university greatly determined reputation of the university and reputation greatly determined student loyalty.

The study by Thomas (2011) in several universities in South India had results to the contrary to those of Helgesen and Nessel (2007a) and Sung and Yang (2009). His findings indicated that reputation had no direct effects on student loyalty and had to be mediated by satisfaction. This indicates that the relationships between reputation and loyalty is still not well defined and warrant further investigation.

Since Hennig-Thurau et al.'s (2001) study from the relationship perspective which spawned the relationship quality based student loyalty model (RSQ), there has been minimal research done to develop this area of knowledge. The application of marketing concepts in the education context is still low and research from the relationship marketing perspective is scarce. The study by Wong and Wong (2012) is important as it contributes to this area of knowledge. This study found that relationship benefits, relationship termination cost and shared values were determinants of loyalty, via commitment. Trust was found to be insignificant which was similar to the findings by Hennig-Thurau et al. (2001).

Another study derived from the relationship marketing perspective was done by Schlesinger et al. (2016) amongst alumni of two public universities in Spain. The findings indicated that shared values, satisfaction and trust as determinants of student loyalty. This is contrary to the findings by Hennig-Thurau et al. (2001) and Wong and

Wong (2012) studies which concluded that trust was insignificant on student loyalty. Their study found that image had an indirect effect of alumni loyalty, via graduate satisfaction and trust. This indicates that image had no direct impact on loyalty and would only be beneficial if the graduate was satisfied and trusted the university. This is contrary to the findings by Brown and Mazarrol (2009) which was the opposite. Schlesinger's study also demonstrated the association between trust and university image in the higher education context, something which had not been researched before in other studies. Another important contribution is the empirical validation of shared values as a key determinant of loyalty in the higher education context.

Table 2.1 is a summary presentation of the literature (from earliest to latest) with regards to the discussion above. Based on the discussions done in this section, this study proposes a student loyalty model which has service quality, reputation, relationship benefits and satisfaction.

The next section of the literature review explores in depth the constructs selected for the research framework. Their definitions, importance and dimensions are discussed together with their relationships to student loyalty.

Table 2.1

*Summary results of selected student loyalty research with student loyalty as the dependent variable*

<b>Author (s)</b>	<b>Independent variables</b>	<b>Results</b>	<b>Context</b>
Hennig-Thurau et al.(2001)	Trust Quality Goal commitment Emotional commitment Cognitive commitment	n.s + sign + sign + sign + sign	Various German universities
Helgesen & Nessel (2007a)	University reputation Satisfaction Service quality Information Social Facilities Commitment	+ sign + sign + sign + sign + sign + sign + sign	Norway university
Lin & Tsai (2008)	Perceived quality of teaching services (QTS) Perceived others retention Perceived quality of administration services (QAS) Perceived signal of retention (PSR)	+ sign + sign + sign + sign	Business administration undergraduates in a Taiwan university
Sung & Yang (2009)	Active communication Quality of educational experience Relational outcomes University reputation	+ sign + sign + sign + sign	A private university in Seoul, Korea
Brown & Mazzarol (2009)	Image Service quality(hardware and software) Perceived value Satisfaction	+ sign n.s + sign + sign	Four different universities in Australia
Alves & Raposo (2010)	Image Student expectations Quality (technical and functional) Perceived value Satisfaction	+ sign + sign + sign + sign + sign	Universities in Portugal

Table 2.1 (Continued)

Thomas (2011)	Satisfaction	+ sign	Several universities
	Reputation	+ sign	in South India
Wong & Wong (2012)	Relationship benefits	+ sign	Undergraduates in a
	Relationship termination costs	+ sign	university in Hong
	Shared values	+ sign	Kong
	Trust	n.s	
	Commitment	+ sign	
Fares et al. (2013)	Service quality	+ sign	International Islamic
	Reputation	+ sign	University (IIUM)
	Satisfaction	+ sign	in Malaysia
Mansori et al. (2014)	Service quality	+ sign	Private universities
	Satisfaction	+ sign	and colleges in Kuala Lumpur, Malaysia
Hashim et al. (2015)	Value	+ sign	Postgraduate
	Trust	+ sign	students in
	Image	+ sign	Universiti Utara
	Reputation	+ sign	Malaysia (UUM)
Schlesinger et al. (2016)	Image	+ sign	A Spanish public
	Shared values	+ sign	university
	Trust	+ sign	
	Satisfaction	+ sign	
Ali et al. (2016)	Service quality	+ sign	International
	Image	+ sign	students in three
	Student satisfaction	+ sign	public universities in Malaysia

\*n.s (not significant)

## 2.2 Service quality

In a global higher education environment which is becoming more aggressive and competitive, delivering superior service quality is believed to be a necessity to ensure an education institution's success or failure (Fares et al., 2013; Munizu & Hamid, 2015; Usman et al., 2016).

Most researchers agree that higher education can be regarded as a service and not a product, in which education institutions provide educational services to their customers, or some would say, their students. Educational service is an essential component in the

success of an education institution. Therefore, it is important to ensure that the quality of service being offered to students is of a high standard.

In the education context, it is imperative for the education institution to offer superior service quality as it can be deemed as a competitive advantage, setting their institution apart from competitors. This would be beneficial in terms of new student recruitment (Dib & Alnazer, 2013).

According to Mansori et al. (2014), an education institution offering higher and better quality services from its competitors, would be able to charge higher fees (tuition fees) leading to higher margins of profitability. This is especially applicable for private higher education institution in which their main of operating income is from students' fees.

There is an abundance of research done on service quality in the services marketing literature. The copious research on this construct has resulted in various conceptualizations but scant consensus on a generally accepted definition of service (Ali et al., 2016).

One of the earlier definitions of service quality was presented by Parasuraman et al. (1988) who defined service quality as a customer's evaluation, judgement or disposition in relation to the "superiority" of the service received. In the education context, Nitecki and Hemon (2000) defined service quality in terms of "meeting or exceeding students' expectations."

The pioneers in service quality research, Parasuraman et al. (1985) constructed a service quality model which identified customer's judgement or attitude in the context of service quality through gaps. The five gaps were:

- 1) The Knowledge gap which is not being aware of what customers expect.
- 2) The Standards gap which is incorrect service quality standards being practiced.
- 3) The Delivery gap which is the actual service does not match up to customer's expectations.
- 4) The Communication gap which is when promises do not match delivery expectations of customers.
- 5) The Customer's gap which is overall customer's expectation (based on the other four gaps) and what they perceived they received.

This model is driven by perceptions. The wider the gaps, especially the last gap (customer gap), the customer's inclination to leave/stop using the service/ stop buying a product would increase in tandem. This model helps marketers understand the role that service quality plays in maintaining their customer's loyalty. Parasuraman et al. (1985) identified ten categories for evaluating service quality which they labeled as "Service Quality Determinants". These determinants were incorporated into their service quality scale called SERVQUAL.

SERVQUAL has become the gold standard to be used in measuring service quality over a wide variety of industries (Ali et al., 2014). It is based on measuring the "gaps" between what the customer expects to receive and what they actually received. The measurements have also become synonymous with the dimensions of service quality commonly cited by most researchers, which are empathy, assurance, reliability, tangibles and responsiveness.

While service quality has earned a large amount of attention in the higher education industry, there has been a lack of research on establishing the determining dimensions

from the viewpoint of students. Several studies have attempted to develop and examine service quality models in the context of higher education. One of them is Abdullah (2006), who came up with an original new instrument to measure service quality that try to represent the determining dimensions of service quality in the higher education industry called HedPERF (Higher education Performance only).

The six dimensions are:

- 1) Non- academic aspects. This comprise of items related to responsibilities/duties conducted by non-academic staff that are essential for students to fulfill obligations related to their studies.
- 2) Academic aspects. This comprise of items that are primarily the responsibilities of academic staff.
- 3) Access. This consists of items that are associated with issue of approachability, availability, convenience and ease of contact.
- 4) Reputation. This consists of items that are associated with the importance of higher education institutions in displaying a reputable image to its stakeholders.
- 5) Programme issues. This consists of items that stress the importance of offering a wide range of academic programs which are reputable and with flexible program structure and course syllabus.
- 6) Understanding. This consists of items related to the education institution's ability to understand their student's needs for counseling and health services.

Sultan and Wong (2010) constructed another scale for the higher education context called “The Performance-based Higher Education” which consisted of a 67 item instrument for students to evaluate the service quality they received from their education

institution. This instrument covered eight dimensions, which were capability, semester syllabus, competencies, effectiveness, assurance, dependability, unusual situation management and efficiency. These studies conducted by different researchers suggest that the dimensions of service quality in higher education can vary widely.

### **2.2.1 Relationship between service quality and loyalty**

As this study proposes service quality as a determining factor of student loyalty, this study reviewed literature related to these two constructs to see their relationships.

The review of literature on service quality's effects in the higher education context have revealed that it is a determinant of student loyalty with many studies finding it to have a significant positive direct effect on loyalty (De Macedo Bergamo et al., 2012; Fares et al., 2013; Hennig-Thurau et al., 2001; Munizu & Hamid, 2015; Usman et al., 2016).

However, other researchers such as Brown and Mazzarol (2009); Dib and Alnazer (2013) and Mohammad and Awang (2009) have found results to the contrary.

Due to the mixed results on the direct effects of service quality on student loyalty, it prompted some researchers to investigate its indirect effects (Ali et al., 2016; Leonard et al., 2013; Lin & Tsai, 2008; Mansori et al., 2014; Mohammad & Awang, 2009; Rojas-Mendez et al., 2009; Sultan & Wong, 2013).

One of the earlier researchers to study service quality in the higher education context was Hennig-Thurau et al. (2001). Their relationship quality based student loyalty (RSQL) model had the essential components of relationship marketing placed in the educational situation. In their study, service quality was named as perceived quality of

education and comprised of the mix of curriculum, exams, facilities, administrative services and teaching quality. They found that higher levels of perceived quality of teaching by students would result in higher the levels of student loyalty. Other significant relationships found were between emotional commitment and student loyalty and between quality of education and emotional commitment. Student's trust was found to have no effect on student loyalty.

Hennig-Thurau et al.'s study served as the spring board for the subsequent Higher Education student loyalty models. Subsequent researchers such as Ali et al. (2016); Lin and Tsai (2008); Mansori et al. (2014); Rojas-Mendez et al. (2009) and Sultan and Wong (2013) followed suit by examining the different dimensions of service quality, in the belief that it would provide better diagnostic powers for their models.

Ali et al. (2016) conducted a study amongst international students in three public universities in Malaysia. Their service quality dimensions followed the dimensions as measured by the HedPERF instrument which covered academic aspects, non- academic aspects, program issues, reputation and access. Their findings indicated that all dimensions of service quality had an indirect effect on loyalty via satisfaction. Student satisfaction was also found to have a direct effect on student loyalty which has been confirmed many times in other studies conducted in the education context (De Macdeo Bergamo et al., 2012; Leonnard et al., 2013; Mansori et al., 2014; Munizu & Hamid, 2015). Ali et al.'s study found that service quality had an indirect effect on student loyalty, and not as found by other researcher like Fares et al., 2013; Munizu and Hamid, 2015 and Usman et al., 2016. This indicates that the relationships between service quality and student loyalty is still unclear. Also, it must be noted that the respondents of

this research were International students from public universities in Malaysia. Thus it would be beneficial to see if similar results would be obtained when conducted with respondents who are residents/locals of that particular country in a private educational context.

Lin and Tsai (2008) divided the service quality construct into two dimensions: perceived quality of teaching services and perceived quality of administrative services. Their findings indicated that quality of teaching services had direct causation on student loyalty, whilst perceived quality of administrative services did not have a direct effect, but only had an effect when mediated by the perceived signal of retention. This indicated that the dimension of teaching is more important than the dimension of administrative services in service quality, which make sense, as students spend a large amount of their time interacting with their lecturers.

The study by Mansori et al. (2014) followed the dimensions prescribed in SERVQUAL which were assurance, empathy, tangibility, reliability and responsiveness. The study concluded that the dimension of tangibility in service quality had the most effect on student loyalty. The findings indicated that tangibility had the strongest influence whether directly or indirectly on students' decision whether to continue studying to higher levels (postgraduate degree) in the same education institution. Satisfaction was also found to be a key antecedent of student loyalty in the Malaysian private higher education context.

Other studies using the dimensions prescribed in SERVQUAL were conducted by Munizu and Hamid (2015) and Leonnard et al. (2013), both conducted in private higher education institutions in Indonesia. Both found that service quality had direct and

indirect effects on loyalty. Both studies indicated that satisfaction is not a prerequisite for service quality to have an effect on student loyalty, as postulated by other studies like Mohamad and Awang (2009). Thus, the inconsistencies in the findings indicate that this area should be researched further. Another important finding is that the researchers found that the effect of service quality via satisfaction on student loyalty was stronger than the effect of service quality directly on student loyalty. They also concluded that the formation of loyalty was more dependent on student satisfaction than service quality. This means that educational institutions should focus on their student's satisfaction levels first, by doing so, they would be able to increase their student's levels of loyalty, at the same time not neglecting their service quality.

Sultan and Wong (2013) study examined the efficacy of service quality's dimensions of academic, administrative and facilities on student loyalty. All were found to have no direct effect on loyalty, and had to be mediated by trust and satisfaction to be significant. This is similar to the findings by Rojas-Mendez et al. (2009) in which service quality in itself had no direct effect on positive student behavioural intentions and satisfaction was needed to ensure its effect on students' behavioural intentions.

The dimensions of the service quality construct in the study by Rojas-Mendez et al. (2009) in a Chilean public university were instructors, program director, secretaries, service attitude and competence development. Their findings indicated that the dimensions of "people based" were found to be more important than "equipment based," highlighting the importance of the human element in the service transaction in the higher education setting. The study found that the major service quality dimension were instructors (teaching staff), followed closely by the service rendered by university

administrative staff and thirdly, competence development of the students. They found that service quality and student satisfaction does not translate directly into student loyalty, but rather indirectly through the mediation of trust and commitment. This study was similar to the findings by Hennig- Thurau et al. (2001) and Lin and Tsai (2008) in which the teaching/academic staff was the most important dimension in service quality. However, the study by Hennig-Thurau et al. (2001) found service quality had a direct effect on student loyalty, whereas in the study by Rojas-Mendez et al. (2009) it was to the contrary. Thus, there still exists some ambiguity on the relationships between service quality and student loyalty.

De Macedo Bergamo et al. (2012) combined Tinto's "Student integration" model and Hennig- Thurau's "RQSL" model into their own comprehensive model with the main objective to investigate the influence of relationship quality dimensions on the formation of student loyalty in the South American higher education context. They found service quality as the most important variable on loyalty, followed by satisfaction, emotional commitment and trust.

The studies by Fares et al. (2013) and Usman et al. (2016) are almost similar in nature, but conducted in different countries, the former in Malaysia and the latter, in Nigeria. Both examined the direct effect of service quality on student loyalty and postulated as a uni dimensional construct in both studies. Usman et al.'s study indicated that service quality was the strongest predictor of student loyalty, followed by student satisfaction, and then image. This finding is consistent with those of other researchers like De Macedo Bergamo et al. (2012); Leonnard et al. (2013) and Munizu and Hamid (2015). Their finding on satisfaction as a key antecedent on student loyalty is also

similar to those of other researchers like Mohamad and Awang (2009); Rojas-Mendez et al. (2009) and Sultan and Wong (2013). The results from Fares et al.'s study in Malaysia is almost similar to Usman et al.'s study, with service quality being the strongest predictor, followed by student satisfaction and lastly, reputation.

Even though many other researchers have found that service quality had a direct effect on student loyalty, researchers such as Dib and Alnazer (2013), Brown and Mazzarol (2009) and Mohamad and Awang (2009) found results to the contrary.

Brown and Mazzarol (2009) and Dib and Alnazer (2013) found that service quality had no direct or indirect effect on student loyalty.

Brown and Mazzarol's study which was conducted in Australia had the service quality construct divided into two separate dimensions: perception of software quality and perception of hardware quality. Their findings concluded that both perception of software and hardware quality had no direct or indirect effect on student loyalty. Their findings are contrary to previous earlier studies like Hennig-Thurau et al. (2001) and Lin and Tsai (2008).

Dib and Alnazer's (2013) study conducted in Syria, found similar results to Brown and Mazzarol's. Service quality was not a predictor of student loyalty, and satisfaction did not mediate between the relationship of service quality and loyalty. This shed lights on the service quality- satisfaction – loyalty formation process.

Mohamad and Awang's (2009) study in the Malaysian public higher education context found that service quality did not have a direct effect on loyalty, but had to be mediated by satisfaction. This finding is contrary to researchers like Brown and Mazzarol (2009) and Dib and Alnazer (2013). Thus, the findings in these three studies

suggests that the relationships between service quality and student loyalty is still unclear and should be examined further.

The summary presentation of the selected literature (from earliest to latest) with regards to the discussion above is presented in Table 2.2.

This section has discussed about the relationships between service quality and student loyalty (direct or indirect), in various countries (Malaysia; Taiwan; Nigeria; Syria; Australia; Indonesia; Germany and South America), in various types of education institutions (public; private; colleges; business schools and universities) and different types of respondents (undergraduates and postgraduates). Thus, based on the above discussions, this study proposes that incorporating service quality as a determining variable on student loyalty would introduce a research framework which has meaningful diagnostic competence.

Table 2.2

*Summary of selected literature on the effects of service quality on loyalty*

Author(s)	Independent variables	Results	Context
Hennig-Thurau et al. (2001)	Trust	+ sign	Students from various
	Service quality	+ sign	German universities
	Goal commitment	+ sign	
	Emotional commitment	+ sign	
	Cognitive commitment	+ sign	
Lin & Tsai (2008)	Perceived quality of teaching services (QTS)	+ sign	Business administration undergraduates in a Taiwan
	Perceived others retention	+ sign	university
	Perceived quality of administration services (QAS)	+ sign	
	Perceived signal of retention (PSR)	+ sign	

Table 2.2 (Continued)

Rojas-Mendez et al. (2009)	Service quality	+ sign	Undergraduates in a business college in a Chilean university
	Trust	+ sign	
	Satisfaction	+ sign	
	Commitment	+ sign	
Mohamad & Awang (2009)	Service quality	n.s	Universiti Teknologi Malaysia (UiTM) business undergraduates
	Image	+ sign	
	Satisfaction	+ sign	
Brown & Mazzarol (2009)	Service quality (hardware and software)	n.s	Students from four different universities in Australia
	Image	+ sign	
	Perceived value	+ sign	
	Satisfaction	+ sign	
De Macedo Bergamo et al. (2012)	Service quality	+ sign	Business undergraduates in a university in Sao Paulo, South America
	Satisfaction	+ sign	
	Trust	+ sign	
	Commitment	+ sign	
Fares et al. (2013)	Service quality	+ sign	International Islamic University (IIUM) in Malaysia
	Reputation	+ sign	
	Satisfaction	+ sign	
Leonard et al. (2013)	Service quality	+ sign	Students from a private college in Jakarta, Indonesia
	Image	+ sign	
	Tuition fees	+ sign	
	Satisfaction	+ sign	
	Trust	+ sign	
	Facilities	+ sign	
	Image of university	+ sign	
	Image of study program	+ sign	
Dib & Alnazer (2013)	Service quality	n.s	Undergraduates and post graduate business students in a university in Syria
	Perceived value	n.s	
	University image	+ sign	
	Satisfaction	+ sign	
Sultan & Wong (2013)	Service quality	+ sign	Post graduate and under graduate students at a university in Australia
	Trust	+ sign	
	Satisfaction	+ sign	
	Brand performance	+ sign	
	Information	+ sign	
	Past experiences	+ sign	
Mansori et al. (2014)	Service quality	+ sign	Students from various private universities and colleges in Kuala Lumpur
	Satisfaction	+ sign	

Table 2.2 (Continued)

Munizu & Hamid (2015)	Service quality Student satisfaction	+ sign + sign	Economic students in four private colleges in Makasar, South Sulawesi
Usman et al. (2016)	Service quality Student satisfaction University image	+ sign + sign + sign	Students from six public universities in Nigeria
Ali et al. (2016)	Service quality Student satisfaction Image	+ sign + sign + sign	International students in three public universities in Malaysia

\*n.s (not significant)

### 2.3 Reputation

In the globalized world, it has become increasingly crucial for higher education institutions to have a strong reputation so that they may stand out from their competitors. This is especially important in the highly competitive private higher education industry where the competition for students is stiff. Having a strong reputation in your stakeholder's minds will have an impact on students' loyalty as well as attracting new students (Fares et al., 2013; Thomas, 2011).

Most researchers agree that higher education can be regarded as a service and not a product, in which education institutions provide educational services to their customers, or some would say, their students. According to Walsh et al. (2009), the importance of reputation is more important for organizations in the service industry than in the manufacturing industry. This is because reputation becomes particularly important in services when there is little physical or tangible evidence that customers can use to evaluate.

A university which has a strong reputation will be able to attract top class academic staff to their education institution. Having top class faculties will be a strong

marketing point when it comes to recruitment of new students. The high reputation of a university is a source of prestige and can attract student as this prestige would enhance their employability upon graduation (Zabala et al., 2005).

Awang and Jusoff (2009) state that the existing reputation literature has revealed that competing organization which offer the same range of product/services could differentiate themselves from their competitors and stand out, thus creating a competitive advantage for themselves. Therefore, the reputation of an organization is a very important asset. It will give the organization a competitive advantage over its competitors because the organization will be perceived as being reliable, trustworthy and responsible to their stakeholders.

In the educational context, Standifird (2005) state that students form perceptions with regards to their university and their specific program of study. These positive or negative perceptions will have an impact for attracting or retaining students. Thus, he surmises that reputation management is an important factor in student loyalty.

According to Nguyen and LeBlanc (2001a), sectors in the service industry like institutions of higher learning depend largely on their reputation to recruit and keep their student. They postulate that students are more predisposed to purchase the products/services from organizations they perceive as having favourable reputation among their competitors.

Definitions of reputation abound in marketing and psychology literature. Earlier researcher such as Dowling (1986) suggests that although researchers have used different terms to define and describe reputation, an agreement exists on the core foundation of the concept. It is the “result of past actions of an organization.” Reputation

is seen as a reflection of the organization's history. This history communicates information to the organization's stakeholders on the quality of its products/services in contrast with those of its competitors.

MacMillan et al. (2005) state that the majority of definitions of reputation have considered it as the whole perception of all constituents towards an organization. Key words for defining reputation include the total, aggregate or overall perception of a company from its stakeholders after buying or using the products/services of the organization. It reflects the "general esteem" in which an organization is held by its stakeholders

Over the years, marketing academicians and practitioners have offered many definitions of reputation. Most of these definitions can be merged into two dominant schools of thoughts. They are the "analogous school of thought" and the "differentiated school of thought." In the "analogous school of thought", academicians and practitioners view reputation and image as similar or alike. In the "differentiated school of thought", image and reputation are considered to be different, and could also be interrelated, (Gotsi & Wilson, 2001).

An overview is depicted in Figure 2.4.

Schools of thought	Relationship between corporate reputation and corporate image
<i>Analogous school of thought</i> (Bernays, 1977; Boorstin, 1961; Boulding, 1973; Budd, 1969; Crissy, 1971; Enis, 1967; Gates and McDaniel, 1972; Kennedy, 1977; Martineau, 1958; Schafhauser, 1967 and later on, Abratt, 1989; Alvesson, 1998; Bernstein, 1984; Dichter, 1985; Dowling, 1986, 1993; Dutton et al., 1994)	Corporate reputation ≡ Corporate image
<i>Differentiated school of thought</i> 1st view (Brown and Cox, 1997; Brown and Dacin, 1997; Grunig, 1993; O'Sullivan, 1983; Semons, 1998)	Corporate reputation ≠ Corporate image
2nd view (Mason, 1993)	Corporate reputation → Corporate image
3rd view (Balmer, 1996, 1997; Bromley, 1993; Fombrun, 1996; Fombrun and Shanley, 1990; Gray and Balmer, 1998; Rindova, 1997; Saxton, 1998)	Corporate reputation ← Corporate image

Figure 2.4

*Defining corporate reputation: the analogous and differentiated school of thought (Gotsi & Wilson, 2001).*

Gotsi and Wilson (2001) state that after having reviewed the literature, there is greater support for the “differentiated school of thought”, which view reputation and image as different but interrelated.

Gotsi and Wilson (2001) summarized the common elements amongst the different definitions of reputation as characteristics of reputation. They found that reputation takes time to construct and control. It is a dynamic concept and a reciprocal relationship exists amongst the concepts of image and reputation. Reputation relies heavily on daily images

that the organization's stakeholders form of an organization which are based on the organization's communication, symbols and communication. It shows an organization's perceived ranking in the market place compared to its competitors. The same organization will have different reputations from its different stakeholders.

Based on the common elements found in literature, they concluded the following definition, "A corporate reputation is a stakeholder's overall evaluation of a company over time. This evaluation is based on the stakeholder's direct experiences with the company, any other form of communication and symbolism that provides information about the firm's actions and/or a comparison with the actions of other leading rivals." (Gotsi & Wilson, 2001).

Fombrun et al. (2000) defined reputation as the collective picture of an organization's previous behaviour and outcomes. It depicts the organization's capability to provide the desired results to its numerous constituents. It calibrates an organization's internal position with its employees and externally with its other constituents. They conclude that reputation is the cumulative judgement of an organization's capability to deliver the desired results to a representative group of constituents.

There has been varying views on the dimensionalities of the reputation construct. Formbrun et al. (2000) postulated six dimensions to be used for measuring reputation: 1) products and services, 2) emotional appeal, 3) financial performance, 4) vision and leadership, 5) social and environmental responsibility, and 6) workplace environment.

Walsh and Beatty (2007) conceptualized their dimensions of reputation from the view point of customers of service firms. It consists of: 1) customer orientation dimension which relates with perception of customers with regards to the firm's

employees willingness to satisfy customer needs, 2) good employer dimension is related to perception of how the firm treats its employees, 3) financially strong and reliable dimension is related to the customer's perception of the company in terms of profitability and sound use of financial resources, 4) product and service quality dimension is related to the customer's perception of the quality, reliability, value and innovation of the firm's products/services, 5) social and environmental responsibilities dimension refers to the customer's beliefs on the firm's positive commitment towards society and the environment.

In the higher education context, Sung and Yang (2009) conceptualized dimensions of reputation as emotional appeal, university management, perceived academic reputation and media reputation.

The dimensions presented by different researchers suggest that the dimensions of reputation can vary widely.

### **2.3.1 Relationship between reputation and loyalty**

As this study proposes reputation as a determining factor of student loyalty, this study reviewed literature related to these two constructs to see their relationships. This section discusses the various studies conducted in various countries in the education industry as well as other industries.

The review of literature has revealed that reputation is a determinant of student loyalty (Fares et al., 2013; Sung & Yang, 2009; Wei & Wonglorasaichon, 2014). However other researchers found that it did not have an effect on loyalty (Barusman,

2014; Thomas, 2011); whilst others found that it had indirect effects (Abd-El-Salam et al., 2013; Nguyen et al., 2013).

In the seminal study conducted by Nguyen and LeBlanc (2001b) in Canada, reputation and image was postulated as a significant predictor of student loyalty. Their study empirically confirmed reputation's efficacy and suggests that loyalty can be influenced by extrinsic characteristics of the product/service and not only by intrinsic characteristics of the product/service as previously thought by earlier researchers. They concluded that it was imperative for institutions of higher learning to handle and manage their student's expectations on given reputational attributes and student loyalty would be formed when these expectations are met.

Later studies that followed, such as by Fares et al. (2013); Helgesen and Nesset (2007a); Sung and Yang (2009) and Wei and Wonglorsaichon (2014) concur, and confirmed reputation's efficacy on student loyalty.

The study by Helgesen and Nesset (2007a) amongst undergraduate students in a public university in Norway postulated relationships between students' satisfaction and reputation on student loyalty. They found that the perception of the reputation of the university and student's satisfaction was positively related to student loyalty. They also found that students' satisfaction is positively related to the university's reputation as perceived by their students. This suggests that the higher the students' positive perception of the university's reputation, the higher would be their loyalty. This implies that reputation management should be an important strategy for educational institutions to pursue to increase the students' loyalty levels.

Reputation was examined in the Asian higher education context by Fares et al., (2013) in Malaysia, Sung and Yang (2009) in Korea and Wei and Wonglorsaichon (2014) in Thailand.

Sung and Yang (2009) introduced a relationship based loyalty model in which university reputation was one of the studied variables. The findings indicated that the students' perception of the reputation of the higher education institution had a great influence on the student's supportive behavioural intentions (student loyalty). This is similar to the findings from Helgesen and Nessel (2007a) study. However, Sung and Yang's research had an additional aspect, in which the reputation of the university as perceived by its students resulted from the relational outcomes (satisfaction, control mutuality, trust and commitment), not the reverse.

Fares et al. (2013) and Wei and Wonglorsaichon (2014) studies were almost similar with both researchers examining reputation, service quality and student satisfaction on loyalty. Both studies concluded that reputation was a determinant of loyalty in the higher education context. This suggests that a student who has a positive perception about the university reputation will be more inclined to be loyal. Another similarity was that both found satisfaction had a direct impact on student loyalty as well, similar to other researchers in other studies (De Macedo Bergamo et al., 2012; Helgesen & Nessel, 2007a; Thomas, 2011). In Fares et al. (2013) and Wei and Wonglorsaichon (2014) studies, the respondents were international/foreign students. Thus, it would be beneficial to see if similar results would be obtained when conducted with respondents who are residents/locals of that particular country in a private educational context.

Reputation was also a significant determinant on loyalty in other industry as demonstrated by Walsh et al. (2009) study in the energy industry in Germany. Reputation was able to explain 76% of customer loyalty and 92% of the word of mouth construct. Their findings also concluded customer satisfaction had substantial effect on reputation.

However, researchers such as Barusman (2014) and Thomas (2011) have found that reputation did not have a direct effect on student loyalty and had to be mediated by satisfaction to be effective.

Thomas (2011) studied the effect of reputation and satisfaction on student loyalty in several universities in South India. Reputation was viewed from two dimensions: university and course. This is an expansion of the reputation construct from the study done by Helgesen and Nessel (2007a) and Sung and Yang (2009) which only looked at the university reputation. Thomas (2011) examined reputation's direct influence on student loyalty and its indirect influence via student's satisfaction. The findings indicated a strong causal relationship between satisfaction and loyalty, suggesting satisfaction as a major determinant of loyalty. Reputation was found to be positively correlated through an indirect effect. Students who have formed positive perceptions about their university would be predisposed to be more satisfied and subsequently make them more loyal. Contrary to the findings in the research done by Helgesen and Nessel (2007a) and Sung and Yang (2009), reputation was found to have no significant direct effect on student loyalty.

In a similar vein, Barusman (2014) study conducted in five private universities Bandar Lampung, Indonesia, in which the construct of reputation was divided into two:

university and study program. This is similar to the study by Thomas (2011). The study concluded that both university reputation and study program had an effect on satisfaction, and satisfaction had an effect on student loyalty. However, this was not translated for university reputation which did not have effect on student loyalty even though it had an effect on student satisfaction. This implies that reputation has no direct effect on student loyalty and has to be mediated by satisfaction. Students need to be satisfied with the university reputation before it would have an effect on student loyalty. This is similar to the findings by Thomas (2011).

The indirect effects of reputation were studied by other researchers such as Abd-El-Salam et al. (2013) in the transport industry and Nguyen et al. (2013) in the banking industry.

Nguyen et al.'s (2013) study examined the relationships between corporate identity, corporate image and corporate reputation on customer loyalty with the mediating effect of trust. They concluded that corporate reputation was effective when mediated by trust.

Abd-El-Salam et al. (2013) examined the effects of corporate image and reputation and service quality with the mediating effect of satisfaction on customer loyalty. Their findings found that significant and positive relationships exist between corporate image and reputation and customer loyalty. Their study also found that there are significant and positive relationships between satisfaction and corporate image and reputation, and between satisfaction and customer loyalty.

The summary presentation of the selected literature (from earliest to latest) with regards to the discussion above is presented in Table 2.3.

This section has discussed about the relationships between reputation and loyalty (direct or indirect), in various countries (Malaysia; Thailand; Indonesia; Egypt; Norway and Canada), in various types of education institutions (public; private; colleges; business schools and universities), various service industries (banking, transport and energy) and different types of respondents (service customers, undergraduate and postgraduate students). Therefore, based on the above discussions, this study proposes that incorporating reputation as a determining variable on student loyalty would introduce a research framework which has meaningful diagnostic competence.

Table 2.3

*Summary of selected literature on the effects of reputation on loyalty.*

Author (s)	Independent variables	Results	Context
Nguyen & LeBlanc (2001b)	Reputation Image Identity	+ sign + sign + sign	Students from a business school in Canada
Helgesen & Nesset (2007a)	University reputation	+ sign	Norway university
Sung & Yang (2009)	Satisfaction University reputation Active communication Quality educational experience Relational outcomes	+ sign + sign + sign + sign + sign	A private university in South Korea
Walsh et al. (2009)	Reputation Satisfaction Trust	+ sign + sign + sign	Customers of an energy supply company in Germany
Thomas (2011)	Reputation Satisfaction	+ sign + sign	Several universities in South India
Fares et al. (2013)	Reputation Satisfaction Service quality	+ sign + sign + sign	International Islamic University (IIUM) in Malaysia

Table 2.3 (Continued)

Nguyen et al. (2013)	Reputation	+ sign	Banking customers in News Brunswick, Canada
	Image	+ sign	
	Identity	+ sign	
	Trust	+ sign	
Abd-El-Salam et al. (2013)	Corporate image and reputation	+ sign	An International service company in Egypt
	Service quality	+ sign	
	Satisfaction	+ sign	
Barusman (2014)	University reputation	n.s	Four private universities in Bandar Lampung, Indonesia
	Study program reputation	+ sign	
	Image	+ sign	
	Satisfaction	+ sign	
Wei & Wonglorsaichon (2014)	Reputation	+ sign	Foreign students in four universities in Bangkok, Thailand
	Student expectation	+ sign	
	Student satisfaction	+ sign	

\*n.s (not significant)

## 2.4 Relationship benefits

The globalization of educational services coupled with the surge in competition in the private higher education sector has pushed higher education institutions to look at ways to increase their students' loyalty (Carvalho & de Oliveira Mota, 2010).

Many educational marketers are now looking towards the area of relationship marketing to find the required solutions. Managers and administrators are learning from their counterparts in the corporate world that it is more profitable to keep an existing customer rather than to find a fresh/new one. Hence, the management of education institutions are beginning to focus on building strong relationships with their students to achieve loyalty (Adidam et al., 2004; Wong & Wong, 2012).

According to Bowden-Everson and Moore (2012), the concept of strong relational bonding is of importance for the higher education industry since a strong student-institution association could reduce student attrition as well as increase the students'

loyalty towards the institution. Positive outcomes of having strong relational bonds would be positive recommendations, alumni support, continuance of further studies, employment opportunities, etc.

In a similar vein, Hassel and Lourey (2005) postulated that relationship benefits as important in the educational context. They postulated that the Exchange Theory depicts students and the education institution in a reciprocal and restrictive exchange, involving quid pro quo behaviour. Thus, when students pay tuition fees for the services of education, they would expect some form of benefits in exchange.

Similarly, Finney and Finney (2010) stated that students are like every other consumer; they are always looking for some form of benefits in their relationship with their educational institution.

Morgan and Hunt (1994) defined relationship benefits as, “The quality of services and goods relative to other suppliers. Relationship benefits are the superior benefits provided to customers which are highly valued by customers.” They found that relationship benefits included the dimensions of profitability, product performance and customer satisfaction.

Adidam et al. (2004) defined relationship benefits in the education context as the superior benefits offered by an education institution that would influence students to continue their relationships with an education institution. In short, it refers to the quality of services and goods relatives to other options.

The dimensions of relationship benefits may change across industries. Gwinner et al. (1998) provided one of the first systematic empirical works on the dimensions of

relationship benefits. Their study proposed three dimensions of relationship benefits: social benefits, confidence benefits and special treatment benefits.

Hur, Park and Kim (2010) in a study done in the mobile industry proposed four dimensions of relationship benefits. They were:

- 1) Functional benefits which are the practical benefits that partners in the relationship get.
- 2) Economic benefits which are price incentives like discounts.
- 3) Experiential benefits which are affective in nature. It is the feeling of happiness that is obtained from a relationship.
- 4) Symbolic benefits. The improvement of someone's image as a consequence of using the product or a relationship with the service provider.

In the context of the banking industry, Dimitriadis (2010) conceptualized five dimensions of relationship benefits. They were:

- 1) Competence benefits which are related to their banks know how for their financial needs.
- 2) Special treatment benefits which are related to preferential treatment such as better financial rates and services.
- 3) Social benefits which are related to positive emotional proximity between the customer and the employees, feeling of familiarity and proximity.
- 4) Convenience benefits which are related to effectiveness and speed of transactions which results in time saving, and less complexity.
- 5) Benevolence which are related to their trust towards the bank in not exploiting or cheating them.

In the educational context, Adidam et al. (2004); Holford and White (1997) and Wong and Wong (2012) suggested that students would be loyal to their higher education institution if the institution offered them relationship benefits such as superior education quality, location, value for money, beneficial opportunities (internship, exchange programs, company visits, professional seminars) and better job placement opportunities.

#### **2.4.1 Relationship between relationship benefits and loyalty**

As this study proposes relationship benefit as a determining factor of student loyalty, this study strived to review literature related to these two constructs to see their relationships. This section discusses the various studies conducted in various countries in the education as well as other industries.

There is paucity in the literature on the effects of relationship benefits on student loyalty. Inconsistencies in findings also indicate that the relationship between relationship benefits and loyalty is still unclear. The review of literature has revealed that relationship benefits had significant positive direct effect on loyalty (Chen & Hu, 2010; Feng et al., 2015; Hernnig-Thurau et al., 2002, Holford & White, 1997). However other researchers found that it did not have an effect on loyalty (Auruskeviciene et al., 2010); whilst other found that it had indirect effects (Adidam et al., 2004; Dimitriadis, 2010; Wong & Wong, 2012; Chinomona et al., 2014).

The seminal study done by Holford and White (1997) was to examine the “Commitment-Trust theory” in relationships between students and their pharmacy school. They found that the higher the students perceived relationship benefits, the lower

the student's propensity to leave. The model used was similar to Morgan and Hunt's (1994) KMV model and was tested amongst undergraduates at Virginia Commonwealth University School of Pharmacy.

Gwinner et al. (1998) conducted a study amongst service industries in the United States of America. They examined the construct of relationship benefits over three dimensions: confidence benefits, social benefits and special treatment benefits and its' effect on behavioural outcomes (loyalty). The findings concluded that all three dimensions of relationship benefits had a strong relationship with positive behavioural outcomes such as positive word of mouth, continuance of the relationship and satisfaction. The dimensions in order of importance were confidence benefits, social benefits and lastly special treatment benefits. This ranking was found to be same in all three service types: from high contact to low contact.

Patterson and Smith (2001) study was a replication of the research conducted by Gwinner et al. (1998) in the Southeast Asian context. The main motivations for the researchers to conduct their research was not to depend solely on empirical research originating from the West, but instead construct their own marketing models which are suitable for Asian economies. Their study was conducted in Bangkok, Thailand. Their findings corroborated the findings of Gwinner et al. (1998), that all three benefits: confidence, social and special treatments benefits are influential forces. Both U.S and Thai consumers prize relationship benefits as an important determinant of loyalty. This aids the generalizability of the findings across the East-West cultural boarders. They found that Thai consumers valued special treatment benefits while their U.S counterparts valued confidence benefits. This is consistent with Thai culture in which relational

outcomes are important in a collectivistic culture. The dimensions in the relationship benefits construct were ranked as follows: special treatment benefits, followed by confidence and lastly social benefits.

Hennig-Thurau et al. (2002) model of customer loyalty conducted in Germany was an expansion of Gwinner et al.'s (1998) study, in which they expanded the dependent variable into two: customer loyalty and word of mouth. They also added other important relationship marketing variables such as satisfaction and commitment which acted as mediators in their model. The dimensions of relationship benefits and service types were similar to the ones used in the research by Gwinner et al. (1998). The findings indicated that the predictors of customer loyalty were satisfaction, commitment, confidence benefits and social benefits. Not surprisingly satisfaction has the strongest effect, followed by commitment, social benefits and lastly confidence benefits. Special treatment benefits were found to have no effect on loyalty, which is contrary to results found by Patterson and Smith (2001). It was determined to have no significance on customer loyalty even through the mediation of satisfaction and commitment respectively. For the word of mouth construct, both satisfaction and commitment had significant impact.

Chen and Hu (2010) developed a loyalty model which incorporated relationship benefits as a determinant. Their dimensions of relationship benefits are akin to the ones by Gwinner et al. (1998) which were special treatment benefits, social benefits and confidence benefits. The researchers examined the direct and indirect effect of relationship benefits on customer loyalty. Their findings concluded that relationship benefits had both direct and indirect effect on customer loyalty, via the mediation of

value. The indirect effects are similar to those found by Adidam et al. (2004) via the mediation of commitment. This suggests that value and commitment are important relationship marketing constructs which can be used to enhance loyalty.

Feng et al. (2015) examined relationship benefits on customer loyalty amongst consumers in a service industry (restaurant and hairdressing) in Beijing, China. The dimensions of relationship benefits were similar to those espoused by Gwinner et al. (1998) which were special treatment benefits, social benefits and confidence benefits. The findings concluded that relationship benefits had a positive effect on customer loyalty, and the dimensions ranked in order of importance were confidence benefits followed by social benefits. Special treatment benefits were found to have no effect on customer loyalty. This is similar to the findings of Hennig-Thurau et al. (2002) but contrary to the findings of Patterson and Smith (2001) which found special treatment benefits to be most influential on customer loyalty. Even though Feng et al.'s study was conducted in the Asian context, as was Patterson and Smith's, the results were different. This suggests that the relationship benefits construct is sensitive towards cultural, indigenous and individual factors which temper its effects on loyalty.

Even though many other researchers had found that relationship benefits had a direct effect on loyalty, Auruskeviciene et al. (2010) found results to the contrary. Their study amongst customers of an international IT company in Lithuania wanted to study the dimensions in relationship quality which had effect on customer loyalty. The dimensions of relationship benefits in their study consisted of social benefits and special treatment benefits. The findings concluded that social benefits and special treatment benefits had no effect on customer loyalty. These findings are different from other

researchers, who have found relationship benefits to have a direct effect on student loyalty (Gwinner et al., 1998; Holford & White, 1997). However, on the part of special treatment benefits, their findings are similar to those found by Hennig- Thurau et al. (2002) which found that it did not have any effect on loyalty. Again, this is different from the findings by Patterson and Smith (2001) which found that special treatment benefits was the most influential on customer loyalty in the Southeast Asian context. Thus, the findings show that the relationships between relationship benefits and loyalty are still unclear and should be examined further.

The indirect effects of relationship benefits were examined by many different researchers (Adidam et al., 2004; Chinomona et al., 2014; Dagger et al., 2011; Dimitriadis, 2010; Wong & Wong, 2012).

The study conducted by Adidam et al. (2004) examined the “Commitment-Trust theory” in relationships between students and their universities. The model used was similar to Morgan and Hunt’s (1994) KMV model and was tested amongst business undergraduates in three Midwestern universities in the US. Their findings concluded that relationship benefits when mediated by commitment was the most important determinant of loyalty, followed by shared values and lastly, by termination cost. The findings corroborated relationship marketing literature that relationship benefits and commitment are important variables which would affect student loyalty.

Dimitriadis (2010) examined relationship benefits on loyalty via the mediating effect of satisfaction in the banking industry in Athens, Greece. Their dimensions of relationship benefits were adapted from the ones by Gwinner et al. (1998) but with two additional ones to fit the needs of the banking industry. Thus, the dimension of

relationship benefits for this study comprised of social benefits, special treatment benefits, competence benefits, convenience benefits and benevolence benefits. Their loyalty construct was divided into three: word of mouth, intention to continue and cross buying. The findings from this study found that only competence and convenience showed a significant impact on behavioural outcomes via the mediation of satisfaction. There was no direct relationship between all the five dimensions of relationship benefits on behavioural outcomes (loyalty). This is contrary to the findings by researchers like Gwinner et al. (1998); Hennig- Thurau et al. (2002) and Holford and White (1997).

Dagger et al. (2011) study in Australia found that all three dimensions of relationship benefits through the mediation of commitment had significant effects on customer loyalty. The findings concluded that organizations must provide and focus on relationship benefits and the most important dimension was confidence benefits. As this study was conducted across a range of service industries such as doctors, travel agents, printing services and hair dressers, it is not surprising that confidence benefits was the most important, as customers using these types of services would want to face the smallest amount of risk, feel that they are in reliable hands and happy in the relationship with the provider.

In a similar vein, Wong and Wong (2012) examined the mediating effect of commitment on the relationship between relationship benefits and loyalty in the Hong Kong higher education context. They concluded that relationship benefits through the mediation of commitment had significant effects on student loyalty. The main contribution of this study was the validation of marketing variables such as relationship benefits and shared values in the higher education context. Another important

contribution was the insignificance of trust in the formation of loyalty, contrary to findings in previous education research in other countries, primarily in the West. The findings of this research indicated that researchers should not depend solely on empirical research originating from the West, but strive to construct reliable marketing models for the Asian culture as well.

A study by Chinomona et al. (2014) examined the effect of relationship benefits and shared values on loyalty with the mediating effect of trust and commitment in the banking industry in South Africa. Consistent with previous studies from Adidam et al. (2004); Dagger et al. (2011) and Wong and Wong (2012), the findings indicated that relationship benefits had indirect effects on customer loyalty via the mediation of trust and commitment. They also found that trust had a significant direct effect on loyalty, unlike Wong and Wong's (2012) study in the education context. As this study was conducted in the banking industry, the findings are logical and congruent with the context.

The summary presentation of the selected literature (from earliest to latest) with regards to the discussion above is presented in Table 2.4.

This section has discussed about the relationships between relationship benefits and loyalty (direct or indirect), in various countries (Malaysia; Thailand; Hong Kong; China; Australia; South Africa; Lithuania; Germany; Greece, USA and Canada), in various types of education institutions (public; private; universities, business school, pharmacy school), various service industries (banking, IT and coffee outlets, ) and different types of respondents (service customers, undergraduate and postgraduate students). Therefore, based on the above discussions, this study proposes that

incorporating relationship benefits as a determining variable on student loyalty would introduce a research framework which has meaningful diagnostic competence.

Table 2.4

*Summary of selected literature on the effects of relationship benefits on loyalty.*

<b>Author(s)</b>	<b>Independent variables</b>	<b>Results</b>	<b>Context</b>
Holford & White (1997)	Relationship benefits Termination cost Shared values Communication Opportunistic behaviour Commitment Trust Acquiescence Propensity to leave Cooperation Functional conflict Uncertainty reduction	+ sign + sign	Pharmacy students in a university in Virginia, United States
Gwinner et al. (1998)	Confidence benefits Social benefits Special treatment benefits	+ sign + sign + sign	Various service companies in the United States of America
Patterson & Smith (2001)	Special treatment benefits Confidence benefits Social benefits	+ sign + sign + sign	Various service companies in Bangkok, Thailand
Hennig-Thurau et al. (2002)	Confidence benefits Social benefits Special treatment benefits Satisfaction Commitment	+ sign + sign n.s + sign + sign	Various service companies in Germany

Table 2.4 (Continued)

Adidam et al. (2004)	Relationship benefits	+ sign	Business undergraduates in three Midwestern universities in the US
	Shared values	+ sign	
	Trust	+ sign	
	Propensity to leave	+ sign	
	Opportunistic behaviour	+ sign	
	Termination cost	+ sign	
	Functional conflict	+ sign	
	Uncertainty	+ sign	
	Communication	+ sign	
	Commitment	+ sign	
Auruskeviciene et al. (2010)	Special treatment benefits	n.s	Customers of an international IT company in Lithuania
	Social benefits	n.s	
	Technical quality	n.s	
	Communication	n.s	
	Functional quality	+ sign	
	Trust	+ sign	
	Commitment	+ sign	
Dimitriadis (2010)	Satisfaction	+ sign	Customers from four banks in Athens, Greece
	Competence benefits	n.s	
	Benevolence benefits	n.s	
	Special treatment benefits	n.s	
	Social benefits	n.s	
	Convenience benefits	n.s	
Chen & Hu (2010)	Relationship benefits	+ sign	Customers of coffee outlets in Melbourne, Australia
	Perceived value	+ sign	
Dagger et al. (2011)	Relationship benefits	+ sign	Consumers in various service industries in Australia
	Relationship maintenance	+ sign	
	Commitment	+ sign	
Wong & Wong (2012)	Relationship benefits	+ sign	Undergraduates in a university in Hong Kong
	Relationship termination costs	+ sign	
	Shared values	+ sign	
	Trust	n.s	
	Commitment	+ sign	

Table 2.4 (Continued)

Chinomona et al. (2014)	Relationship benefits Shared values Trust Commitment	+ sign + sign + sign + sign	University students who were customers of five major banks in Johannesburg, South Africa
Feng et al. (2015)	Relationship benefits Confidence benefits Social benefits Special treatment benefits	+ sign + sign + sign n.s	Consumers in various service industries in Beijing, China

\*n.s (not significant)

## 2.5 Satisfaction

In the highly competitive and globalized higher education industry, satisfaction is a worthy construct to be studied further due to its significant causal relationship with student loyalty (Ali et al., 2016; Dib & Alnazer, 2013; Leonnard et al., 2013; Mansori et al., 2014; Mohamad & Awang.2009; Schlesinger et. al., 2016).

To date, researchers have yet to agree on the definition of satisfaction. In general, commons definitions refer to an “evaluative”, “affective” or “emotional” feelings that have developed through the consumer’s encounters with a product/service over time (Giese & Cote, 2002).

Earlier researchers like Oliver (1997) have defined satisfaction as the customer’s contentment response after using the product/service of an organization. It is a judgement that the product/service has given the customer a certain gratifying and satisfying level of contentment.

In the education context, different researchers have defined student satisfaction in numerous different interpretations. One of the earliest definitions was from Alpert (1996) who defined it as the student’s fleeting or momentary attitude that emerges from the student’s assessment of their educational experience with the education institution.

In a similar vein, Elliott and Healy (2001) concur and define it in similar terms. Elliott and Shin (2002) define student satisfaction as a personal outcome established on the student's various cumulative experiences at the education institution. Jurkowitsch et al. (2006) defined it as a student's fulfilment response. It is the student's overall personal evaluation and experiences of the university's product/services, the product/services itself and between what was received and what expected from the university to date.

The satisfaction concept occupies a dominant position in marketing literature due to its importance and benefits for an organization. In the educational context, it is important for the education institution to ensure high levels of student's satisfaction as it acts as an performance indicator on the delivery of its' service towards their customers (Barnet, 2011).

In terms of benefits, student satisfaction has been strongly linked to many favourable outcomes for a higher education institution. Borden (1995) found a positive relationship between satisfaction and student retention levels. The greater the satisfaction levels in the student's first year of study, the greater the student's motivation to complete his/her degree and not drop out. Similarly, Shah (2009) suggests that satisfied students increased the student retention rate. Thus, these satisfied students represent a steady stream of income for an education institution because they increased revenue and reduced costs. Mavondo, Tsarenko and Gabbot (2004) found that satisfied students were more likely to contribute towards positive word of mouth and positive recommendation (a sign of attitudinal loyalty). Al-Alak (2006) and Helgesen and Nessel (2007) opines that the relationship longevity between student and education institution

could be extended when satisfied students return to continue their studies (post graduate or other professional courses) (a sign of behavioural loyalty).

### **2.5.1 Relationships between satisfaction, service quality, reputation, relationship benefits and loyalty**

As this study proposes satisfaction as a mediator on the relationships between the independent variables (service quality, reputation and relationship benefits) with the independent variable (student loyalty), this study reviewed the literature related to these constructs to see their relationships. This section discusses the various studies conducted in various countries in the education as well as other industries (as there is a dearth of research on reputation and relationship benefits in the education context) from the earliest to the latest in relation to the key findings and contributions of these studies. The first section discusses the direct relationship between satisfaction and loyalty, the second section covers the relationships between satisfaction, service quality and loyalty, the third discusses the relationships between satisfaction, reputation and loyalty and the last section covers the relationships between satisfaction, relationship benefits and loyalty.

#### **2.5.1.1 Relationship between satisfaction and loyalty**

The review of literature has shown that satisfaction is a predictor variable of loyalty in the higher education context. Numerous researchers have confirmed a positive and significant influence of satisfaction on student loyalty (Ali et al, 2016; Leonnard et al, 2013; Mansori et al., 2014; Schlesinger et al., 2016; Thomas, 2011).

Thomas (2011) studied the effect of reputation and satisfaction on student loyalty in several universities in South India. The findings indicated a significant causal relationship exists between satisfaction and loyalty. This suggests that student satisfaction is a critical causal factor of student loyalty.

Leonard et al. (2013) conducted their study in Indonesia amongst students in a private college in Jakarta, Indonesia and validated the significant influence of satisfaction on student loyalty.

As our study is focused on private universities, university colleges and colleges in Malaysia, the study by Mansori et al. (2014) is most significant. The objective of their study was to examine the determinants of service quality (SERVQUAL) and the relationship these determinants had with student loyalty. Their study achieved the objective of validating service quality with loyalty as well as the empirical validation of satisfaction as an antecedent of student loyalty.

Schlesinger et al. (2016) in their study conducted in Spain confirmed the causal relationship between satisfaction and student loyalty. Their model was adopted from the relationship marketing perspective and indicated that key determinants of loyalty were shared values, satisfaction and trust.

The study by Ali et al. (2016) conducted amongst International students in three public universities in Malaysia confirmed satisfaction as a key determinant of student loyalty. Student satisfaction had a direct effect on student loyalty. Their results imply that students that are more satisfied are more loyal to their education institutions.

Besides being a predictor of loyalty, the review of literature has found that satisfaction functioned as an antecedent on independent variables of this study

(reputation) and mediator (service quality, reputation and relationship benefits). The subsequent sections discussed in details these relationships.

### **2.5.1.2 Relationships between satisfaction, service quality and loyalty**

The mixed results on the effects of service quality on student loyalty prompted some researchers to investigate the mediating effect of satisfaction on this relationship. The study by Mohamad and Awang (2009) in Malaysia tested the mediating effect of satisfaction on the relationship between service quality and student loyalty. Their study provided empirical evidence that satisfaction was a major antecedent of student loyalty, and service quality was an antecedent of satisfaction. Student loyalty is formed when students are satisfied with the service quality offered by the education institution.

Dib and Alnazer (2013) proposed a student loyalty model consisting of service quality, university image and perceived value with the mediating effect of satisfaction. Their findings indicated that student's had to be satisfied to be loyal. Service quality was found not to be an antecedent of satisfaction. This shed lights of the service quality-satisfaction-loyalty formation process, meaning that service quality would not be required to be present to have satisfied and loyal students, satisfaction was required to ensure loyal students and that satisfaction does not mediate between the relationship of service quality and loyalty. This is contrary to the findings by Mohamad and Awang (2009) which found that service quality would only have an effect on loyalty when students are satisfied.

The study by Munizu and Hamid (2015) examined the relationships between service quality, satisfaction and student loyalty. The researchers determined that service

quality had a direct and indirect effect on student loyalty. Their findings indicated that satisfaction was not a prerequisite for service quality to have an effect on student loyalty, as postulated by Mohamad and Awang (2009). Another important finding was that the researchers found that the indirect effect of service quality via satisfaction on student loyalty was stronger than the effect of service quality directly on student loyalty, which was similar to the findings by Leonnard et al. (2013) which found that the higher the student's level of satisfaction towards service quality, the higher the student's loyalty level. Munizu and Hamid (2015) concluded that the formation of loyalty was more dependent on student satisfaction than service quality.

### **2.5.1.3 Relationships between satisfaction, reputation and loyalty**

Walsh et al. (2009) wanted to clear up the ambiguity of whether reputation was a predictor or consequence of other variables. Many researchers have confirmed reputation as a major predictor of loyalty (Fares et al., 2013; Helgesen & Nessel, 2007a; Nguyen & LeBlanc, 2001b; Sung & Yang, 2009). However, these researchers had not assessed whether reputation was a consequence of some other variables. A general assumption existed that when the stakeholders estimation were more favourable, the more positive the stakeholders' attitude, action and behaviour towards the organization. This prompted the researchers to hypothesize that satisfaction was an antecedent of reputation. The findings of their study conducted amongst customers of an international energy supply company in Germany found that satisfaction was an antecedent of reputation and that reputation was an antecedent of loyalty. Their findings concluded that there was a causal association between the satisfaction-reputation relationship. Their

findings confirmed that reputation be deemed as a predictor of loyalty and a consequence of satisfaction. This implied that a customer must be satisfied first with an organization, before an organization would have a positive reputation.

Satisfaction has also been found to be mediator between the reputation-loyalty relationship (Abd-El-Salam et al., 2013; Barusman, 2014; Helgesen & Nessel, 2007a; Thomas, 2011).

Thomas (2011) studied the effect of reputation and satisfaction on student loyalty in several universities in South India. They concluded that reputation had no direct effect on student loyalty and had to be mediated by satisfaction. This suggests that students who have positive perceptions about their institutions is likely to feel more satisfied which in turn will make them more loyal.

Abd-El-Salam et al. (2013) examined the effects of corporate reputation and image and service quality with the mediating effect of satisfaction on customer loyalty in an Egyptian international service company. They concluded that there was a positive association between satisfaction and corporate reputation and image, and between satisfaction and customer loyalty. This implies that a causal association exists between the satisfaction - reputation- loyalty relationship.

The study by Barusman (2014) examined the effects of university reputation, study program reputation, university image and satisfaction on student loyalty in five private universities Bandar Lampung, Indonesia. Their reputation was divided into two: university reputation and study program reputation. They found that both university reputation and study program has a positive effect on satisfaction and subsequently satisfaction has a positive effect on student loyalty. However, university reputation did

not have an effect on student loyalty even though it had an effect on student satisfaction. This implies that reputation had no direct effect on student loyalty and had to be mediated by satisfaction. Student need to be satisfied with the university reputation before it would have an effect on student loyalty. This is similar to the findings by Thomas (2011).

Helgesen and Nessel (2007a) examined the effect of satisfaction on the relationship between reputation and student loyalty. The respondents for their study were undergraduates in a public university in Norway. Their study found that the reputation of the university and student's satisfaction was positively associated to student loyalty. It also determined that student satisfaction was positively associated to the reputation of the university. This suggests that when the student's satisfaction levels increase, so does the student's perception of the reputation, which leads to the student's loyalty.

#### **2.5.1.4 Relationships between satisfaction, relationship benefits and loyalty**

Satisfaction has been found to be mediator between the relationship benefits-loyalty relationship. The study by Hennig-Thurau et al. (2002) which was conducted amongst customers from various service companies in Germany determined that satisfaction was the strongest predictor of customer loyalty in their model which comprised other variables such as confidence benefits, social benefits and commitment. Not surprisingly satisfaction had the strongest effect, followed by commitment, social benefits and lastly confidence benefits. Special treatment benefits were found to have no impact on loyalty. Confidence benefits had a strong impact on satisfaction, whereas

social and special treatment benefits both did not have any impact. Through mediation of satisfaction, special treatment benefits still did not have an effect on loyalty. This implies that no causal relationship exists between satisfaction, special treatment benefits and customer loyalty. Confidence benefits as a direct effect on customer loyalty might not be as strong as other variables, but through the mediation of satisfaction, it had the second highest total effect of loyalty amongst the constructs in the model.

Dimitriadis (2010) studied relationship benefits on loyalty via the mediating effect of satisfaction in the banking industry in Athens, Greece. The dimension of relationship benefits for this study comprised of social benefits, special treatment benefits, competence benefits, convenience benefits and benevolence benefits. This study found satisfaction had a significant effect on behavioural outcomes (loyalty). The findings found that no direct relationship exists between all the five dimensions of relationship benefits on behavioural outcomes (loyalty). Through the mediation of satisfaction, only competence and convenience showed a significant impact on behavioural outcomes (loyalty). This sheds light on the relationship benefits-satisfaction-loyalty relationship, in which implies that customers must be satisfied with the relationship benefits that they receive before loyalty can be formed.

#### **2.5.1.5 Summary of relationships between satisfaction, service quality, reputation, relationship benefits and loyalty**

The preceding sections have discussed about the relationships between satisfaction, service quality, reputation, relationship benefits and loyalty. These relationships have been highlighted and discussed. Therefore, based on the above discussions, this study

proposes that incorporating satisfaction as a mediating variable on the relationships between service quality; reputation and relationship benefits on student loyalty would introduce a research framework which has meaningful diagnostic competence.

## **2.6 Underpinning theory**

This study is anchored on Social Exchange Theory (SET). According to Wangenheim (2003), SET has been identified as a useful theoretical basis for explaining the formation of loyalty.

The theory proposes that an exchange relationship develops between two parties when one party provides a benefit to the other party resulting in the other party reciprocating with something beneficial. In other words, social exchange relationships are formed when the first party supplies benefits to the second party which obligates him/her. To discharge this obligation, the second must furnish benefits to the first in turn. The exchange of benefits could involve a wide range, such as services, money or even social emotional benefits such as prestige, respect and loyalty (Blau, 1964).

Blau (1964) described relationships, or “social associations,” as “an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons.” He went on to distinguish two specific kinds of relationships: social and economic exchanges. Social exchanges represent a more invested relationship that is based on and motivated by obligatory exchanges of unspecified favours and benefits, over an open-ended and long-term time frame. In contrast, economic exchanges represent a less invested and more contractual relationship where benefits and repayment schedules are clearly specified.

This theory is suitable for this study because it can explain the role of service quality, reputation, relationship benefits and satisfaction in the loyalty formation process.

As the theory argues, individuals direct their reciprocation efforts towards the source from which benefits are received, it would be interpreted that when the higher education institution provides benefits such as service quality, reputation and relationship benefits that satisfy their students, their students would be obliged to reciprocate by exhibiting loyal behaviour to the higher education institution (Chiu-Han & Sejin, 2011).

As most researchers like De Macedo Bergamo et al., 2012; Fares et al., 2013 and Hennig-Thurau et al., 2001 agree, higher education can be regarded as a service and not a product, it would be imperative for education institutions to offer superior service quality to their students. In this context, SET is appropriate because service encounters can be viewed as social exchanges with the interaction between service provider (interpreted as the higher education institution) and customer (interpreted as student) being a crucial component for providing a strong reason for continuing a relationship (interpreted as behavioural loyalty) (Kinoti & Kibeh, 2015).

In SET, both Blau (1964) and Homans (1958) presented the concept of exchange which is not only limited to material goods but also include symbolic value such as approval and prestige. Prestige and reputation are one of the same (synonym), in which prestige is the preferred term in sociology, and reputation is the marketing term (Shenkar & Yuchtman-Yaar, 1997). In applying SET in this study, reputation is interpreted as the exchange of prestige benefits between the higher education institution and the students.

The higher the reputation of the higher education institution, the higher the prestige benefits the students perceive they receive. In line with SET, the students would reciprocate by exhibiting behaviour that is beneficial for the higher education institution (interpreted as attitudinal and behavioural loyalty).

Relationship benefits is deemed another salient factor for reciprocal parties to remain in an exchange relationship. Consistent with SET, students would remain in the relationship (interpreted as behavioural loyalty) if the relationship benefits the students perceive they received compensates them for the cost of the on-going reciprocal relationship (Foa & Foa 1974). In a similar vein, Hassel and Lourey (2005) postulate that SET depicts students and the higher education institution in a reciprocal and restrictive exchange, involving quid pro quo behaviour. Thus, students that receive relationship benefits that they perceive are of benefit to them, they would reciprocate by exhibiting behaviour that is beneficial for the higher education institution (interpreted as attitudinal and behavioural loyalty).

As to the role of satisfaction in the context of SET, students who perceive that they received benefits that meet or exceed their expectation are more likely to remain in the relationship (interpreted as behavioural loyalty) (Thibaut & Kelly, 1959).

In line with SET, over time, based on this reciprocity, the relationship between the student and his/her higher education institution would evolve into a loyal relationship (Cropanzano & Mitchell, 2005).

## 2.7 Summary of the chapter

The review of literature has provided this study with a clearer understanding of the loyalty construct, its antecedents and its importance for Private HEIs in the higher education context. This chapter furnished the critical arguments, relevant knowledge and information necessary for the construction of the research framework as well as the formation of the hypotheses in the coming chapter.



## CHAPTER 3

### METHODOLOGY

#### 3.0 Introduction

This chapter describes the construction of the research framework and hypotheses development. Methodology covers the research design, operationalization and measurement of variables, population and sample, sample frame, sample size, sampling design, data collection procedures, data analysis techniques and pilot study. The summary of the chapter is provided at the end.

#### 3.1 Research framework

The main objective of this study is to determine the factors that influence students' loyalty in Private Higher Education Institutions in Malaysia while examining the mediating effect of satisfaction on these factors.

The literature review related to this subject matter led this study to suggest that students' loyalty can be determined by service quality, reputation and relationship benefits. Satisfaction mediates the relationship between service quality, reputation and relationship benefits with students' loyalty.

The research framework of this study is illustrated in Figure 3.1. The research framework illustrates the postulated relationships between the constructs. This study has five constructs, namely student loyalty as the dependent variable, service quality, reputation and relationship benefits as the dependent variables and satisfaction as the

mediator variable. In total, nine hypotheses have been formulated for testing and validation.

Social Exchange Theory (SET) is the underpinning theory as it has been empirically used by other researchers to explain the formation of loyalty (Kinoti & Kibeh, 2015; Sierra & Mcquitty, 2005). In line with SET, students who are satisfied with the benefits provided by the education institution will feel obligated to reciprocate by increasing their loyalty to the education institution (Blau, 1964).

#### INDEPENDENT VARIABLE

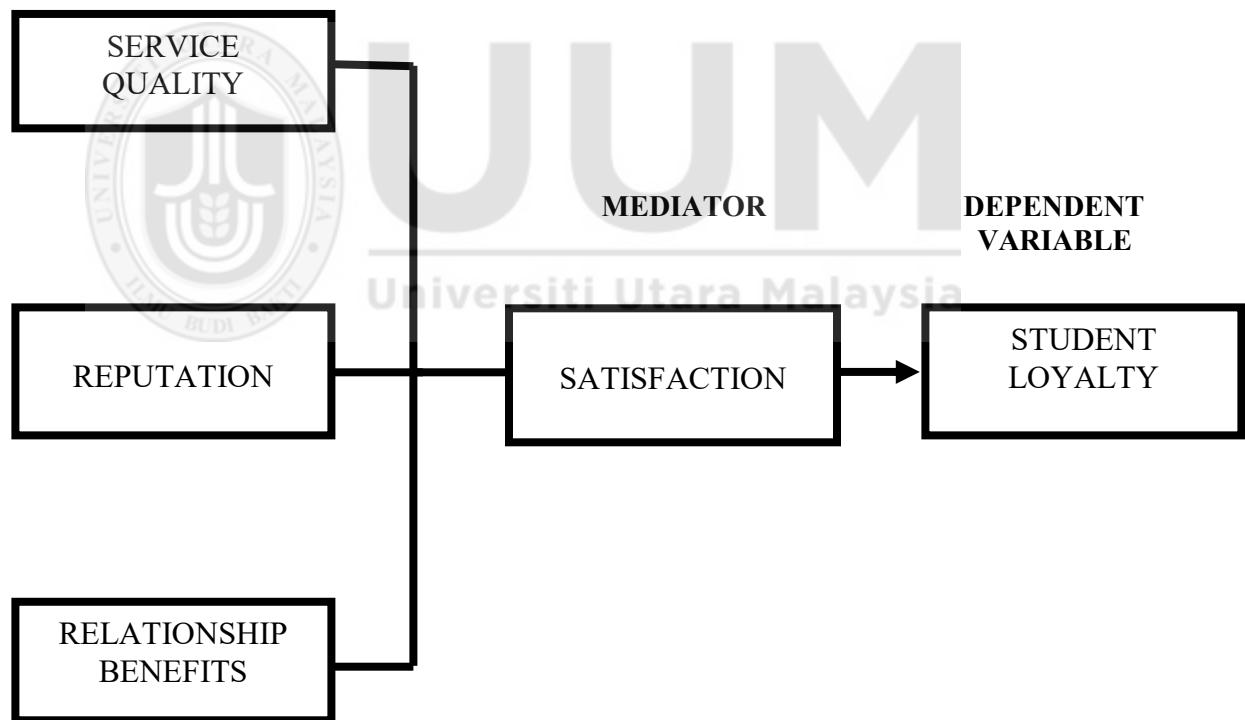


Figure 3.1  
*Research framework of the study*

### **3.2 Hypotheses development**

The hypotheses of this study are formulated based on the research framework as shown in Figure 3.1 above. The following sections address these relationships and their arguments from the literature.

#### **3.2.1 The relationships between service quality, reputation, relationship benefits and students' loyalty.**

Past literature suggests that there are relationships between service quality, reputation, relationship benefits and students' loyalty in the higher education context. Hennig-Thurau et al. (2001) was one of the earliest researchers to confirm that student loyalty is positively correlated to the component of perceived quality of teaching in the service quality construct. Similarly, Rojas-Mendez et al. (2009) concurred, with their study conducted in a Chilean public university. Several researchers have found positive relationships between reputation and loyalty in the higher education context (Helgesen & Nessel, 2007a; Sung & Yang, 2009; Wei & Wonglorsaichon, 2014). As for relationship benefits, researchers such as Adidam et al. (2004); Holford and White (1997) and Wong and Wong (2012) found that relationship benefits had positive relationships with students' loyalty. Therefore, the above discussion has led to the formulation of the first three hypotheses of this study which are as follows:

**Hypothesis 1 (H1)** There is a positive relationship between students' perception of the higher education institution's service quality and their loyalty.

**Hypothesis 2 (H2)** There is a positive relationship between students' perception of the higher education institution's reputation and their loyalty.

**Hypothesis 3 (H3)** There is a positive relationship between students' perception of the relationship benefits between them and the higher education institution and their loyalty.

### **3.2.2 The significant effects between service quality, reputation, relationship benefits and students' loyalty**

The review of literature has indicated that service quality, reputation and relationship benefits as determinants of students' loyalty.

Past studies have recognized the importance of service quality on students' loyalty (Fares et al., 2013; Leonnard et al., 2013). In the education context, superior service quality would provide education institutions with a competitive advantage, setting their institution apart from their competitors as well as the ability to charge higher tuition fees leading to higher margins of profitability (Dib & Alnazer, 2013; Mansori et al., 2014). Since Hennig-Thurau et al.'s (2001) study which underlined the significant effect of service quality on students' loyalty in the higher education context, subsequent researchers have also empirically validated service quality as a predictor of students' loyalty (De Macedo Bergamo et al., 2012; Fares et al., 2013; Leonnard et al., 2013; Munizu & Hamid, 2015; Usman et al., 2016).

In the globalized world, it has become increasingly crucial for higher education institutions to have a strong reputation so that they may stand out from their competitors. This is especially important in the highly competitive private higher education industry where the competition for students is stiff. Having a strong reputation in stakeholders'

minds will have an impact on students' loyalty as well as attracting new students (Fares et al., 2013; Thomas, 2011). Several researchers have found causal relationships between reputation and students' loyalty (Fares et al., 2013; Helgesen & Nessel, 2007a; Nguyen & LeBlanc, 2001b; Sung & Yang, 2009; Wei & Wonglorsaichon, 2014). This significant effect was also studied in other industries like Walsh et al. (2009) in the German energy supply industry, Nguyen et al. (2013) in the banking industry and Abd-El-Salam (2013) in the service supply industry with similar results being concluded.

The ability of an organization to be able to provide remarkable and preferable benefits to their customers is essential when building loyalty with their customers (Adidam et al., 2004; Wong & Wong, 2012). In the education context, relationship benefits were found to have significant effects on students' loyalty (Adidam et al., 2004; Holford & White, 1997; Wong & Wong, 2012). Gwinner et al. (1998) and Hennig-Thurau et al. (2002) found significant positive effects and relationships between relationship benefits and customer loyalty in the service industry. This significant effect was also studied into other industries, Dimitriadis (2010) in the banking industry, Chen and Hu (2010) in the coffee outlets industry, Dagger et al. (2011) in a wide range of services (hairdressers, family doctors, travel agents, photo printing service, airlines, pest control, fast food), with similar results being concluded.

Therefore, the above discussions have led to the formulation of the subsequent hypotheses of this study which are as follows:

**Hypothesis 4 (H4)** Students' perception of the higher education institution's service quality has a significant positive effect on their loyalty.

**Hypothesis 5 (H5)** Students' perception of the higher education institution's reputation has a significant positive effect on their loyalty.

**Hypothesis 6 (H6)** Students' perception of the relationship benefits between them and the higher education institution has a significant positive effect on their loyalty.

### **3.2.3 The mediating effect of satisfaction on the relationship between service quality, reputation, relationship benefits and students' loyalty**

Satisfaction has been used as a mediating variable in many previous studies in the education context (Ali et al., 2016; Alves & Raposo, 2012; Mansori et al., 2014; Munizu & Hamid, 2015).

The direct relationships between service quality and students' loyalty has been mixed, with some researchers finding it directly related, yet others found it had no direct effect but had to be mediated by satisfaction (Dib & Alnazer, 2013; Mohamad & Awang, 2009).

Munizu and Hamid (2015) found that service quality had both direct and indirect effects on students' loyalty. The findings indicate that satisfaction is not a prerequisite for service quality to have an effect on students' loyalty, as postulated by Mohamad and Awang (2009). Another important finding is that the researchers found that the indirect effect of service quality via satisfaction on students' loyalty was stronger than the effect of service quality directly on student loyalty, which is similar to the findings by Leonnard et al. (2013) which found that the higher the student's level of satisfaction towards service quality, the higher the students' loyalty level.

Munizu and Hamid (2015) concluded that the formation of loyalty was more dependent on student satisfaction than service quality. In light of previous contributions on the service quality-satisfaction-loyalty relationships, this study sought to validate the mediating effect of satisfaction on the relationship between service quality and students' loyalty in the Malaysian private higher education context.

Satisfaction has also been found to be mediator between the reputation-loyalty relationship (Abd.-El-Salam et al., 2013; Barusman, 2014; Helgesen & Nessel, 2007a; Thomas, 2011). Thomas (2011) and Barusman (2014) studied the effect of reputation and satisfaction on students' loyalty in several universities in South India and Indonesia, respectively. Both researchers concluded that reputation had no direct effect on student loyalty and had to be mediated by satisfaction. This suggests that students who have positive perceptions about their institutions is likely to feel more satisfied which in turn will make them more loyal.

Walsh et al. (2009) in their study in the energy industry in Germany wanted to examine the satisfaction-reputation-loyalty relationship. They found that there is a causal association between the said relationship. Their findings confirmed that reputation was a strong predictor of loyalty and a consequence of satisfaction. This suggests that customers must be satisfied with an organization before an organization will be perceived to have a positive reputation.

Moving on to relationship benefits, previous studies conducted by Dimitriadis, 2010 and Hennig-Thurau et al., 2002, have shown that satisfaction is a mediator between the relationship benefits-loyalty relationship. However, both of these studies were not conducted in the education context. Dimitriadis (2010) study was conducted in the

banking industry in Greece, whilst Hennig-Thurau et al.'s (2002) study was conducted amongst customers from various service industries in Germany. Both these studies shed light on the relationship benefits-satisfaction-loyalty relationship, in which implies that customers must be satisfied with the relationship benefits that they receive before loyalty can be formed.

Therefore, the above discussion has led to the formulation of the subsequent hypotheses of this study which are as follows:

**Hypothesis 7 (H7)** Satisfaction mediates the relationship between the students' perception of the higher education institution's service quality and their loyalty.

**Hypothesis 8 (H8)** Satisfaction mediates the relationship between the students' perception of the higher education institution's reputation and their loyalty.

**Hypothesis 9 (H9)** Satisfaction mediates the relationship between the students' perception of their relationship benefits with the higher education institution and their loyalty.

### **3.3 Research design**

The aim of this study was hypothesis testing as this study strived to define the relationships between the independent variables (service quality, reputation and relationship benefits) and the dependent variable (student loyalty) as well as to study the mediating effects of satisfaction on these relationships.

In consideration of financial budgetary, manpower and time limitations on the part of the researcher, a quantitative cross sectional study was used for this study. This type of study will allow the researcher to collect data just once, over duration of days, weeks or months, in order to be able to answer the research questions (Cavana et al., 2001).

A survey was conducted to collect the data. The survey method was chosen because it has comparatively high levels of validity as questions can be posed directly to respondents, thus directly addressing the underlying nature of the construct. It is also a method in which information from people can be obtained from them in their natural environment. Surveys can be refined to incorporate an ample amount of items to exemplify the topic of interest. The survey method is an efficient way to collect large amounts of data at comparatively low cost, which can then be analysed via statistical analysis (Sekaran, 2005).

### **3.4 Operationalization and measurement of variables**

The operational definition of a variable is the specific way in which it is measured in that study (Burns, Bush & Chen, 2003). It is critical to operationally define a variable in order to lend credibility to the methodology and to ensure the reproducibility of the results. The operational definition also helps to control the variable by making the measurement constant.

The questionnaire comprised of three sections: Section A for demographics, Section B for the independent and mediating variables and Section C for the dependent variable. There were a total of five demographic questions and forty two items to measure the studied variables.

All the variables were measured by using a 5-point Likert scale (1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree). This category of scale was chosen based on Babakus and Mangold (1992) and Devlin et al. (1993) recommendation that a 5-point Likert scale can help increase response rate and response quality along with reducing respondents “frustration level.” As the respondents of this study were students, they were busy rushing from class to class. Thus, they would be more amenable to answering statements with fewer choices. According to Marton-Williams (1986), a 5-point Likert scale is more readily comprehensible to respondents and enables them to express their views better. A few researchers have also reported higher reliabilities for 5-point scales as opposed to 7-point scales (Jenkins & Taber, 1997; Lissitz & Green, 1975; McKelvie, 1978).

The variables in this study were measured using established measures from past studies. Table 3.1 show the variables involved in this study, the number of items for each variables in the questionnaire, the source of which the statements were obtained and its past reliability.

Table 3.1  
*Measurements for the study*

Variable	No of items	Past reliability	Source
Student loyalty	6	.93	Nguyen & LeBlanc (2001b)
Service quality	15	.84	Abdullah (2006)
Reputation	9	.86	Sung & Yang (2009)
Relationship benefits	6	.78	Wong & Wong (2012)
Satisfaction	6	.83	Ali et al. (2016)

The subsequent sections cover the operationalization of the aforementioned variables as well as the items used to measure them.

### **3.4.1 Dependent variable**

#### **3.4.1.1 Student loyalty**

Student loyalty was defined as loyalty of a student during and after his/her time at an education institution. It usually demonstrated by re patronage, positive word of mouth of mouth and supportive and committed behaviour towards the education institution (Kunanusorn & Puttawong, 2015).

In line with this, it was measured as when the student recommends or says positive things about the Private HEI to others, supportive committed behaviour/resistance to switch in spite of other more attractive competitor offers and retention/repatronage intentions

The items used to measure student loyalty were derived from the scale developed by Nguyen and LeBlanc (2001b). Item 1, 2 and 3 was related to recommendations and positive word of mouth (attitudinal loyalty), Item 4 was for supportive committed behaviour/resistance to switch (attitudinal loyalty) and Item 5 and 6 was related to retention and repurchase intentions (behavioural loyalty).

**Table 3.2**  
*Items for student loyalty*

<b>Items</b>
1 I would recommend the education institution that I am currently studying in to others
2 I say positive things about the education institution that I am currently studying in to other people
3 I have encouraged others to study at the education institution that I am currently studying in
4 I will continue to study with my current education institution even if other education institution's offers are better
5 If I still needed to find an education institution to study or start afresh, the education institution that I am currently studying in would be my first choice
6 Should I plan to continue my studies to postgraduate level, the education institution that I am currently studying in would be my first choice

Source: Nguyen & LeBlanc (2001b)

### **3.4.2 Independent variables**

#### **3.4.2.1 Service quality**

Service quality was defined as the comparison between what the customer perceives the service should be and what the actual performance offered by the service provider (Parasuraman et al., 1988).

Thus, for this study it was operationalized as the measure of how well the service delivered by the Private HEI matches the student's expectations. Students make conclusions on the quality of the service received by comparing what they expected to receive and the actual service that they received.

The measurement instrument known as HedPerf which was constructed by Abdullah (2006) was adopted and adapted to measure the service quality dimensions and the gaps as perceived by the respondents.

The original measures consisted of six dimensions: academic aspects, non-academic aspects, access, reputation, programme issues and understanding, with a total of 41 items. For this study, reputation was not covered as it would be covered separately under the other independent variable of reputation.

Non-academic aspects attempted to measure items that are imperative to allow students to accomplish their study needs and were related to responsibilities executed by non-academic staff. Item 1 to 5 represented this dimension. The academic aspects attempted to measure items that are solely the responsibilities of academic staff. Item 6 to 10 represented this dimension. The access aspects attempted to measure the issue of approachability, ease of contact, availability and convenience. There were two items in the measures that represented this dimension and they were Item 11 and 12. The

programme issue aspects attempted to measure the importance of offering a broad range of academic programs with flexible syllabus and course structure. Item 13 and 14 represented this dimension. Finally, the understanding aspects measured items related to understanding students' specialized wants for health and counselling services, and was represented by Item 15 in the measures.

Table 3.3  
*Items for service quality*

<b>Items</b>
1 The education institution that I am currently studying in has sufficient academic facilities like well-equipped classrooms, up to date computer labs, library with a wide range of resources and clean and safe accommodation
2 The education institution that I am currently studying in provides caring and individualized attention
3 The education institution that I am currently studying in provides efficient/prompt service when dealing with complaints and shows a sincere interest in solving problems
4 The education institution that I am currently studying in provides administrative services within a reasonable time frame
5 The education institution that I am currently studying in keeps its promises
6 The education institution that I am currently studying in has academic staffs that are knowledgeable in course content
7 The education institution that I am currently studying in has academic staffs that have good communication skills
8 The education institution that I am currently studying in has academic staffs that are caring and courteous
9 The education institution that I am currently studying in has academic staffs that are sincere in solving student's academic problems
10 The education institution that I am currently studying in has academic staffs that are readily available for academic consultation
11 The education institution that I am currently studying in is easily contactable by telephone and email
12 The education institution that I am currently studying in has a system for feedback for improvement on services offered and clear and simple service delivery procedures which are easily accessible to students
13 The education institution that I am currently studying in offers flexible syllabus and program structure
14 The education institution that I am currently studying in offers a wide variety of programs and specializations
15 The education institution that I am currently studying in offers counseling services, health services and a student union

Source: Abdullah (2006)

### 3.4.2.2. Reputation

Reputation was defined as the collective picture of an organization's previous behaviour and outcomes. It depicts the organization's capability to provide the desired results to its numerous constituents. To sum it up, reputation is a collective assessment of an organization's capability to deliver the desired results to a group of constituents (Formbrun et al., 2000).

Therefore, reputation was operationalized based on the student's assessment about the education institution's ability to fulfil their expectations and was measured by the following dimensions: university management, emotional appeal, perception of media reputation and perception of academic reputation.

This study used measures adapted from the study conducted by Sung and Yang (2009) in the higher education industry. A total of nine items were used to measure reputation. Item 1 and 2 was related to the emotional dimension, Item 3, 4 and 5 was related to university management dimension, Item 6 and 7 was related to perceived academic reputation dimension and Item 8 and 9 was related to perceived media reputation dimension.

Table 3.4  
*Items for reputation*

<b>Items</b>
1 I admire and respect the education institution that I am currently studying in
2 My choice to study at the education institution that I am currently studying in was a wise one
3 The education institution that I am currently studying in is well managed
4 The education institution that I am currently studying in always fulfills the promises it makes to its students
5 I believe that the education institution in which I am currently studying in has excellent leadership

Table 3.4 (Continued)

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6	I believe that the program that I am currently studying in is superior compared to other programs offered by other education institutions
7	I believe that the program that I am currently studying in has a better reputation than its competitors
8	The education institution that I am currently studying in has a good reputation with the media
9	The education institution that I am currently studying in receives favourable and positive news reports from the media

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Source: Sung & Yang (2009)

### 3.4.2.3 Relationship benefits

Relationship benefits was defined as the superior benefits provided to customers which are highly valued by customers (Morgan & Hunt, 1994).

In line with this, it was measured as the benefits offered by the Private HEI which is preferred by the student that would influence the student to continue their relationship with the said education institution.

Relationship benefits was measured using items adopted from Wong and Wong (2012) in a study done in the education industry in Hong Kong. The six items covered the following dimensions: location, beneficial opportunities, value for money, better employability prospects and superior education quality.

Item 1 was related to the location dimension. Item 2 was related to beneficial opportunities which covered exchange programmes, company visits, internship opportunities and professional seminar opportunities offered by the higher education institution. Item 3 and 4 was related to the dimension of value for money which touched on the cost of tuition. Item 5 was related to better employability benefits and Item 6 was related to the superior education quality dimension.

Table 3.5

*Items for relationship benefits*

<b>Items</b>
1 The location of the education institution that I am currently studying in makes this the ideal place to attend
2 The education institution that I am currently studying in provides several beneficial opportunities for its students such as company visits, internship placement, exchange programmes and professional seminars
3 I believe the education institution that I am currently studying in offers the best value for money compared to its competitors
4 The monetary cost spent to study in my current education institution is worth it
5 When I graduate, I am confident that the degree that I obtain from my current education institution will be able to get me a job
6 The education institution that I am currently studying in provides high quality education for its students

Source: Wong & Wong (2012)

### 3.4.3 Mediating variable

#### 3.4.3.1 Satisfaction

Satisfaction was defined as the student's fulfilment response. It is the student's overall subjective evaluation and experiences of the higher education's product/services, the product/services itself and between what was received and what expected from the higher education institution to date (Jurkowitsch et al., 2006).

The items used to measure satisfaction were derived from the scale developed by Ali et al. (2016) in a research conducted in the higher education context. The six items attempted to measure the satisfaction levels of respondents towards the education institution that they were currently studying in. The items focused on the overall favourability, the positive perception of own choice and the perception against expectation.

Table 3.6  
*Items for satisfaction*

<b>Items</b>
1 Overall, I am satisfied with the products/services offered by the education institution that I am currently studying in
2 My decision to choose the education institution that I am currently studying in was a wise one
3 I am satisfied with my decision to register at the education institution that I am currently studying in
4 I feel that my experience with the education institution that I am currently studying in has been enjoyable
5 Overall, the education institution that I am currently studying in is a good place to study in
6 Overall, I am satisfied with the education institution that I am currently studying in

Source: Ali et al. (2016)

### **3.5 Population and sample**

#### **3.5.1 Population**

A population is defined as the complete collection of the subject of interest to be studied in a research (Cavana et al., 2001). The population for this study were students enrolled at Private HEIs in Malaysia. The population frame was obtained from the Ministry of Education which indicated that as at December 2015, the number of students enrolled in Private HEIs in Malaysia was 580,928.

#### **3.5.2 Sample frame**

The sample is the subset of the population. It comprises some members selected from it (Sekaran, 2005). The sample frame is a list of all the elements in the population from which the sample is drawn (Cavana et al., 2001)

For this study, the sample frame was based on the figures obtained from the Ministry of Higher Education. The figures indicated that there were a total of 58 Universities with

a student enrolment of 272,722. For University Colleges, there were a total of 27 with a student enrolment of 78,077. For Foreign University branch campus, there were eight with a student enrolment of 16,034. Lastly, there were a total of 346 Colleges with a student enrolment of 214,095. The full name list of the Private HEIs is provided in Appendix B1, B2, B3 and B4. The overall figures are presented in Table 3. 7.

Table 3.7

*Total number of Private HEIs and enrolment of students by status as at December 2015*

PHEIs status	Total numbers	Total student enrolment
University	58	272,722
University College	27	78,077
Foreign University branch campus	8	16,034
College	346	214,095
Total	439	580,928

Source: National Education Statistics: Higher Education Sector, Ministry of Education, Malaysia

### 3.5.3 Sample size

Selecting an adequate sample size is important as it can reduce sampling error. As the sample size increases, the sampling error decreases. There is less likelihood that the sample will be different from the population, thus increasing the representativeness of the sample.

Sekaran (2005), citing Krejcie and Morgan (1970) has greatly simplified sample size decision by providing a table that ensures a good decision model. Based on the table, it is suggested that a sample size of 384 is suitable for a study that involves a population of 600,000. The researcher also calculated the sample size using the formula by Yamane (1967) with manual calculation. The formula assumes a degree of variability of .5 and a confidence level of 95%.

$$\begin{aligned}
 n &= \frac{N}{1 + N(e)^2} \\
 &= \frac{580,928}{1 + 580,928 (.05)^2} \\
 &= 400
 \end{aligned}$$

n = required sample size

N = the population size

e = precision level

From the above manual calculation, a total of 400 samples were required. Thus, for this study, the researcher used the sample size obtained from manual calculation which offered better precision. The sample size used for this study conformed to the rule of thumb as proposed by Roscoe (1975) that state, “sample size larger than 30 and less than 500 is appropriate for most studies.”

### 3.5.4 Sampling design

Sampling is the process of selecting sufficient number of elements from the population, so that a study of the sample and an understanding of its properties would make it possible to generalize such properties to the population elements (Sekaran, 2005).

This study employed the proportionate stratified random sampling design. Stratification is an efficient research sampling design because it provides more

information with a given sample size (Sekaran, 2005). Proportionate stratified sampling ensures that the resulting sample will be distributed in the same way as the population in terms of the stratifying criterion (Bryman & Bell, 2011)

In using the proportionate stratified random sampling design, several steps were involved. The first step was to stratify the population. This study stratified according to the statuses set by the Ministry of Higher Education, which were as follows: 1) University, 2) University College, 3) Foreign University branch campus and 4) College. Next, the list of Private HEIs obtained from the Ministry of Higher Education was placed alphabetically in the appropriate strata based on their statuses. Third step, a Private HEI(s) was selected within each strata with probability. Final step, the students were then selected based on systematic random sampling from each of the Private HEIs which had been previously selected in the third step.

The number of students enrolled in each strata and the desired samples required are shown in Table 3.8.

Table 3.8  
*Desired samples required*

PHEI status	Total student enrolment	Number of samples required
University	272,722	188
University College	78,077	52
Foreign University branch campus	16,034	12
College	214,095	148
Total	580,928	400

### **3.6 Data collection procedure**

A survey was conducted to collect the data required for this study. The survey instrument was a personally administered questionnaire to the systematic randomly selected students and was collected back by the researcher when the students had completed answering.

The main advantage for choosing a personally administered questionnaire is that it ensures a higher return rate as compared to self-administered questionnaires (Sekaran, 2005). Taking in consideration that the respondents were busy students, it was highly unlikely that they would take the time to return the questionnaires if they were self-administered.

By employing this method, it also allowed the researcher with the chance and opening to introduce the research subject matter, to encourage the students to give frank and honest answers and being on hand to clear up any doubts the respondents may have about the questionnaire. Respondents were given the freedom to answer the questionnaire without any influence from the researcher. When questions were asked, the researcher handled all respondents' enquiries professionally and ethically.

Due to the budgetary and time constraints of the researcher, this method was chosen. According to Cavana et al. (2001), this is the least expensive and time consuming method.

As explained in the sampling design section earlier, the third step of the sampling design required the Private HEI(s) to be selected within each strata with probability. This was achieved with the assistance of a random table (RAND Corporation, 2001).

This ensured education institution(s) would be selected within each strata with probability (Cochran, 1977).

For example: for the strata of university status, there were a total of 58 universities placed in alphabetical order (refer Appendix B1). The researcher randomly selected a starting point and from there, methodically moved down the columns of the table selecting corresponding two digits numbers which were between 01 to 58. These numbers represented the university listed in the sampling frame. This step was repeated for the other strata's as well. The names of the randomly selected Private HEIs are highlighted in the full name list of all Private HEIs and can be found in Appendix B1, B2, B3 and B4.

As the researcher intended to personally administer the questionnaire to the students, permission had to be obtained from the Private HEIs relevant authorities to enter their campuses to administer the survey. This is because most education institution have a policy that ensures all research conducted on their campus with students as subjects is sound, appropriate, and is not unreasonably intrusive.

The randomly chosen Private HEIs were then contacted to obtain permission to visit their campuses to conduct the survey. Participation from the Private HEIs was solicited with assurance that the identity of the education institution would be kept in confidence. Emails were sent to the Private HEIs with set deadlines for responses. At the end of the stipulated time frame for replies, only seven, out of the sixty Private HEIs contacted, granted permission for the researcher to visit their campuses to conduct a survey amongst their students, giving a response rate of 11.6%. Appointments were made with the respective Private HEIs to conduct the survey at their convenience. The researcher

personally visited the campuses to conduct the survey. The data collection process took place for a period of five weeks, from Feb 27<sup>th</sup> to April 3<sup>rd</sup> 2017.

For the University strata, a total of three universities consented, one in Perak and two in Selangor. For the University College strata, one consented and was located in Perak. For the Foreign University branch campus strata, one consented and was located in Selangor, Lastly, for College strata, two consented and both were located in Penang.

The fourth step of the sampling design required the selection of subjects to participate in the survey. Systematic random sampling was used to determine the subjects of the survey during the visits to the selected campuses. Systematic sampling is a type of probability sampling method in which sample members from a larger population are selected according to a random starting point and a fixed periodic interval. In line with this method, the researcher positioned herself at the exit of a public area, such as the library or cafeteria of the education institution. Every fifth student was approached to participate in the survey to minimize sampling bias on the part of the researcher (Hair et al., 2008).

Before proceeding to answer the questionnaire, the researcher first confirmed that the subject was an enrolled student in the said education institution. Once verified, the researcher would identify herself; explain the objective of the survey and the student was asked on whether he/she would be willing to answer the questionnaire. Students were free to participate or not to participate, and no inducement was provided for them to do so. A cover letter was provided with the survey instrument informing the student that the survey was voluntary and responses would be kept anonymous and strictly confidential. The researcher stood unobtrusively by the side while the student answered the questions.

Once the student finished answering the questionnaire, the researcher was on hand to collect it back. The questionnaire would then be checked for completeness and usability on the spot by the researcher.

The number of distributed survey questionnaires were based on the desired number of samples identified earlier in the sampling design (refer Table 3.8). For the University strata, 188 questionnaires were distributed evenly amongst the three visited universities. In the University College strata, 52 questionnaires were distributed to the one visited college. In the Foreign University branch campus, 12 questionnaires were distributed to the one visited Foreign University branch campus. Lastly, 148 questionnaires were distributed evenly amongst the two visited Colleges. As targeted, 400 students were surveyed and the similar number of questionnaires was collected back by the researcher. The completed and collected questionnaires were coded and tracked to enable pairing of the students with their respective Private HEIs status.

### **3.7 Data analysis techniques**

Various analyses were conducted on the data obtained using Statistical Package for Social Sciences (SPSS). A combination of descriptive and inferential analyses was employed in this study.

#### **3.7.1 Data analysis procedures**

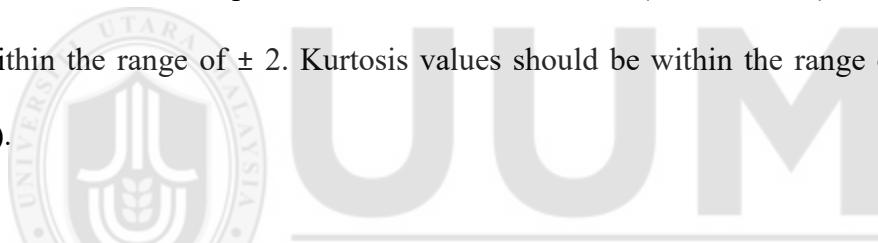
Research data needs to be tested to ensure that the data is suitable for subsequent statistical analyses. The goodness of measures analyses was also conducted prior to statistical analyses to ensure that they met the requirement in terms of reliability and

validity. The subsequent sections discussed the analyses that would be used to achieve these objectives.

### **3.7.1.1 Assessment of normality**

Normality of data is important because it can affect the results of the statistical techniques, resulting in invalid results (Hair et al., 2010).

Normality can be assessed through skewness and kurtosis and graphically through the normal probability plot (P-P) of the regression standardised residuals. The skewness value provides an indication of the symmetry of the distribution. Kurtosis provides information about the “peakedness” of the distribution (Pallant, 2013). Skewness should be within the range of  $\pm 2$ . Kurtosis values should be within the range of  $\pm 7$  (Pallant, 2013).



### **3.7.1.2 Assessment of linearity and homoscedasticity**

Testing for linearity is important as the objective of this study was to examine relationships between the variables studied. Therefore, non linearity would affect the predictive accuracy of the model generated as well as the validity of the coefficients generated in the subsequent regression analyses (Hair et al., 2010).

According to Pallant (2013), linearity can be assessed by a visual inspection of the scatterplot of the standardized residuals of the independent variables against the dependent variable. The residuals should be roughly rectangularly distributed with most concentrated in the centre (along the 0 point).

Homoscedasticity refers to the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variables (Hair et al., 2006).

Homoscedasticity can be verified by a visual inspection of the scatter plot of the regression line of the standardized residuals. If the assumption is met, the scatter plot takes the (approximate) shape of a rectangular and scores will be concentrated in the centre (about the 0 point) and distributed in a rectangular pattern.

### **3.7.1.3 Assessment of multicollinearity**

Multicollinearity occurs when a model included multiple variables that are correlated not only to the dependent variable, but also to each other. Multicollinearity is not beneficial when conducting regression as it would result in unreliable estimation of the regression coefficient (Pallant, 2013).

To test the presence of multicollinearity, tolerance value and variance inflation factor (VIF) tests were used. Pallant (2013) state that tolerance value less than .10 or VIF that is in access of 10 signifies severe multicollinearity problems.

### **3.7.1.4 Assessment of outliers**

Outliers are extreme responses to particular questions. The presence of outliers is not beneficial during regression as the results of the regression coefficient could lead to unreliable results (Hair et al., 2010).

Outliers are detected through the evaluation of the Mahalanobis distance statistic (Tabachnick & Fidell, 2013). Mahalanobis analysis can be conducted in SPSS during regression analysis. Outlier detection is based on whether Mahalanobis distance (D2) are more than the Chi-square ( $\chi^2$ ) value of the number of items used (Pallant, 2013).

### **3.7.1.5 Reliability analysis**

Reliability analysis was used to identify to what degree a research instrument taps into a specific domain and to what degree that instrument is free of error due to item sampling (Hair et al., 2010).

It is important to ascertain that items used to measure a variable have internal stability and consistency. To ascertain the internal stability and consistency of the measures, the Cronbach's alpha was used. It is the most common measure of internal consistency (reliability) used in statistical analysis (Nunally, 1978).

According to Hinton et al. (2004), a good guide on the cut off points for the reliability of a scale is as follows: .90 and above shows excellent reliability, .70 to .90 shows high reliability. .50 to .60 shows moderate reliability and .50 and below show low reliability.

### **3.7.1.6 Factor analysis**

According to Hair et al. (2006) factors analysis is, “An interdependence technique in which its primary purpose is to uncover the underlying structure among the variables in the analysis.”

Factor analysis was used in this study to ascertain construct validity of the measurements. Construct validity refers to the degree to which a measurement is accurately measuring what it is purported to measure (Beins & McCarthy, 2012).

Exploratory factor analysis using the principal component technique with varimax rotation was performed. The orthogonal varimax rotation was used for this study in order to maximize the separation of factors (Hair et al., 2010).

Before proceeding with factor analysis, various tests were conducted to examine its suitability. One of these tests was The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Values between .5 and 1.0 imply factor analysis is suitable while values below 0.5 imply that factor analysis may not be. Bartlett's test of sphericity tests the adequacy of the correlation matrix and must be significant ( $p < .05$ ) (Hair et al., 2006).

The Eigenvalue is a measure of how much of the variance of the observed variables a factor explains. Thus, it can be used to decide which factors to take out or keep. Factors which have eigenvalues higher than 1 are important. Factors with eigenvalues lower than 1 are not important and should be taken out (Hair et al., 2006).

The analysis of communalities of the variables was also conducted. A communality is the extent to which an item correlates with all other items. Higher communalities scores indicate better fit within an overall research model. If communalities for a particular variable are low (between 0.0 - 0.4), then that variable will struggle to load significantly on any factor and would be a candidate for removal after examination of the pattern matrix (Hair et al., 2006).

Subsequently, factor loadings were examined to determine the factor structure. The factor loadings refer to the correlation coefficients between the variables and factors. According to Hair et al. (2006), factor loadings greater than .50 are recommended to be retained for further analysis as they would be able to provide a practical significance. Consequently, factor loadings that were less than 0.5 were eliminated in the context of this study.

When a variable has more than one significant loading, this is called cross loading. The recommended cross loading level should not be more than .35 (Hair et al., 2006).

Lastly, the variance explained was examined. The acceptable total variance explained in factor analysis for a construct to be valid in social sciences research is about 60% and in some instances even less (Hair et al., 2006).

### **3.7.2 Statistical analysis procedures**

This section discussed the various statistical analyses that would be conducted to answer the research objectives of this study.

#### **3.7.2.1 Descriptive analysis**

To begin to understand the data collected in this study, a descriptive analysis was done. Descriptive analysis illustrates the basic and main characteristics of the data in a study. Descriptive statistics provides elementary and uncomplicated analysis about the sample and the measures. Data can be presented in manageable and simple table and graphic forms.

There are two types of descriptive statistics: frequency distributions and measures of central tendencies and dispersion such as the mean, median, standard deviation, maximum and minimum. These statistics will provide the researcher with a good idea of how respondents responded to the statements in the questionnaire as well as how good the items and measures in the questionnaire were (Cavana et al., 2001).

For this study, frequency and percentages were used to present the demographic profile of the respondents, whilst the measures of central tendencies and dispersion were used to examine and understand the characteristics of the studied variables.

Besides describing the data, descriptive analysis can also be used to check if the dataset violate any assumptions such as normality. It can also be used to answer research questions as well (Pallant, 2013).

To achieve the first research objective of this study, descriptive statistics was used. Percentiles were used to answer the first research question of this study, which was to determine the level of students' loyalty in Private HEIs in Malaysia. A percentile is the point on a scale at or below which a given percentage of the scores fall. It can provide information about how a person or thing relates to a larger group (Howell, 1989).

Percentiles are calculated by dividing a distribution of values into two or more groups, as required. They are often used to draw the line between observed values with the distribution. For example: if a teacher wishes to determine the exam score that divides his class in half, with 50% scoring above and 50% scoring below, he determines the point that marks the 50th percentile (Hinkle, 1994).

Using the frequency analysis in SPSS, the percentiles can be calculated. To divide the scores into Low, Medium and High levels, the percentiles used were 33 and 66. Thus, mean values corresponding to percentile 33 and lower are categorized at Low level, between 34 and 66 are Moderate level, and higher than 67 are High level.

### **3.7.2.2 Correlation analysis**

To achieve the second research objective of this study, which was to determine the relationships between the studied independent variables and the dependent variable, correlation analysis was conducted.

In correlation analysis, the Pearson Product Moment correlation coefficient (r) is used for measuring the strength of an assumed linear relationship between the two variables. It ranges between -1 and +1 and quantifies the direction and strength of the linear relationship between the two variables. The sign of the correlation coefficient indicates the direction of the relationship. The number of the correlation coefficient indicates the strength of the relationship (Hair et al., 2006).

A perfect correlation of 1 or -1 indicates that the value of one variable can be determined exactly by knowing the value on the other variable. This relationship can be graphically shown in a scatterplot through a straight line plot. A correlation of 0 indicates no relationship between the two variables. The scatterplot would show a circle of points, with no evident pattern (Pallant, 2013).

The rule of thumb for interpreting strength of relationship between two variables is by looking at the value of the correlation coefficient. A strong correlation would be between .50 to 1.0, a medium correlation would be between .30 to .49 and a weak correlation would be between .10 to .39. These guidelines apply to whether it is a positive or negative relationship (Pallant, 2013).

### **3.7.2.3 Regression analysis**

As our third research objective was to determine the significant effects of our studied independent variables on the dependent variable, regression analysis was used. Specifically, multiple regression was used to examine the significant effects of service quality, reputation, relationship benefits on student loyalty.

R squares, also called the “coefficient of determination” was the statistic used to assess the suitability of the multiple regression models generated for this study. The range is between 0 and 100%. The higher the R-squares, the better the model fits the data. 0% indicates that the model explains none of the variability of the response data around its mean. 100% indicates that the model explains all the variability of the response data around its mean (Hair et al., 2006).

Some statisticians suggest that adjusted R squares be used instead of R squares when considering the usefulness of the multiple regression models generated. The sample size can be used to determine when to use adjusted R squares or R squares. When sample size is less than 30, it is recommended to use adjusted R squares. When the sample size is more than 30, it is recommended to use the R squares (Hair et al., 2006). Thus, for this study, the R squares is used as the sample size for this study was 400.

### **3.7.2.4 Mediation analysis**

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationships between our independent variables (service quality, reputation and relationship benefits) and our dependent variable (student loyalty).

There are many tests that can be used for mediation analysis. Most of them follow the same guidelines which are to examine the relation between independent and the independent variables, the relation between the independent and the mediator variables, and the relation between the mediator and independent variables. All of these correlations should be significant. The relation between dependent and independent variables should be reduced (to zero in the case of total mediation) after controlling the

relation between the mediator and independent variables. There are three major approaches to statistical mediation analysis: (a) causal steps, (b) difference in coefficients, and (c) product of coefficients. The most popular is Baron and Kenny's (1986) 4 step causal approach (McKinnon, Fairchild & Fritz, 2007).

Thus, following Baron and Kenny's guidelines, mediation analysis would involve:

Step 1: Confirm the significance of the relationship between the independent variable and the dependent variable.

Step 2: Confirm the significance of the relationship between the independent variable and the mediator variable.

Step 3: Confirm the significance of the relationship between the mediator and the dependent variable in the presence of the independent variable.

Step 4: Confirm the insignificance (or the meaningful reduction in effect) of the relationship between the independent variable and the dependent variable in the presence of the mediator.

All these steps can be done via regression to estimate the coefficients in linear models. PROCESS, a computational procedure for SPSS written by Hayes (2012), has simplified the mediation analysis process.

Using a path analysis framework, PROCESS estimates the coefficients of a model using Ordinary Least Square (OLS) regression (continuous outcomes) or maximum likelihood logistic regression (for dichotomous dependent variables). PROCESS generates the total effect (C), direct effect ( $c'$ ) and indirect effect ( $ab$ ) mediation model. and generates direct and indirect effect in mediation models.

PROCESS constructs bias corrected and percentile based bootstrap confidence intervals for conditional and unconditional indirect effects in mediation models. To ensure significance of the indirect effect at the 95% confidence interval, bootstrapping was done (Hayes, 2012).

A Sobel test was also conducted to further confirm mediation. This test provided an approximated significance for the indirect effect between the independent and the dependent variable through a mediating variable ( $p < .05$ ) (Sobel, 1982).

### **3.8 Pilot study**

A pilot study refers to a “trial run” of a study conducted on a small scale to determine whether the research design, survey instrument and methodology are relevant, applicable, sufficient and effective (Cavana et al., 2001).

The purpose of the pilot study was to estimate the reaction of the potential respondents to the length, format and content of the survey instrument. Secondly, to ask the respondents to provide feedback on the clarity of the survey scales, and finally to improve the reliability and validity of the measurement scales.

Determining sample size for a pilot study is important to reduce sampling error. Connelly (2008) suggests that the appropriate sample size for a pilot study should be ten per cent of the sample estimated from the parent study. Hill (1998) and Isaac and Michael (1995) suggested 10 to 30 samples would be adequate. Both van Belle (2002) and Julious (2005) suggested 12 samples.

Thus, based on the literature and the sample size of the parent study which is 400, a sample size of 40 would be suitable.

### 3.8.1 Pilot study results

The pre-test of the survey was administered to a total of 40 undergraduates from one selected University and one selected University College. The pilot study was conducted from January 18<sup>th</sup> to January 25<sup>th</sup>, 2017. The survey administration was conducted in person by the researcher. All of the questionnaires were distributed and collected back upon completion by the researcher. During the pilot testing, the researcher noted that it took respondents an average of 12 minutes to complete the questionnaire. The respondents were asked on clarity of the survey statements and its length. Respondents said that the statements were clearly worded and easily understood. However, some said that the survey was too long and there were too many items for the service quality variable.

Reliability analysis was carried out using the Cronbach's coefficient alpha. As per Hinton et al. (2004) guideline, which states that a coefficient alpha of 0.70 to .90 indicates high reliability, it was concluded that all the variables had achieved a high level of reliability. The results of the reliability test are presented in Table 3.9.

Table 3.9  
*Cronbach's Alpha Reliability score for pilot study*

Variables	No of items	Cronbach's Alpha
Service quality	15	.829
Reputation	9	.759
Relationship benefits	6	.752
Satisfaction	6	.889
Student loyalty	6	.794

### **3.9 Summary of the chapter**

This chapter described the methodology used in this study. The research framework for this study was service quality, reputation and relationship benefits as the independent variables, and students' loyalty as the dependent variable and satisfaction as the mediator variable. Based on the framework, nine hypotheses were formulated.

A quantitative cross sectional study was used. The population of this study were students enrolled in Private HEIs in Malaysia with a sample size of 400. Data for the full scale study was collected via a personally administered questionnaire to randomly selected students enrolled in Private HEIs in Malaysia.

The collected data was analysed using various statistical procedures such as descriptive, reliability, factor, correlation, multiple regression and mediation analyses.

Pilot study was carried out to ensure the reliability of the instrument prior to the full scale study. The results of the reliability analysis revealed that the measures used were reliable. The data obtained from the pilot study was excluded from the full scale study.

The analyses and findings of this study are discussed in depth in the subsequent chapter.

## CHAPTER 4

### RESULTS AND DISCUSSION

#### 4.0 Introduction

This chapter presents the results from the data analyses conducted based on the research objectives mentioned in Chapter 1 and the statistical analyses suggested in the previous chapter. The first section of this chapter comprises of the response rate of this study. The second section deals with the testing of the research instrument, with the results and discussions on the factor and reliability analyses presented. This is then followed by the restatement of hypotheses.

Subsequently, the results and discussions of the testing of the research data to ensure normality, linearity, homoscedasticity, multicollinearity and to detect outliers are reported. In order to understand the nature of the respondents, descriptive analysis was used to examine the demographic profiles of the respondents. Descriptive statistics was used to report the demographic profile of the respondents that contained the frequency and percentage of the respondents based on gender, nationality, race, age group and years of studying at current education institution. Descriptive statistics was also used to report the characteristics of the independent and dependent variables of this study. The mean, median, standard deviation, minimum and maximum for each variable was presented and discussed. Percentiles was used to determine the level of students' loyalty.

The next section of this chapter covers the inferential analyses pertaining to the hypotheses testing. The results from the correlation, multiple regression and mediation

analyses are presented and discussed. Lastly, a summary of the results of the hypothesis testing are presented and the conclusion closes this chapter.

#### **4.1 Response rate**

The data for this study was collected via a personally administered questionnaire by the researcher. The researcher collected the questionnaires upon respondents' completion. The collection of samples was conducted over the period of five weeks, from Feb 27<sup>th</sup> to April 3<sup>rd</sup> 2017. As the required samples size was 400, the similar number of questionnaires were handed out and collected back by the researcher. Samples collected were in accordance to the procedures and number required for each strata (PHEI status) as outlined in the previous chapter. All questionnaires were checked for completeness and usability on the spot by the researcher. Thus, the 400 samples were successfully achieved. The results of the data collection are reported in Table 4.1.

Table 4.1  
*Summary of sample*

<b>PHEI status</b>	<b>Sample size required</b>	<b>Questionnaire</b>		
		<b>Distributed</b>	<b>Returned/collected</b>	<b>Usable</b>
University	188	188	188	188
University College	52	52	52	52
Foreign University branch campus	12	12	12	12
College	148	148	148	12
<b>Total</b>	<b>400</b>	<b>400</b>	<b>400</b>	<b>400</b>

## **4.2 Testing of the research instrument**

It is essential to ensure that the measures used in this study are “good”, which refers to being valid and reliable. Sekaran (2005) states that a valid instrument is an instrument that seeks to measure what it is purported to measure, while a reliable instrument measures the degree of consistency of the instrument across time. The measures in the research instrument in this study were examined using factor and reliability analyses.

Factor analysis was used to determine the construct validity of the measures. The reliability analysis was used to determine the internal consistency of the measures via the Cronbach Alpha statistic. The testing of the measures for each variable is discussed in the subsequent sections, starting with the independent variables (service quality, reputation and relationship benefits), followed by the mediator variable (satisfaction) and lastly by the dependent variable (student loyalty).

### **4.2.1 Validity analysis**

Ensuring validity of the instrument is essential in any study and one of the important approaches is to examine the construct validity (Hair et al., 2007). Construct validity of the scales in the survey instrument was established through factor analysis. If a scale is construct valid, the items in the scales will represent the underlying construct (Rattray & Jones, 2007).

The subsequent sections presented the results and discussion of the factor analysis conducted for each variable in the study.

#### **4.2.1.1 Factor analysis for service quality**

A check of the Kaiser-Meyer-Olin (KMO) measure of sampling adequacy and Bartlett's test of sphericity in the first run of factor analysis for the service quality scale revealed that factor analysis was appropriate to be used to analyze the dimensionality of the service quality construct. The KMO indicated the strength of the relationships amongst items were high (KMO = .909) and the Bartlett's test of sphericity was significant ( $\chi^2 = 2252.245$ ,  $p < .05$ ).

The analysis of the communalities was checked and it revealed that the fifteen items in the service quality scale had communalities in the range of .380 (lowest) to .703 (highest). The fifteen items in the service quality scale was found to be loaded onto three factors. Examination of factor loadings showed that there were three items (item 1, 11 and 12) that fell below the recommended required value of .50, thus these items were discarded in the next analysis. There were also two items (item 2 and 5) which had cross loading above the required recommended value of .35, thus were discarded in the next factor analysis run.

The principal components analysis performed extracted three factors having eigenvalues greater than 1.0. Factor 1 with an eigenvalue of 6.002, followed by Factor 2 with an eigenvalue of 1.425 and lastly Factor 3 with an eigenvalue of 1.141. The variance accounted for by these three factors is 40.011 %, 9.498 %, and 7.606 % respectively. The various items in the service quality scale were able to capture 57.115 % of the total variance that represent the underlying construct. The results of the first run of factor analysis are reported in Table 4.2.

Table 4.2  
*Factor analysis results for service quality (first run)*

ITEMS	FACTORS			COMMUNALITIES
	F1	F2	F3	
SQ 1	Wide range of resources		.434	.496
SQ 2	Provides caring and individualized attention	.373	<b>.527</b>	.456
SQ 3	Prompt service when dealing with complaints		<b>.815</b>	.703
SQ 4	Provides administrative services within a reasonable time		<b>.767</b>	.640
SQ 5	Keeps its promises	.395	<b>.639</b>	.584
SQ 6	Academic staff that are knowledgeable in course content		<b>.653</b>	.540
SQ 7	Academic staff who have good communication skills		<b>.759</b>	.611
SQ 8	Academic staff that are caring and courteous		<b>.770</b>	.641
SQ 9	Academic staff that are sincere in solving student's academic problems		<b>.789</b>	.669
SQ 10	Academic staff that are readily available for academic consultation		<b>.688</b>	.586
SQ 11	Easily contactable	.485	.331	.380
SQ 12	System for feedback for improvement on services offered		.485	.443
SQ 13	Offers flexible syllabus and program structure		<b>.616</b>	.509
SQ 14	Offers a wide range of programs and specializations		<b>.800</b>	.669
SQ 15	Offers counselling services, health and a student union		<b>.782</b>	.641
KMO				.909
Bartlett's Test				2252.245
Sig				.000
Eigenvalues	6.002	1.425	1.141	
Total variance explained (%)	40.011	9.498	7.606	
Cumulative variance explained (%)	40.011	49.509	57.115	

Note: Factor loading > .50 are in boldface. SQ= Service quality. KMO= Kaiser-Meyer-Olkin.

In the final run of the factor analysis for the service quality scale, the KMO was .856 and the Bartlett's test of sphericity was ( $\chi^2 = 1371.853$ ,  $p < .05$ ), indicating that factor analysis was appropriate.

The analysis of the communalities were checked and it revealed that the ten items in the service quality scale had communalities in the range of .566 (lowest) to .774 (highest), indicating a good fit within the scale.

The ten items in the service quality scales were loaded onto three factors. All factor loadings were above .50 and did not have cross loading above .35 as recommended by Hair et al. (2006). Even though Factor 3 only had two items it was retained as it could be clearly interpreted as the administrative dimension of service quality. This is in line with Worthington and Whitaker's (2006) recommendation that a factor should be retained only if it can be interpreted in a meaningful way no matter how solid the evidence for its retention or deletion based on the statistical criteria.

The variance explained was checked and according to the recommendation by Hair et al. (2006), the acceptable variance explained in factor analysis for a construct to be valid in social sciences research is about 60 % and in some instances even less. The three factors was able to explain 65.847% of the total variance that explain the underlying construct, thus it can be concluded that the ten items in the service quality scale had construct validity and is a valid measure of service quality for this study.

The first factor comprised of five items and was named academic quality, the second factor comprised of three items and named program quality and the third factor comprised of two items and named administrative quality. The results of the above discussion are reported in Table 4.3.

Table 4.3

*Factor analysis results for service quality (final run)*

	ITEMS	FACTORS			COMMUNALITIES
		F1	F2	F3	
SQ 3	Prompt service when dealing with complaints			<b>.843</b>	.774
SQ 4	Provides administrative services within a reasonable time			<b>.834</b>	.772
SQ 6	Academic staff that are knowledgeable in course content		<b>.707</b>		.556
SQ 7	Academic staff who have good communication skills		<b>.787</b>		.634
SQ 8	Academic staff that are caring and courteous		<b>.780</b>		.650
SQ 9	Academic staff that are sincere in solving student's academic problems		<b>.792</b>		.677
SQ 10	Academic staff that are readily available for academic consultation		<b>.688</b>		.579
SQ 13	Offers flexible syllabus and program structure			<b>.661</b>	.571
SQ 14	Offers a wide range of programs and specializations			<b>.821</b>	.700
SQ 15	Offers counselling services, health and a student union			<b>.794</b>	.661
KMO		<b>.856</b>			
Bartlett's Test		1371.853			
Sig		<b>.000</b>			
Eigenvalues		4.246	1.318	1.020	
Total variance explained (%)		42.461	13.182	10.204	
Cumulative variance explained (%)		42.461	55.643	65.847	

Note: Factor loading > .50 are in boldface. SQ= Service quality. KMO= Kaiser-Meyer-Olkin.

#### **4.2.1.2 Factor analysis for reputation**

The results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity indicated that the factor analysis was appropriate to be used to analyze the dimensionality of the reputation construct. The KMO indicated the strength of the relationships amongst items were high (KMO = .841) and the Bartlett's test of sphericity was significant ( $\chi^2 = 1433.943$ ,  $p < .05$ ).

The analysis of the communalities was checked and it revealed that the nine items in the reputation scale had communalities in the range of .493 (lowest) to .796 (highest).

The nine items in the reputation scale was found to be loaded onto two factors having eigenvalues greater than 1.0. Factor 1 with an eigenvalue of 4.289 and Factor 2 with an eigenvalue of 1.142.

The six items in Factor 1 contributed the most in explaining the total variance of the data, which was 47.655 %. Factor 2 had three items and explained an additional 12.688 % of total variance, for a cumulative variance of 60.343 %.

The factor loadings for the nine items ranged from .542 (lowest) to .875 (highest). All factor loadings were above the recommended .50, however item 6 had a cross loading above the recommended value of .35, thus it was discarded in the next analysis. The results of the first run of factor analysis are reported in Table 4.4.

Table 4.4  
*Factor analysis results for reputation (first run)*

	ITEMS	FACTORS		COMMUNALITIES
		F1	F2	
REP1	Admire and respect	<b>.700</b>		.559
REP2	Choice to study here was a wise one	<b>.738</b>		.556
REP3	Well managed	<b>.765</b>		.625
REP4	Fulfils it promises	<b>.667</b>		.493
REP5	Excellent leadership	<b>.728</b>		.573
REP6	Superior program	<b>.542</b>	.420	.470
REP7	Better reputation than others		<b>.716</b>	.610
REP8	Good reputation with media		<b>.875</b>	.796
REP9	Favourable reports from media		<b>.829</b>	.738
KMO				.841
Bartlett's Test				1433.943
Sig				.000
Eigenvalues		4.289	1.142	
Total variance explained (%)		47.655	12.688	
Cumulative variance explained (%)		47.655	60.343	

Note: Factor loading  $> .50$  are in boldface. REP= Reputation. KMO= Kaiser-Meyer-Olkin.

In the final run of the factor analysis for the reputation scale, the KMO was .822 and the Bartlett's test of sphericity was ( $\chi^2 = 1237.529$ ,  $p < .05$ ), indicating that factor analysis was appropriate.

The analysis of the communalities were checked and it revealed that the eight items in the reputation scale had communalities in the range of .514 (lowest) to .818 (highest), indicating a good fit within the scale.

The eight items in the reputation were loaded onto two factors. All factor loadings were above .50 and did not have cross loading above .35 as recommended by Hair et al. (2006).

The variance explained was checked and according to the recommendation by Hair et al. (2006), the acceptable variance explained in factor analysis for a construct to be

valid in social sciences research is about 60% and in some instances even less. The two factors was able to explain 62.833 % of the total variance that explain the underlying construct, thus it can be concluded that the ten items in the reputation scale had construct validity and is a valid measure of reputation for this study.

The first factor comprised of five items and was named university management and the second factor comprised of three items and named academic and media reputation. The results of the above discussion are reported in Table 4.5.

Table 4.5  
*Factor analysis results for reputation (final run)*

ITEMS	FACTORS		COMMUNALITIES
	F1	F2	
REP1 Admire and respect	<b>.700</b>		.560
REP2 Choice to study here was a wise one	<b>.738</b>		.568
REP3 Well managed	<b>.774</b>		.643
REP4 Fulfils it promises	<b>.680</b>		.514
REP5 Excellent leadership	<b>.732</b>		.582
REP7 Better reputation than others		<b>.707</b>	.586
REP8 Good reputation with media		<b>.885</b>	.818
REP9 Favourable reports from media		<b>.838</b>	.756
KMO			.822
Bartlett's Test			1237.529
Sig			.000
Eigenvalues	3.885	1.142	
Total variance explained (%)	48.560	14.273	
Cumulative variance explained (%)	48.560	62.833	

Note: Factor loading  $> .50$  are in boldface. REP= Reputation. KMO= Kaiser-Meyer-Olkin.

#### 4.2.1.3 Factor analysis for relationship benefits

The results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity indicated that the factor analysis was appropriate to be used to analyze the dimensionality of the relationship benefits construct. The KMO indicated

the strength of the relationships amongst items were high ( $KMO = .763$ ) and the Bartlett's test of sphericity was significant ( $\chi^2 = 677.703, p < .05$ ).

The analysis of the communalities was checked and it revealed that the six items in the relationship benefits scale had communalities in the range of .234 (lowest) to .594 (highest).

The six items in the relationship benefits scale loaded onto a single factor. The single factor accounted for 48.142 % of the total variance with an eigenvalue of 2.889. The factor loadings for the six items ranged from .483 (lowest) to .771 (highest). Five out of the six items in the scale loaded above .50, except for item 1 which had a factor loading of .483, thus was discarded in further analysis. The results of the first run of the factor analysis for relationship benefits are reported in Table 4.6.

Table 4.6  
*Factor analysis results for relationship benefits (first run)*

	ITEMS	FACTOR	COMMUNALITIES
		F1	
RB1	Location is ideal	.483	.234
RB2	Beneficial opportunities	<b>.650</b>	.423
RB3	Best value for money	<b>.724</b>	.524
RB4	Monetary cost is well worth it	<b>.723</b>	.523
RB5	Able to get a good job	<b>.771</b>	.594
RB6	Provides high quality education	<b>.769</b>	.592
	KMO	.763	
	Bartlett's Test	677.703	
	Sig	.000	
	Eigenvalues	2.889	
	Total variance explained (%)	48.142	
	Cumulative variance explained (%)	48.142	

Note: Factor loading  $> .50$  are in boldface. RB= Relationship benefits.  
KMO=Kaiser=Meyer-Olkin.

In the final run of the factor analysis for the relationship benefits scale, the KMO was .756 and the Bartlett's test of sphericity was ( $\chi^2 = 608.126$ ,  $p < .05$ ), indicating that factor analysis was appropriate.

The analysis of the communalities were checked and it revealed that the five items in the relationship benefits scale had communalities in the range of .388 (lowest) to .630 (highest), indicating a good fit within the scale.

All factor loadings were above .50 as recommended by Hair et al. (2006), with the highest at .794 and the lowest at .623.

The five items in the relationship benefits scale was loaded onto only one factor, which accounted for 54.471 % of the total variance with an eigenvalue of 2.724. As recommended by Hair et al. (2006) variances explained close to or even less than 60 % in social sciences research is acceptable for a construct to be considered valid.

Thus, it can be concluded that the five items in the relationship benefits scale had construct validity and is a valid measure of relationship benefits for this study. The results of the above discussion are reported in Table 4.7.

Table 4.7

*Factor analysis results for relationship benefits (final run)*

ITEMS	FACTOR	COMMUNALITIES
	F1	
RB2 Beneficial opportunities	<b>.623</b>	.388
RB3 Best value for money	<b>.740</b>	.548
RB4 Monetary cost is well worth it	<b>.739</b>	.547
RB5 Able to get a good job	<b>.794</b>	.630
RB6 Provides high quality education	<b>.782</b>	.611
KMO	.756	
Bartlett's Test	608.126	
Sig	.000	
Eigenvalues	2.724	
Total variance explained (%)	54.471	
Cumulative variance explained (%)	54.471	

Note: Factor loading  $> .50$  are in boldface. RB= Relationship benefits. KMO=Kaiser-Meyer-Olkin.

#### 4.2.1.4 Factor analysis for satisfaction

The results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity indicated that the factor analysis was appropriate to be used to analyze the dimensionality of the satisfaction construct. The KMO indicated the strength of the relationships amongst items were high (KMO = .876) and the Bartlett's test of sphericity was significant ( $\chi^2 = 1311.993$ ,  $p < .05$ ).

The analysis of the communalities was checked and it revealed that the six items in the satisfaction scale had communalities in the range of .553 (lowest) to .743 (highest). The six items in the satisfaction scale loaded onto a single factor, with the lowest at .744 and the highest at .862. All were above the required criteria of .50, thus were retained for subsequent analysis.

The variance explained was checked and according to the recommendation by Hair et al. (2006), the acceptable variance explained in factor analysis for a construct to be

valid in social sciences research is about 60% and in some instances even less. The single factor was able to explain 65.202 % of the total variance that explain the underlying construct.

Thus, it can be concluded that the six items in the satisfaction scale had construct validity and is a valid measure of satisfaction for this study. The results of the above discussion are reported in Table 4.8.

Table 4.8  
*Factor analysis results for satisfaction*

	ITEMS	FACTOR F1	COMMUNALITIES
SAT1	Overall satisfied with the product/services offered	<b>.744</b>	.553
SAT2	Decision to choose the education institution was a wise one	<b>.846</b>	.715
SAT3	Satisfied with the decision to study at the education institution	<b>.834</b>	.696
SAT4	Enjoyable experience	<b>.762</b>	.581
SAT5	Overall, good place to study in	<b>.790</b>	.624
SAT6	Overall, satisfied with the education institution	<b>.862</b>	.743
KMO		.876	
Bartlett's Test		1311.993	
Sig		.000	
Eigenvalues		3.912	
Total variance explained (%)		65.202	
Cumulative variance explained (%)		65.202	

Note: Factor loading > .50 are in boldface. SAT= Satisfaction. KMO= Kaiser-Meyer-Olkin.

#### **4.2.1.5 Factor analysis for student loyalty**

The results of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity indicated that the factor analysis was appropriate to be used to analyze the dimensionality of the student loyalty construct. The KMO indicated the strength of the relationships amongst items were high (KMO = .848) and the Bartlett's test of sphericity was significant ( $\chi^2 = 1032.274$ ,  $p < .05$ ).

The analysis of the communalities was checked and it revealed that the six items in the student loyalty scale had communalities in the range of .513 (lowest) to .644 (highest).

The six items in the satisfaction scale loaded onto a single factor, with the lowest at .716 and the highest at .803. All were above the required criteria of .50, thus were retained for subsequent analysis. The six items in the student loyalty scale was loaded onto one factor, which accounted for 59.359 % of the total variance with an eigenvalue of 3.562.

As recommended by Hair et al. (2006) variances explained close to or even less than 60 % in social sciences research is acceptable for a construct to be considered valid.

Thus, it can be concluded that the six items in the student loyalty scale had construct validity and is a valid measure of student loyalty for this study. The results of the above discussion are reported in Table 4.9.

Table 4.9  
*Factor analysis results for student loyalty*

ITEMS	FACTOR	COMMUNALITIES
	F1	
SL1 Recommend to others	<b>.790</b>	.624
SL2 Say positive things	<b>.786</b>	.618
SL3 Encouraged other to study here	<b>.803</b>	.644
SL4 Continue to study here even if competitors offers are better	<b>.716</b>	.513
SL5 Would study or start afresh again at the same education institution	<b>.789</b>	.623
SL6 Plan to continue studies to postgraduate level	<b>.735</b>	.540
KMO	.848	
Bartlett's Test	1032.274	
Sig	.000	
Eigenvalues	3.562	
Total variance explained (%)	59.359	
Cumulative variance explained (%)	59.359	

Note: Factor loading  $> 0.33$  are in boldface. SL= Student loyalty. KMO= Kaiser-Meyer-Olkin.

#### 4.2.2 Reliability analysis

The reliability of the measures was tested after factor analysis was conducted. This was to ensure that the new measures identified for service quality and reputation in the previous factor analysis was reliable.

The reliability of the measures was tested using the Cronbach's Alpha which is a measure of the internal consistency. According to Hinton et al. (2004), a good guide on the cut off points for the reliability of a scale is as follows: .90 and above shows excellent reliability, .70 to .90 shows high reliability. .50 to .60 shows moderate reliability and .50 and below show low reliability.

Thus, the results in Table 4.10 shows that all the independent and dependent variables have high reliability as they are all between that range of .70 to .90, with satisfaction at the highest reliability at .891 and administrative quality at the lowest with .711.

Table 4.10  
*Cronbach's Alpha reliability score for the study's variables*

Variables	No of items	Cronbach's Alpha
Service quality		
Academic quality	5	.843
Program quality	3	.712
Administrative quality	2	.711
Reputation		
University management	5	.813
Academic and media reputation	3	.802
Relationship benefits	5	.785
Satisfaction	6	.891
Student loyalty	6	.859

### 4.3 Restatement of hypotheses

Following the results from the factor analysis, service quality and reputation are not uni dimensional constructs. Subsequently, the following hypotheses were re stated.

**H1 There is a positive relationship between students' perception of the higher education institution's service quality and their loyalty.**

**H1a** There is a positive relationship between students' perception of the higher education institution's academic quality and their loyalty.

**H1b** There is a positive relationship between students' perception of the higher education institution's program quality and their loyalty.

**H1c** There is a positive relationship between students' perception of the higher education institution's administrative quality and their loyalty.

**H2** **There is a positive relationship between students' perception of the higher education institution's reputation and their loyalty.**

**H2a** There is a positive relationship between students' perception of the higher education institution's university management and their loyalty.

**H2b** There is a positive relationship between students' perception of the higher education institution's academic and media reputation and their loyalty.

**H4** **Students' perception of the higher education institution's service quality has a significant positive effect on their loyalty.**

**H4a** Students' perception of the higher education institution's academic quality has a significant positive effect on their loyalty.

**H4b** Student's perception of the higher education institution's program quality has a significant positive effect on their loyalty.

**H4c** Students' perception of the higher education institution's administrative quality has a significant positive effect on their loyalty.

**H5** **Students' perception of the higher education institution's reputation has a significant positive effect on their loyalty**

**H5a** Students' perception of the higher education institution's university management has a significant positive effect on their loyalty.

**H5b** Students' perception of the higher education institution's academic and media reputation has a significant positive effect on their loyalty.

**H7 Satisfaction mediates the relationship between the students' perception of the higher education institution's service quality and their loyalty.**

**H7a** Satisfaction mediates the relationship between the students' perception of the higher education institution's academic quality and their loyalty.

**H7b** Satisfaction mediates the relationship between the students' perception of the higher education institution's program quality and their loyalty.

**H7c** Satisfaction mediates the relationship between the students' perception of the higher education institution's administrative quality and their loyalty.

**H8 Satisfaction mediates the relationship between the students' perception of the higher education institution's reputation and their loyalty.**

**H8a** Satisfaction mediates the relationship between the students' perception of the higher education institution's university management and their loyalty.

**H8b** Satisfaction mediates the relationship between the students' perception of the higher education institution's academic and media reputation and their loyalty.

#### 4.4 Testing of the research data

Before proceeding with further analyses, the research data were tested for normality, linearity, homoscedasticity, multicollinearity and outliers. This was to ensure that the data was suitable for subsequent analyses which involve parametric techniques. The subsequent sections discuss the results of the tests conducted in this study.

##### 4.4.1 Normality

Normality test was conducted to test the normal distribution of the data before proceeding with further analyses. As suggested by Pallant (2013), the recommended range for skewness should be within the range of  $\pm 2$ , whilst for kurtosis, values should be within the range of  $\pm 7$ . As all the values for skewness and kurtosis were within the recommended range, it can be concluded that the data was normally distributed. This is presented in Table 4.11. A visual inspection of the normality probability plot (P-P) of the regression standardised residual also indicated normality was verified. The points all lie in a reasonably straight diagonal line from bottom left to right. This suggested no major deviations from normality (Pallant, 2013). This is presented in Figure 4.1

Table 4.11  
*Skewness and kurtosis*

Variable	Skewness	Kurtosis
Service quality		
Academic quality	-.417	.245
Program quality	-.399	-.061
Administrative quality	-.215	-.109
Reputation		
University management	-.171	.264
Academic and media reputation	-.440	.557
Relationship benefits	-.572	1.106
Satisfaction	-.343	.883
Student loyalty	-.419	.612

Normal P-P Plot of Regression Standardized Residual

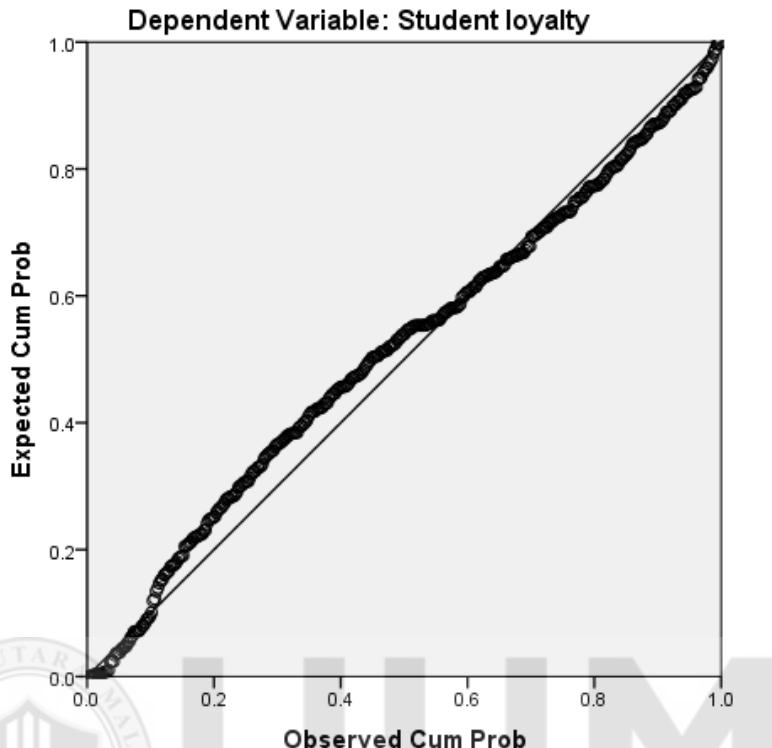


Figure 4.1

Normality probability plot (P-P) of the regression standardised residual

#### 4.4.2 Linearity

To ensure the assumption of linearity was not violated, a scatterplot of the standardised residual was produced for visual inspection to check for linear association. As per Pallant (2013) guideline, the residuals were all roughly rectangularly distributed with most concentrated in the centre (along the 0 point). There were no deviations from a centralized rectangle, thus indicating linearity. The scatterplot was found to have no presence of curvilinear relationship thus no violation of assumption was found. The scatterplot is shown in Figure 4.2.

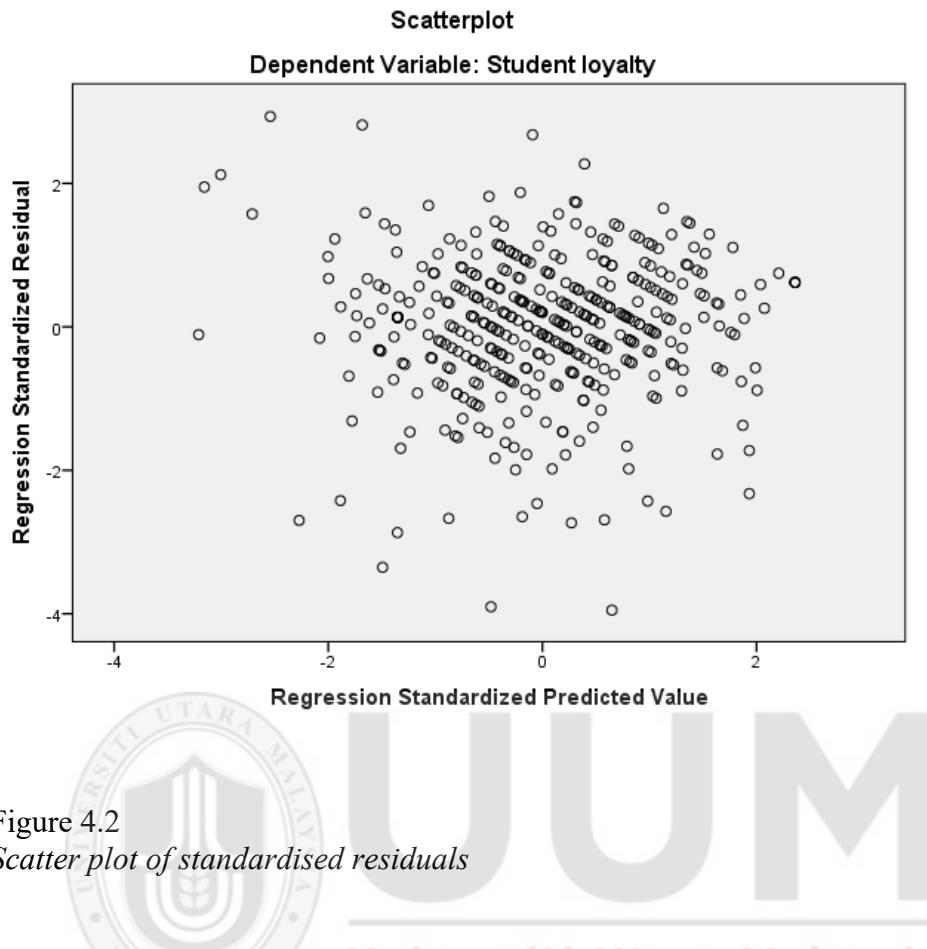


Figure 4.2  
*Scatter plot of standardised residuals*

#### 4.4.3 Homoscedasticity

A visual inspection of the scatterplot (Figure 4.2) of the standardised residual indicated no problems in homoscedasticity. The scatter plot was the approximate shape of a rectangular and scores were concentrated in the centre (about the 0 point) and distributed in a rectangular pattern. The scatter plot showed that there was no obvious pattern of increasing or decreasing residuals, which indicated that assumption of homoscedasticity was supported.

#### 4.4.4 Multicollinearity

The presence of multicollinearity is not beneficial when conducting regression as it would result in unreliable estimation of regression coefficient (Pallant, 2013). As per Pallant (2013) guideline, the tolerance values for all predictor variables were above .10, and all the VIF was below 10. This indicated that there was no multicollinearity problem. The collinearity statistic is reported in Table 4.12.

Table 4.12  
*Tolerance value and Variance inflation factor (VIF)*

Variables	Collinearity statistic	
	Tolerance	VIF
Service quality		
Academic quality	.591	1.693
Program quality	.658	1.519
Administrative quality	.675	1.481
Reputation		
University management	.409	2.446
Academic and media reputation	.590	1.696
Relationship	.516.	1.939
Satisfaction	.392	2.551

#### 4.4.5 Outliers

Multivariate outliers were determined through Mahalanobis distance statistic (Tabachnick & Fidell, 2013). Mahalanobis distance (D2) was evaluated with a Chi-square ( $\chi^2$ ) criterion with degrees of freedom equal to the number of independent variables (Pallant, 2013). The researcher used the number of independent variables (i.e. 6) to represent the degree of freedom at  $p < .001$  and found the chi-square cut off value of 22.46. Based on this, two cases had been detected as multivariate outliers. As a result, these two cases were omitted, thus leaving 398 cases to be used in the correlation and regression analyses.

## 4.5 Descriptive analysis

Descriptive statistics can be divided into two types: frequency distributions and measures of central tendencies and dispersion (Cavana et al., 2001). The demographic profiles of the respondents were presented in the form of frequency and percentages. The characteristics of the independent and dependent variables in this study were examined using the measures of central tendencies and dispersion like mean, median standard deviation, minimum and maximum. The descriptive analysis was used to achieve the first research objective of this study, which was to determine the level of students' loyalty in private higher education institutions in Malaysia.

### 4.5.1 Demographic profile of respondents

This section presents the demographic profile of the respondents through descriptive analysis. The frequencies and percentages of the respondents' characteristics such as their gender, nationality, race, age group and years of studying at their current education institution are discussed and reported in Table 4.13.

In terms of gender, out of the 400 samples collected, 156 or 39 % were male and 244 or 61 % of respondents were female.

In terms of nationality, the majority of respondents were Malaysians, 380 or 95%. 20 or 5% of the respondents were non-Malaysian, with the breakdown (in numbers) as follows: Thai (1); Sudanese (1); Sri Lankan (1); French (1); Bahraini (1); Yemeni (2); Saudi Arabian (1); Pakistani (1); Iranian (1); Indonesian (1); Korean (1); Nigerian (1); Ugandan (1); Bangladeshi (1); Vietnamese (1) and Indian (4).

In terms of race, the majority of the respondents were Chinese, 243 or 60.8%. Followed by Indians, 95 or 23.8%, Malays, 41 or 10.3% and others, 21 or 5.3%. The others comprise of the following races (in numbers): Kedayan (1); Bidayuh (2); Kenyah (1); Melanau (1); Kadazan (1); African (4); Arab (4); Punjabi (3); Persian (1); Bengali (1); Viet (1) and Korean (1).

In terms of age group, majority of the respondents, 216 or 54% were aged between 17 – 20 years, followed by 166 or 41.5 % of the respondents aged 21 – 24 years old and 13 or 3.3% aged between 25 – 28 years. Three respondents were aged between 29 – 32 years and two respondents aged 32 years and above.

Lastly, in terms of years of studying at current education institution, slightly more than half of the respondents, 51% or 204 students reported having studied at their current education institution between 1 – 2 years. This was followed by 84 or 21% of students having studied at their current education institution less than a year, 58 or 14.5% of students with 2 – 3 years of study, 15 or 3.8% with 4 -5 years of study. Lastly, only 7 or 1.8% of the students have studied at their current education institution more than 5 years.

Table 4.13  
*Demographic profile of respondents*

Characteristics	Frequency	Percentage (%)	Cumulative (%)
<b>Gender</b>			
Male	156	39	39
Female	244	61	100
<b>Nationality</b>			
Malaysian	380	95	95
Non Malaysian	20	5	100
<b>Race</b>			
Malay	41	10.3	10.3
Chinese	243	60.8	71.1
Indian	95	23.8	94.9
Others	21	5.3	100
<b>Age group</b>			
17 – 20 years	216	54.0	54
21 – 24 years	166	41.5	95.5
25 – 28 years	13	3.3	98.8
29 – 32 years	3	0.8	99.6
Above 32 years	2	0.5	100
<b>Years studying at current education institution</b>			
Less than 1 year	84	21	21
1 – 2 years	204	51	72
2 -3 years	58	14.5	86.5
3 – 4 years	32	8	94.5
4 – 5 years	15	3.8	98.3
More than 5 years	7	1.8	100

Overall, the demographic profile of the sample does not deviate significantly from the general population, except in terms of the Malaysian to non Malaysian students' ratio. In terms of gender, females represent 61% and males represent 39% of the sample. This is fairly consistent with gender ratios in higher education institutions in Malaysia which indicate a female to male ratio of 60:40 (Wan, 2012).

In terms of race, the majority of the respondents were non Bumiputera, in which 60.8% were Chinese, 23.8% were Indian and 5.3% were Others, totalling almost 90% non Bumiputera students which are fairly consistent with Bumiputera to non Bumiputera student ratios in Private HEIs in Malaysia. According to Wan (2007), Private HEIs in Malaysia serve as the avenue for deserving students (of other ethnic groups) who were unable to enter into Public HEIs due to particular entry requirements. As such, about 95% of the clientele in private institutions are made up of non-Bumiputera students.

Majority of the students in the sample were in the age group of 17-20 years at 54%, followed by those in the age group of 21-24 years at 41%. In Malaysia, most non Bumiputera students opt to enter Private HEIs upon completion of their Sijil Pelajaran Malaysia (SPM), whether to pursue popular foundation, diploma or degree courses, which can take up to 1 to 5 years to complete (Wan, 2007). As such, most of these students would be in the range of 18 to 23 years, which is fairly consistent with our sample.

In our sample, the percentage of Malaysian students to non Malaysian students is 95% to 5%. According to the Ministry of Higher Educations' statistics, the percentage of international students at Private HEIs in Malaysia for the year 2015 is 15% (87,002 out of the total 580,928). As such, this is a limitation of the study. The findings from this study should only be construed to be representative of students who are of Malaysian nationality only.

#### 4.5.2 Descriptive statistics

This section covers the measures of central tendencies and dispersion for the independent and dependent variables of this study. The statements for the independent and dependent variables were measured based on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The mean, median, standard deviation, minimum and maximum of all the variables are summarized and reported in Table 4.14.

Based on the results below, the highest mean was academic and media reputation (3.840) and the lowest mean was administrative quality (3.411). The variables' standard deviation ranged from .620 to .805 with administrative quality at the highest standard deviation (.805) and the lowest standard deviation was university management (.620). All the standard deviations were lower than 1.0, meaning the respondents were consistent in their opinions (Hair et al., 2006).

Table 4.14  
*Summary of descriptive statistics for all variables*

Variables	Mean	Median	Standard deviation	Minimum	Maximum
Service quality					
Academic quality	3.755	3.800	.666	1.60	5
Program quality	3.585	3.666	.739	1.33	5
Administrative quality	3.411	3.500	.805	1	5
Reputation					
University management	3.743	3.800	.620	1.60	5
Academic and media reputation	3.840	4.000	.709	1	5
Relationship benefits	3.814	3.800	.650	1	5
Satisfaction	3.765	3.833	.645	1	5
Student loyalty	3.556	3.666	.721	1	5

To achieve the first research objective of this study, which was to determine the level of students' loyalty in private higher education institutions in Malaysia, percentiles

were used. A percentile is a score or a group of scores (class interval) in a distribution at or below which a given percentages of cases is found. The quartiles are the most commonly used in social research in which the 25th, 50th (median) and the 75th percentiles are used (Abu-Bader, 2011).

As this study wanted to identify the levels of student loyalty, the most commonly used ranges: Low, Medium and High were used. The student loyalty score was split at the percentile 33.33 and 66.66, dividing the score into three groups, to conform to the Low, Medium and High groups. This procedure is typical in research work related to social sciences because it allows scores to be easily categorized into groups according to the needs of the researcher (Abu-Bader, 2011).

The 33.33th percentile is the score that 33.33% of cases fall at or below. The 66.66th percentile is the score that 66.66% of cases fall at or below. This means that scores corresponding to percentile 33.33 and lower are categorized as Low level, between 33.33 and 66.66 are Moderate level, and higher than 66.66 are High level. From Table 4.15, the score for student loyalty at the 33.33th percentile is 3.333 and the score for student loyalty at the 66.66th percentile is 3.833. This marks our ranges for the level of student loyalty as reported in Table 4.16.

The mean and median for student loyalty is 3.556 and 3.666, respectively (Table 4.15). Based on Table 4.16, the mean and median fall within the moderate level range (3.334 to 3.833).

This indicated that the level of students' loyalty in private higher education institutions in Malaysia is at the moderate level. Thus, the first research objective of this study has been achieved.

Table 4.15

*Mean, median and cut off points for levels of students' loyalty*

<b>Student loyalty</b>		
Mean		3.556
Median		3.666
Std. Deviation		.721
Minimum		1
Maximum		5
<b>Percentiles</b>	<b>33.333</b>	<b>3.333</b>
	<b>66.667</b>	<b>3.833</b>

Table 4.16

*Range for every level of students' loyalty*

<b>Mean value</b>	<b>Level of students' loyalty</b>
$\leq 3.333$	Low
3.334 to 3.833	Moderate
$\geq 3.834$	High

To provide further insight into loyalty levels in the Malaysian private higher education industry, the mean, median, cut off points and ranges for levels of students' loyalty for each of the different Private HEIs statuses were tabulated. The results are reported in Table 4.17 and Table 4.18.

For Private HEIs with University status, the results indicated that students' loyalty levels are at moderate levels as the mean (3.562) and median (3.666) are within the range of the moderate level (3.334 to 3.833). For Private HEIs with University college status, the results indicated that students' loyalty levels are at the moderate level as well. The mean is 3.653 and the median is 3.666. Both fall within the range of the moderate level (3.333 to 4.000). For Private HEIs with Foreign University branch campus status, the results indicated that students' loyalty levels are at the moderate level too. The mean is 3.444 and the median is 3.416. Both fall within the range of the moderate level (3.056 to 3.500). Lastly, for Private HEIs with College status, the results indicated that

students' loyalty levels are at moderate levels as well as the mean (3.524) and the median (3.500) are within the range of the moderate level (3.168 to 4.000).

Table 4.17

*Mean, median and cut off points for levels of students' loyalty according to Private HEIs' status*

<b>Private HEI's status</b>	<b>Mean</b>	<b>Median</b>	<b>Standard deviation</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Percentiles</b>	
						<b>33.333</b>	<b>66.667</b>
University	3.562	3.666	.706	1.17	5	3.333	3.833
University College	3.653	3.666	.523	2.67	5	3.333	4.000
Foreign University branch campus	3.444	3.416	.690	2.50	4.67	3.055	3.500
College	3.524	3.500	.800	1	5	3.167	4.00

Table 4.18

*Range of every level of students' loyalty according to Private HEIs' status*

<b>Private HEI's status</b>	<b>Mean value</b>	<b>Level of students' loyalty</b>
University	$\leq 3.333$	Low
	3.334 to 3.833	Moderate
	$\geq 3.834$	High
University College	$\leq 3.333$	Low
	3.334 to 4.000	Moderate
	$\geq 4.001$	High
Foreign University branch campus	$\leq 3.055$	Low
	3.056 to 3.500	Moderate
	$\geq 3.501$	High
College	$\leq 3.167$	Low
	3.168 to 4.000	Moderate
	$\geq 4.001$	High

#### **4.6 Inferential Analysis (Hypotheses testing)**

As previously discussed in the previous chapter, a total of nine main hypotheses and fifteen sub hypotheses has been developed to fulfill the second, third and fourth research objectives of this study.

They are as follows:

Research To determine the relationships between service H1:H1a;H1b;H1c  
objective 2 quality, reputation, relationship benefits and students' H2: H2a;H2b  
loyalty in private higher education institutions in H3  
Malaysia.

Research To determine the significant effects of service quality, H4:H4a;H4b;H4c  
objective 3 reputation and relationship benefits on students' H5:H5a;H5b  
loyalty in private higher education institutions in H6  
Malaysia.

Research To determine the mediating effects of satisfaction on H7:H7a;H7b;H7c  
objective 4 the relationships between service quality, reputation H8:H8a;H8b  
and relationship benefits on students' loyalty in private H9  
higher education institutions in Malaysia.

All hypotheses were tested by using inferential statistics. For the first to third main hypotheses, they were tested by using Pearson Correlation, for the fourth to sixth main hypotheses, multiple regression was used, and mediation analysis was used to test the seventh to ninth main hypotheses.

#### **4.6.1 Correlation analysis**

To achieve the second research objective of this study, correlation analysis was conducted. The analysis was to determine the relationships between service quality, reputation, relationship benefits and students' loyalty. The strength and direction of the relationships between the variables was determined through the correlation coefficient (r) value.

##### **4.6.1.1 Relationship between service quality and students' loyalty**

To assess the size and direction of the relationship between service quality and students' loyalty, a bivariate correlation analysis was conducted. All dimensions: academic quality, program quality and administrative quality had positive relationships with students' loyalty.

The results as reported in Table 4.19 indicated a positive relationship between academic quality with students' loyalty ( $r = .371, p < .001$ ); program quality and students' loyalty ( $r = .377, p < .001$ ) and administrative quality with students' loyalty ( $r = .411, p < .001$ ).

Following Pallant (2013) guide to the direction and strength of the relationships, all relationships were positive with medium strength.

Therefore, the second research objective of this study which was to determine the relationship between service quality and students' loyalty had been achieved. The results of the analysis indicated that Hypotheses 1 (H1: H1a; H1b; H1c) was fully supported.

Table 4.19

*Pearson correlation between service quality and students' loyalty*

Variables	1	2	3	4
Service quality				
1. Academic quality				
2. Program quality				
3. Administrative quality				
4. Student loyalty	.371**	.377**	.411**	1

Note: \*\* p<.001 (2 tailed)

#### **4.6.1.2 Relationship between reputation and students' loyalty**

To assess the size and direction of the relationship between reputation and students' loyalty, a bivariate correlation analysis was conducted. Both university management and academic and media reputation dimension had positive relationships with students' loyalty.

The results as reported in Table 4.20 indicated a positive relationship between university management with students' loyalty ( $r = .603$ ,  $p < .001$ ) and academic and media reputation and students' loyalty ( $r = .431$ ,  $p < .001$ )

Following Pallant (2013) guide to the direction and strength of the relationships, both relationships were positive. The relationship between university management with students' loyalty was strong, whilst academic and media reputation was of medium strength.

Therefore, the second research objective of this study which was to determine the relationship between reputation and students' loyalty had been achieved. The results of the analysis indicated that Hypotheses 2 (H2: H2a; H2b) was fully supported.

Table 4.20

*Pearson correlation between reputation and students' loyalty*

Variables	1	2	3
Reputation			
1. University management			
2. Academic and media reputation			
3. Student loyalty	.603**	.431**	1

Note: \*\* p&lt;.001 (2 tailed)

**4.6.1.3 Relationship between relationship benefits and students' loyalty**

To assess the size and direction of the relationship between relationship benefits and students' loyalty, a bivariate correlation analysis was conducted.

The results as reported in Table 4.21 indicated a positive relationship between relationship benefits with students' loyalty ( $r = .529$ ,  $p < .001$ ).

Following Pallant (2013) guide to the direction and strength of the relationships, the relationship was positive and strong.

Therefore, the second research objective of this study which was to determine the relationship between relationship benefits and students' loyalty had been achieved. The results of the analysis indicated that Hypotheses 3 was supported.

Table 4.21

*Pearson correlation between relationship benefits and students' loyalty*

Variables	1	2
1. Relationship benefits		
2. Student loyalty	.529**	1

Note: \*\* p&lt;.001 (2 tailed)

## 4.6.2 Multiple regression analysis

To achieve the third research objective and to answer Hypotheses 4, 5 and 6 and their accompanying sub hypotheses, multiple regression analysis was conducted.

### 4.6.2.1 The effects of service quality, reputation and relationship benefits on students' loyalty

To estimate the proportion of variance in students' loyalty that can be accounted for by service quality, reputation and relationship benefits, multiple regression analysis was conducted.

The results of the multiple regression analysis are reported in Table 4.22.

Table 4.22

*Summary of multiple regression between dependent variable (student loyalty) with independent variables (service quality, reputation and relationship benefits)*

<b>Dependent variable: Student loyalty</b>		
	<b>β</b>	<b>Sig</b>
Constant		
Service quality		
Academic quality	-.015	.753
Program quality	.048	.291
Administrative quality	.114	.012
Reputation		
University management	.367	.000
Academic and media reputation	.057	.247
Relationship benefits	.262	.000
<i>R</i> <sup>2</sup>	.444	
<i>F</i>	52.038	
Sig	.000	
df <sub>1</sub> df <sub>2</sub>		6,391

In combination, the variables accounted for a significant 44.4 % of the variability in students' loyalty,  $R^2 = .444$ ,  $F (6,391) = 52.038$ ,  $p <.001$ ). The 55.56 % could be due to error or explained by other factors not included in this study.

The results of the hypothesis testing in this study indicated that academic quality ( $\beta = -.015$ ,  $p > .05$ ), program quality ( $\beta = .048$ ,  $p > .05$ ) and academic and media reputation ( $\beta = .057$ ,  $p > .05$ ) were found not significant.

The results indicated that administrative quality ( $\beta = .114$ ,  $p < .005$ ), university management ( $\beta = .367$ ,  $p < .001$ ) and relationship benefits ( $\beta = .262$ ,  $p < .001$ ) were found to have significant effects on students' loyalty.

In terms of effect size, Cohen (1988) suggested than a  $f^2$  of .02 (or  $R^2$  of .0196 can be considered small, a  $f^2$  of .15 (or  $R^2$  of .13) can be considered medium, and a  $f^2$  of .35 (or  $R^2$  of .25) can be considered large.

The  $f^2$  was calculated using the following formula and the results are as reported below.

$$f^2 = \frac{R^2}{1 - R^2}$$

$$f^2 = \frac{0.444}{1 - 0.444} = 0.798$$

Thus, based on Cohen's (1988) conventions, a combined effect of this magnitude by the independent variables in this study can be considered large.

As such, the third research objective of this study which was to determine the significant effects of service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia has been achieved.

The results of the analysis indicted that Hypotheses 4 (H4) was partially supported, as H4a, academic quality and H4b, program quality was not supported and only H4c, administrative quality was supported.

Hypotheses 5 (H5) was also partially supported, as H5a, university management was supported and H5b, academic and media reputation was not supported.

Lastly, Hypotheses 6 was supported, indicating that relationship benefits as a strong determinant of students' loyalty.

#### **4.6.3 Mediation analysis**

The fourth objective of this study was to determine the mediating effect of satisfaction on the relationships between service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia. To determine the seventh, eighth and ninth hypothesis (H7, H8 and H9) and their accompanying sub hypotheses of this study; mediation analysis was conducted using PROCESS, a computational program developed by Hayes (2012).

The following sections cover the mediation analyses for the respective independent variables.

#### **4.6.3.1 Mediation analysis for service quality**

##### **4.6.3.1.1 Mediating effect of academic quality**

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between academic quality and student loyalty. Results of the mediation analysis revealed that academic quality indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.23 and Figure 4.3, in Step 1 of the mediation analysis, the regression of academic quality to student loyalty was significant ( $B = .411, p < .001$ ).

This is denoted as Path C. Step 2 showed that the regression of academic quality on satisfaction was significant ( $B = .489, p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student loyalty while controlling for academic quality was also significant ( $B = .756, p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between academic quality and student loyalty taking into account the effect of satisfaction, was not significant ( $B = .417, p > .05$ ). This is denoted as Path c'.

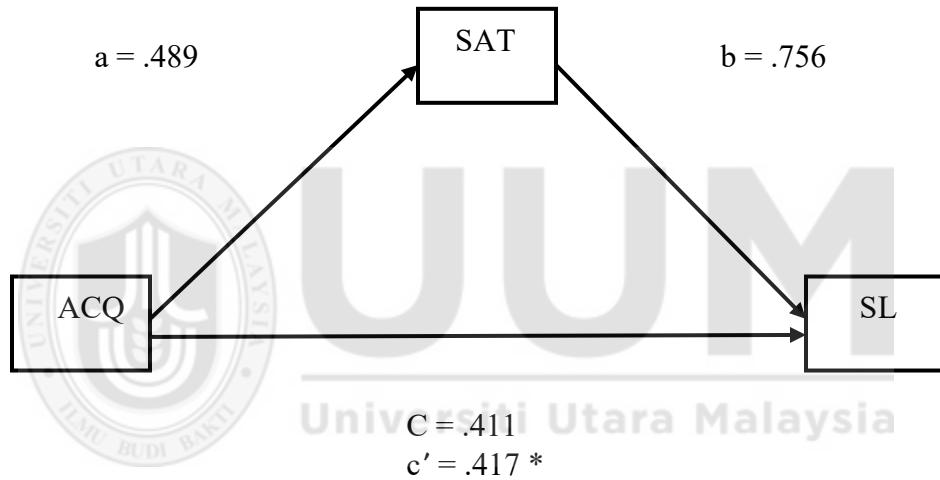
A Sobel test was conducted and confirmed mediation ( $z = 9.279, p < .001$ ). It was found that satisfaction fully mediated the relationship between academic quality and students' loyalty. Therefore, Hypothesis 7a (H7a) was supported.

Table 4.23

*Summary of mediation analysis between academic quality, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	ACQ	SL	C	.411	.000
2	ACQ	SAT	a	.489	.000
3	SAT	SL	b	.756	.000
4	ACQ		c'	.417	.379
	Sobel Test (z)			9.279	
	Sig			.000	

Note: SL = Student loyalty. SAT = Satisfaction. ACQ = Academic quality.



Note: \*  $p > .05$

Figure 4.3

*Mediating effect of satisfaction on the relationship between academic quality and students' loyalty*

#### 4.6.3.1.2 Mediating effect of program quality

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between program quality and student loyalty. Results of the mediation analysis revealed that program quality indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.24 and Figure 4.4, in Step 1 of the mediation analysis, the regression of program quality to student loyalty was significant ( $B = .374$ ,  $p < .001$ ).

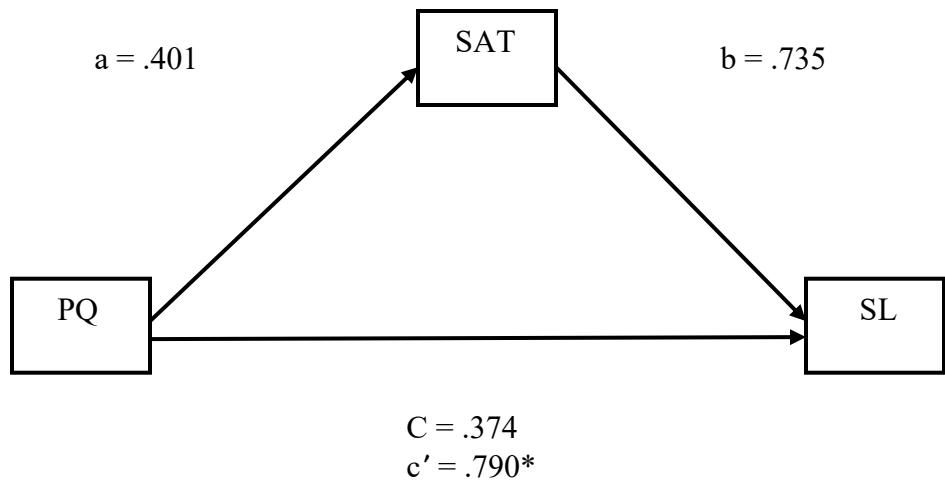
This is denoted as Path C. Step 2 showed that the regression of program quality on satisfaction was significant ( $B = .401$ ,  $p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student loyalty while controlling for program quality was also significant ( $B = .735$   $p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between program quality and student loyalty taking into account the effect of satisfaction, was not significant ( $B = .790$ ,  $p > .05$ ). This is denoted as Path c'.

A Sobel test was conducted and confirmed mediation ( $z = 8.616$ ,  $p < .001$ ). It was found that satisfaction fully mediated the relationship between program quality and students' loyalty. Therefore, Hypothesis 7b (H7b) was supported.

Table 4.24  
*Summary of mediation analysis between program quality, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	PQ	SL	C	.374	.000
2	PQ	SAT	a	.401	.000
3	SAT	SL	b	.735	.000
4	PQ		c'	.790	.055
Sobel Test (z)				8.616	
Sig				.000	

Note: SL = Student loyalty. SAT = Satisfaction. PQ = Program quality.



Note: \*  $p > .05$

**Figure 4.4**  
*Mediating effect of satisfaction on the relationship between program quality and students' loyalty*

#### 4.6.3.1.3 Mediating effect of administrative quality

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between administrative quality and student loyalty. Results of the mediation analysis revealed that administrative quality indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.25 and Figure 4.5, in Step 1 of the mediation analysis, the regression of administrative quality to student loyalty was significant ( $B = .371, p < .001$ ). This is denoted as Path C. Step 2 showed that the regression of administrative quality on satisfaction was significant ( $B = .319, p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student

loyalty while controlling for administrative quality was also significant ( $B = .702$ ,  $p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between administrative quality and student loyalty taking into account the effect of satisfaction, was significant ( $B = .147$ ,  $p < .001$ ). This is denoted as Path c'.

A Sobel test was conducted and confirmed mediation ( $z = 7.637$ ,  $p < .001$ ). As per Baron and Kenny's (1986) guideline, to decide whether the mediation was full or partial, the values corresponding to Path C and Path c' were compared. As the value in Path C ( $B = .371$ ) was greater than the value in Path c' ( $B = .147$ ), it indicated that the mediation effect was partial. Therefore, Hypothesis 7c (H7c) was supported.

Table 4.25

*Summary of mediation analysis between administrative quality, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	ADQ	SL	C	.371	.000
2	ADQ	SAT	a	.319	.000
3	SAT	SL	b	.702	.000
4	ADQ		c'	.147	.000
Sobel Test (z)				7.637	
Sig				.000	

Note: SL = Student loyalty. SAT = Satisfaction. ADQ = Administrative quality.

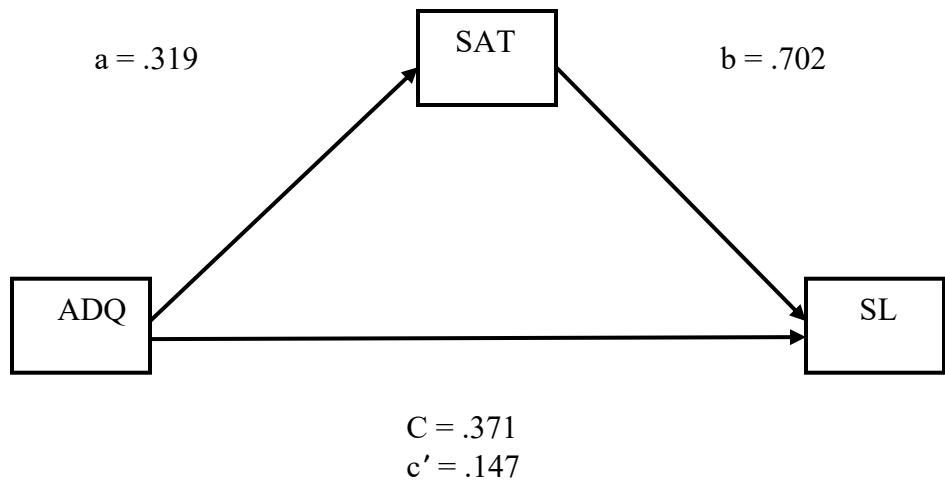


Figure 4.5

*Mediating effect of satisfaction on the relationship between administrative quality and students' loyalty*

#### 4.6.3.2 Mediation analysis for reputation

##### 4.6.3.2.1 Mediating effect of university management

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between university management and student loyalty. Results of the mediation analysis revealed that university management indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.26 and Figure 4.6, in Step 1 of the mediation analysis, the regression of university management to student loyalty was significant ( $B = .701, p < .001$ ). This is denoted as Path C. Step 2 showed that the regression of university management on satisfaction was significant ( $B = .711, p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student loyalty while controlling for university management was also significant ( $B = .578, p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between

university management and student loyalty taking into account the effect of satisfaction, was significant ( $B = .290$ ,  $p < .001$ ). This is denoted as Path  $c'$ .

A Sobel test was conducted and confirmed mediation ( $z = 8.945$ ,  $p < .001$ ). As per Baron and Kenny's (1986) guideline, to decide whether the mediation was full or partial, the values corresponding to Path C and Path  $c'$  were compared. As the value in Path C ( $B = .701$ ) was greater than the value in Path  $c'$  ( $B = .290$ ), it indicated that the mediation effect was partial. Therefore, Hypothesis 8a (H8a) was supported.

Table 4.26  
*Summary of mediation analysis between university management, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	UM	SL	C	.701	.000
2	UM	SAT	a	.711	.000
3	SAT	SL	b	.578	.000
4	UM		$c'$	.290	.000
Sobel Test (z)				8.945	
Sig				.000	

Note: SL = Student loyalty. SAT = Satisfaction. UM = University management

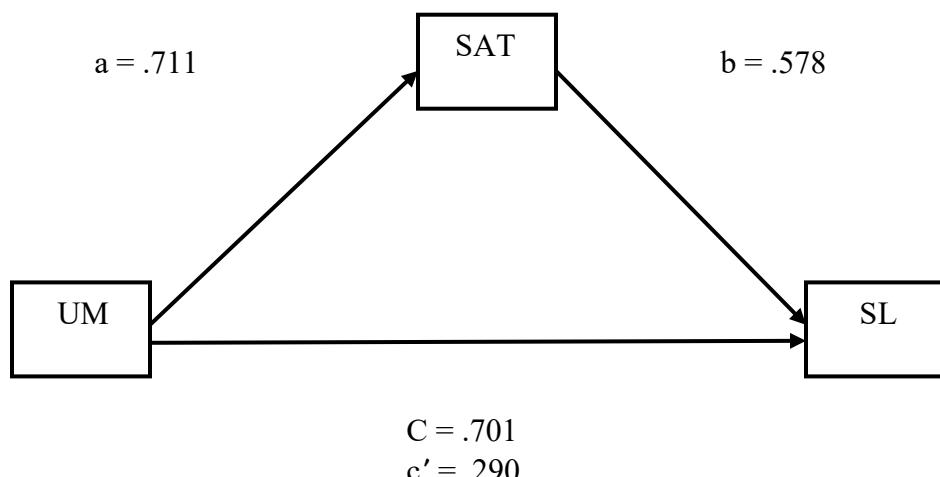


Figure 4.6  
*Mediating effect of satisfaction on the relationship between university management and students' loyalty*

#### **4.6.3.2.2 Mediating effect of academic and media reputation**

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between academic and media reputation and student loyalty. Results of the mediation analysis revealed that academic and media reputation indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.27 and Figure 4.7, in Step 1 of the mediation analysis, the regression of academic and media reputation to student loyalty was significant ( $B = .438$ ,  $p < .001$ ). This is denoted as Path C. Step 2 showed that the regression of academic and media reputation on satisfaction was significant ( $B = .447$ ,  $p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student loyalty while controlling for academic and media reputation was also significant ( $B = .709$   $p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between academic and media reputation and student loyalty taking into account the effect of satisfaction, was significant ( $B = .121$ ,  $p \leq .05$ ). This is denoted as Path c'.

A Sobel test was conducted and confirmed mediation ( $z = 9.082$ ,  $p < .001$ ). As per Baron and Kenny's (1986) guideline, to decide whether the mediation was full or partial, the values corresponding to Path C and Path c' were compared. As the value in Path C ( $B = .438$ ) was greater than the value in Path c' ( $B = .121$ ), it indicated that the mediation effect was partial. Therefore, Hypothesis 8b (H8b) was supported.

Table 4.27

*Summary of mediation analysis between academic and media reputation, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	ACMR	SL	C	.438	.000
2	ACMR	SAT	a	.447	.000
3	SAT	SL	b	.709	.000
4	ACMR		c'	.121	.005
		Sobel Test (z)		9.082	
		Sig		.000	

Note: SL = Student loyalty. SAT = Satisfaction. ACMR = Academic and media reputation

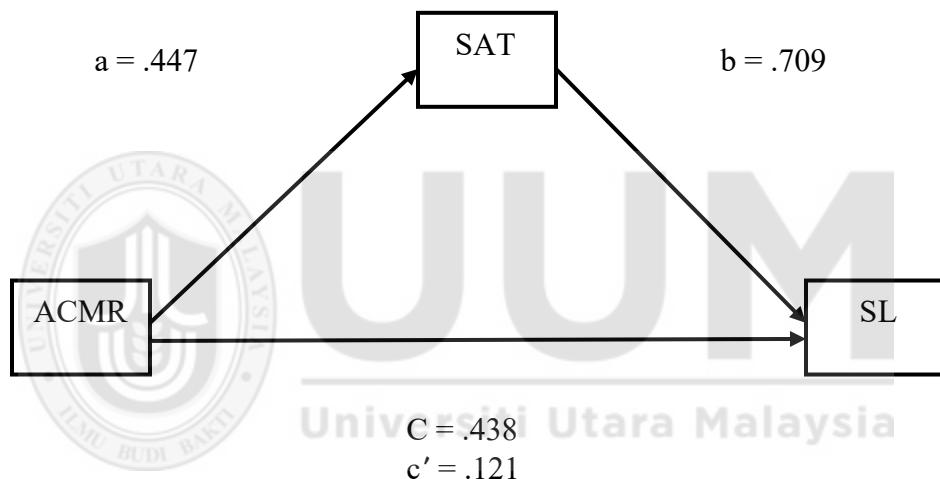


Figure 4.7

*Mediating effect of satisfaction on the relationship between academic and media reputation and students' loyalty*

#### 4.6.3.3 Mediation analysis for relationship benefits

Mediation analysis was conducted to examine the mediating effect of satisfaction on the relationship between relationship benefits and student loyalty. Results of the mediation analysis revealed that relationship benefits indirectly influenced student loyalty through the effects of satisfaction.

As reported in Table 4.28 and Figure 4.8, in Step 1 of the mediation analysis, the regression of relationship benefits to student loyalty was significant ( $B = .615, p < .001$ ). This is denoted as Path C. Step 2 showed that the regression of relationship benefits on satisfaction was significant ( $B = .620, p < .001$ ). This is denoted as Path a. Step 3 of the mediation analysis showed that satisfaction positively predicted student loyalty while controlling for relationship benefits was also significant ( $B = .651, p < .001$ ). This is denoted as Path b. Step 4 of the analysis revealed that regression between relationship benefits and student loyalty taking into account the effect of satisfaction, was still significant ( $B = .212, p < .001$ ). This is denoted as Path c'.

A Sobel test was conducted and confirmed mediation ( $z = 9.651, p < .001$ ). As per Baron and Kenny's (1986) guideline, to decide whether the mediation was full or partial, the values corresponding to Path C and Path c' were compared. As the value in Path C ( $B = .615$ ) was greater than the value in Path c' ( $B = .212$ ), it indicated that the mediation effect was partial. Therefore, Hypothesis 9 (H9) was supported.

Table 4.28  
*Summary of mediation analysis between relationship benefits, satisfaction and students' loyalty*

Step	IV	DV	Path	B	Sig
1	RB	SL	C	.615	.000
2	RB	SAT	a	.620	.000
3	SAT	SL	b	.651	.000
4	RB		c'	.212	.000
Sobel Test (z)				9.651	
Sig				.000	

Note: SL = Student loyalty. SAT = Satisfaction. RB = Relationship benefits.

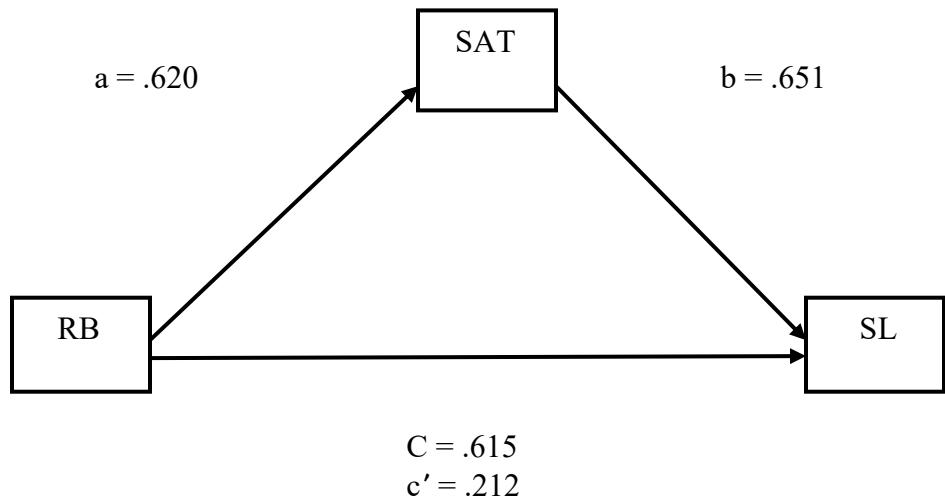


Figure 4.8

*Mediating effect of satisfaction on the relationship between relationship benefits and students' loyalty*

#### 4.7 Summary of hypotheses testing

The results of the hypotheses testing are presented in Table 4.29.

Table 4.29

*Summary of hypotheses testing*

	Hypotheses	Results
H1	There is a positive relationship between students' perception of the higher education institution's service quality and their loyalty.	Supported
H1a	There is a positive relationship between students' perception of the higher education institution's academic quality and their loyalty.	Supported
H1b	There is a positive relationship between students' perception of the higher education institution's program quality and their loyalty.	Supported
H1c	There is a positive relationship between students' perception of the higher education institution's administrative quality and their loyalty.	Supported

Table 4.29 (Continued)

H2	There is a positive relationship between students' perception of the higher education institution's reputation and their loyalty.	Supported
H2a	There is a positive relationship between students' perception of the higher education institution's university management and their loyalty.	Supported
H2b	There is a positive relationship between students' perception of the higher education institution's academic and media reputation and their loyalty.	Supported
H3	There is a positive relationship between students' perception of the relationship benefits between them and the higher education institution and their loyalty.	Supported
H4	Students' perception of the higher education institution's service quality has a significant positive effect on their loyalty.	Partially supported
H4a	Students' perception of the higher education institution's academic quality has a significant positive effect on their loyalty.	Not supported
H4b	Students' perception of the higher education institution's program quality has a significant positive effect on their loyalty.	Not supported
H4c	Students' perception of the higher education institution's administrative quality has a significant positive effect on their loyalty.	Supported
H5	Students' perception of the higher education institution's reputation has a significant positive effect on their loyalty.	Partially supported
H5a	Students' perception of the higher education institution's university management has a significant positive effect on their loyalty.	Supported
H5b	Students' perception of the higher education institution's academic and media reputation has a significant positive effect on their loyalty.	Not supported

Table 4.29 (Continued)

H6	Students' perception of the relationship benefits between them and the higher education institution has a significant positive effect on their loyalty.	Supported
H7	Satisfaction mediates the relationship between the students' perception of the higher education institution's service quality and their loyalty.	Supported
H7a	Satisfaction mediates the relationship between the students' perception of the higher education institution's academic quality and their loyalty.	Supported (Full mediation)
H7b	Satisfaction mediates the relationship between the students' perception of the higher education institution's program quality and their loyalty.	Supported (Full mediation)
H7c	Satisfaction mediates the relationship between the students' perception of the higher education institution's administrative quality and their loyalty.	Supported (Partial mediation)
H8	Satisfaction mediates the relationship between the students' perception of the higher education institution's reputation and their loyalty.	Supported
H8a	Satisfaction mediates the relationship between the students' perception of the higher education institution's university management and their loyalty.	Supported (Partial mediation)
H8b	Satisfaction mediates the relationship between the students' perception of the higher education institution's academic and media reputation and their loyalty.	Supported (Partial mediation)
H9	Satisfaction mediates the relationship between the students' perception of their relationship benefits with the higher education institution and their loyalty.	Supported (Partial mediation)

#### 4.8 Summary of the chapter

This chapter presented the results from the various statistical analyses conducted to achieve the research objectives and hypotheses of this study.

Firstly, the research instrument was tested for goodness through factor analysis and reliability analysis. The exploratory factor analysis indicated that the measurements used for all the variables in this study were construct valid. The factor analysis also revealed that service quality and reputation was not a uni dimensional construct. Thus, the hypotheses were restated to reflect the new dimensions. The Cronbach's Alpha indicated that all the measures were reliable.

Before proceeding with inferential analysis such as correlation and regression analyses, the data was tested for normality, linearity, homoscedasticity, multicollinearity and outliers.

Next, descriptive analysis was conducted. The demographic profile of the 400 respondents in this study was presented via frequencies and percentages. The descriptive statistics summarized the data collected on the variables in a meaningful way and exposed patterns within the data. It was also used to answer the first research objective of this study which was to determine the level of students' loyalty in private higher education institutions in Malaysia.

Subsequently, correlation analysis was conducted to achieve the second research objective and the first three hypotheses of this study which was to determine the relationships between the independent and dependent variables.

Multiple regression analysis was used to achieve the third research objective and the fourth, fifth and sixth hypotheses of this study which was to determine the effects of service quality, reputation and relationship benefits on students' loyalty.

Lastly, mediation analysis was used to achieve the fourth research objective as well as the seventh, eighth and ninth hypotheses of this study which was to determine the mediating effects of satisfaction on the relationships between service quality, reputation, relationship benefits and students' loyalty.

In summary, it was concluded that the level of loyalty amongst students in Private HEIs in Malaysia was at a moderate level. There were positive relationships between all the independent variables and the dependent variable. The significant effects of service quality on students' loyalty were mixed. Academic quality and program quality had no significant effect on students' loyalty, while administrative quality did. The significant effects of reputation on students' loyalty was also mixed, with university management having an effect on students' loyalty, while academic and media reputation did not. Satisfaction was found to mediate the relationship between all the independent variables and the dependent variables.

The next chapter reviews the findings and discusses the results, the theoretical and practical implications, limitations of the study, recommendations for future research and the conclusion of the study.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION**

#### **5.0 Introduction**

This chapter discusses the findings of this study as outlined in the previous chapter and conclusions are drawn. A summary of the whole study is presented in the recapitulation of study section. Next, a detailed discussion of the findings in relation to the research objectives, hypotheses and in light of previous studies conducted by other researchers is presented. Theoretical and practical implications, limitations of the study and recommendations for future research is presented. Lastly, the chapter ends with the conclusion of the study.

#### **5.1 Recapitulation of study**

The objectives of this study were to determine the level of students' loyalty in private higher education institutions in Malaysia, to determine the relationships between service quality, reputation, relationship benefits and students' loyalty, to determine the significant effects of service quality, reputation and relationship benefits on students' loyalty and lastly, to determine the mediating effects of satisfaction on these relationships.

Based on the literature review, service quality, reputation and relationship benefits were postulated as predictors of students' loyalty and satisfaction as mediator. It was hoped that these variables would produce a research framework which had meaningful

diagnostic competence. A total of four research questions were developed for this study.

They were as follows:

- 1) What is the level of students' loyalty in private higher education institutions in Malaysia?
- 2) What are the relationships between service quality, reputation, relationship benefits and students' loyalty in private higher education institutions in Malaysia?
- 3) What are the significant effects of service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia?
- 4) Does satisfaction mediate the relationships between service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia?

From the research questions, a total of nine hypotheses were developed. The first three was to determine the relationships between service quality, reputation, relationship benefits and students' loyalty. The next three was to determine the significant effects of service quality, reputation and relationship benefits on students' loyalty and the last three were to determine the mediating effect of satisfaction on the relationship between service quality, reputation, relationship benefits and students' loyalty.

The results from the Factor analysis in the previous chapter indicated that the independent variables of service quality and reputation were not uni dimensional as hypothesized. Therefore, the hypotheses were restated, resulting in nine main hypotheses and fifteen sub hypotheses. They are presented as follows:

H1 There is a positive relationship between students' perception of the higher education institution's service quality and their loyalty.

H1a There is a positive relationship between students' perception of the higher education institution's academic quality and their loyalty.

H1b There is a positive relationship between students' perception of the higher education institution's program quality and their loyalty.

H1c There is a positive relationship between students' perception of the higher education institution's administrative quality and their loyalty.

H2 There is a positive relationship between students' perception of the higher education institution's reputation and their loyalty.

H2a There is a positive relationship between students' perception of the higher education institution's university management and their loyalty.

H2b There is a positive relationship between students' perception of the higher education institution's academic and media reputation and their loyalty.

H3 There is a positive relationship between students' perception of the relationship benefits between them and the higher education institution and their loyalty.

H4 Students' perception of the higher education institution's service quality has a significant positive effect on their loyalty.

H4a Students' perception of the higher education institution's academic quality has a significant positive effect on their loyalty.

H4b Students' perception of the higher education institution's program quality has a significant positive effect on their loyalty.

H4c Students' perception of the higher education institution's administrative quality has a significant positive effect on their loyalty.

H5 Students' perception of the higher education institution's reputation has a significant positive effect on their loyalty.

H5a Students' perception of the higher education institution's university management has a significant positive effect on their loyalty.

H5b Students' perception of the higher education institution's academic and media reputation has a significant positive effect on their loyalty.

H6 Students' perception of the relationship benefits between them and the higher education institution has a significant positive effect on their loyalty.

H7 Satisfaction mediates the relationship between the students' perception of the higher education institution's service quality and their loyalty.

H7a Satisfaction mediates the relationship between the students' perception of the higher education institution's academic quality and their loyalty.

H7b Satisfaction mediates the relationship between the students' perception of the higher education institution's program quality and their loyalty.

H7c Satisfaction mediates the relationship between the students' perception of the higher education institution's administrative quality and their loyalty.

H8 Satisfaction mediates the relationship between the students' perception of the higher education institution's reputation and their loyalty.

H8a Satisfaction mediates the relationship between the students' perception of the higher education institution's university management and their loyalty.

H8b Satisfaction mediates the relationship between the students' perception of the higher education institution's academic and media reputation and their loyalty.

H9 Satisfaction mediates the relationship between the students' perception of their relationship benefits with the higher education institution and their loyalty.

The research design for this study was a quantitative cross sectional study. The survey method was used to collect data for this study. The survey instrument was a personally administered questionnaire. The population of this study were students enrolled in Private HEIs in Malaysia with a sample size of 400. Proportionate stratified sampling design was used.

The collected data was analysed through a variety of statistical techniques such as descriptive, reliability, factor, correlation, multiple regression and mediation analyses. The findings of the study revealed that students' loyalty in the Malaysian private higher education industry is moderate. The first three main hypotheses and sub hypotheses of this study was fully supported. Hypotheses 4 was partially supported, as the sub hypotheses of academic quality and program quality was not supported whilst the sub hypothesis of administrative quality was supported. Hypothesis 5 was also partially supported, as the sub hypothesis of university management was supported, whilst the sub hypothesis for academic and media reputation was not. Lastly, hypotheses 6, 7, 8 and 9, and its accompanying sub hypotheses were all supported.

## **5.2 Discussion on findings**

The discussions on the findings in this section are organized based on the research objectives, hypotheses, in light of previous studies conducted by other researchers and the underpinning theory.

### **5.2.1 Level of students' loyalty**

The first research objective was to determine the level of students' loyalty in private higher education institutions in Malaysia. Descriptive analysis was employed to determine the first research objective.

As reported in Table 4.15 and 4.16 in the previous chapter, the findings indicate that the level of students' loyalty in private higher education institutions in Malaysia is at moderate level. This highlights the importance and relevance of this study to managers of Private HEIs on identifying factors that would be helpful for them in increasing and improving their students' loyalty.

To provide further insight into loyalty levels according to the various different statuses of Private HEIs, this study found that loyalty levels for students' in Private HEI with University, University College, Foreign University branch campus and College statuses all had moderate levels of loyalty.

Plausible reasons for moderate loyalty levels of students in Malaysian Private HEIs could be attributed to the similar competitive offerings available in the market. As postulated by Wan (2007), most Private HEIs offer similar courses/programs which are popular and high in demand. Thus, students' are spoilt for choices and more prone to leave when they do not receive what they expected.

The exponential growth in the number of private higher education institutions in Malaysia is another contributing factor. As at November 2015, with an estimated number of 111 private universities and university colleges, 402 private colleges, 34 polytechnics and 94 community colleges, this number is expected to grow even larger.

Against this back drop of a highly competitive education landscape, a rift had developed between students' expectations and what they are receiving. As paying "customers", students' expectations are high and if their current education institution is unable to deliver, it would impact on their loyalty.

### **5.2.2 The relationships between service quality, reputation, relationship benefits and students' loyalty**

The second research objective was to determine the relationships between service quality, reputation, relationship benefits and students' loyalty in private higher education institutions in Malaysia.

#### **5.2.2.1 The relationship between service quality and students' loyalty**

The first hypothesis (H1) and its accompanying sub hypotheses (H1a, H1b, H1c) of this study which postulated a positive relationship between service quality and students' loyalty was supported.

Based on the correlation analysis results at a 99% confidence level, the finding indicated that the relationships between all the three dimensions of service quality: academic, program and administrative with students' loyalty was of medium strength and positive. Administrative quality had the strongest positive relationship with students' loyalty, followed by program quality and lastly, academic quality.

This finding suggests that high levels of students' loyalty exist when there are high levels of service quality. This is in line with the study conducted by Hennig-Thurau et

al. (2001) that found that higher levels of perceived service quality by students would result in higher the levels of student loyalty.

Similar studies conducted by Munizu and Hamid (2015) and Usman et al. (2016) also concluded that when service quality is evident, this results in student loyalty.

This finding suggests that the service quality rendered to the student by the education institution would lead to feelings of obligations on the part of the student who then will reciprocate positively through loyalty. This is consistent with SET (Cronanzano & Mitchell, 2005).

#### **5.2.2.2 The relationship between reputation and students' loyalty**

The second hypothesis (H2) and its accompanying sub hypotheses (H2a, H2b) of this study which postulated a positive relationship between reputation and students' loyalty was supported.

The results of the correlation analysis as reported in Table 4.20 in the previous chapter indicated that there is a significant relationship between reputation and students' loyalty and the relationship is positive. The relationship strength between university management with students' loyalty was strong, whilst academic and media reputation was of medium strength.

This result is broadly consistent with findings by other researchers like Fares et al. (2013) in Malaysia, Sung and Yang (2009) in Korea and Wei and Wonglorsaichon (2014) in Thailand. These researchers concluded that higher levels of reputation would result in higher levels of students' loyalty.

In line with SET, when students perceive that they are receiving high levels of reputational benefits from their education institution, they would reciprocate by increasing their loyalty (Blau, 1964).

### **5.2.2.3 The relationship between relationship benefits and students' loyalty**

The third hypothesis (H3) of this study which postulated a positive relationship between relationship benefits and students' loyalty was supported. The correlation analysis indicated a strong positive relationship between relationship benefits and students' loyalty.

This finding suggests that high levels of students' loyalty exist when there are high levels of relationship benefits. This is consistent with the study conducted by Holford and White (1997) that found that higher levels of perceived relationship benefits by students would result in higher the levels of student loyalty.

This finding is also in line with earlier studies conducted by Gwinner et al. (1998) in the American service industry, Chen and Hu (2010) in the Australian coffee outlets industry, and Feng et al. (2015) amongst service companies in China.

Based on the social exchange approach, students will trade under the norm of reciprocity of their loyalty in exchange for the relationship benefits they receive from the education institution (Foa & Foa, 1974).

### **5.2.3 The effects of service quality, reputation and relationship benefits on students' loyalty**

The third research objective was to determine the significant effects of service quality, reputation and relationship benefits on students' loyalty in private higher education institutions in Malaysia. The results of the multiple regression analysis are discussed in the subsequent sections.

#### **5.2.3.1 The effect of service quality on students' loyalty**

The fourth hypothesis (H4) which postulated that students' perception of the higher education institution's service quality has a significant positive effect on their loyalty was partially supported. This was because out of the three sub hypotheses, only H4c which hypothesized that administrative quality had a significant positive effect on loyalty was supported. The other two sub hypotheses H4a for academic quality and H4b for program quality was not supported.

This result is broadly consistent with findings by Hennig-Thurau et al. (2001) in their study conducted in Germany, in which the service quality dimensions of their study such as perceived quality of curriculum, exams, facilities, administrative services and teaching were all found to have an effect on student loyalty. Similarly, the findings in this study conclude that administrative quality had an effect on loyalty. However, on the other dimensions, such as teaching and curriculum, this study found results to the contrary.

The results in this study is also broadly consistent with Sultan and Wong's (2013) study which found that the service quality dimensions of academic did not have an effect

on student loyalty. However, on the dimension of administrative quality, this study found that it had an effect, whilst Sultan and Wong's study did not.

The results from this study contradicts the findings by Lin and Tsai's (2008) study in Taiwan which found that perceived quality of teaching services had direct effect on student loyalty whilst perceived quality of administrative services did not. In this study, the findings were the reverse.

The findings from this study indicate that Malaysian Private HEI students place great importance on the administrative aspect of service quality. A possible explanation for this is because as paying customers, they expect that their complaints to be dealt with promptly and efficiently. Paying students also expect support services to be provided in a timely manner. Students expect more when they pay a premium for the educational service. Ng and Forbes (as cited in Bowden, 2011) said that a student from the prestigious Standford Business School in the United States told his professor that he "didn't pay \$40,000 for this bullshit" and stormed out of the classroom.

Surprisingly, the dimensions of academic quality and program quality did not have an effect on student loyalty in the Malaysian private higher education context. The possible explanation could be that students perceive the tight assurance of academic and program quality of higher education through the Malaysian Qualifications Agency Act, 2007 as sufficient guarantee. Students in Private HEIs are assured that any program they pursue is stringently controlled for academic and program quality via the Malaysian Qualifications Framework (MQF). Subsequently, academic quality and program quality becomes insignificant and not have any effect on their loyalty.

In the education context, SET is appropriate because administrative service encounters between the student and the education institution can be viewed as social exchanges with the interaction between the higher education institution and the student being a crucial component for continuing a relationship (Kinoti & Kibeh, 2015). Consistent with SET, when students perceive that they are receiving a high level of service quality from their education institution, they would reciprocate by increasing their loyalty.

#### **5.2.3.2 The effect of reputation on students' loyalty**

With respect to the fifth hypothesis (H5) which postulated that students' perception of the higher education institution's reputation has a significant positive effect on their loyalty was partially supported. Hypothesis 5a which hypothesized that university management had a significant positive effect on loyalty was supported, whilst Hypothesis 5b, which postulated that academic and media reputation had a significant positive effect on loyalty was not supported.

The most plausible explanation for university management having a significant effect on students' loyalty, whilst academic and media reputation did not, is that students in Private HEIs as paying customers would be very concerned that the education institution that they are planning to spend at least three to four years of their academic life be well run and managed. Thus, the aspects of excellent leadership, well managed and ability to fulfil its promises becomes paramount in ensuring students' loyalty. As to the possible explanation on why academic and media reputation does not have an effect on students' loyalty is that students are not easily swayed by the favourable reports from

the media as they perceive that these reports might be fabricated. As to the academic aspect of the reputation, as observed earlier, students are already assured of stringent academic programs via the Malaysian Qualifications Agency. As such, the academic aspect becomes insignificant to them and not have any effect on their loyalty as well.

Overall, the findings in this study is broadly consistent with the results of other studies conducted by Fares et al. (2013); Helgesen and Nessel (2007a); Nguyen and LeBlanc (2001b); Sung and Yang (2009) and Wei and Wonglorsaichon (2014) that determined reputation as a predictor of students' loyalty. The significant positive effect of reputation on students' loyalty was reported in these studies in various public and private universities in Malaysia, Norway, Canada, Korea and Thailand.

In the higher education context, this finding is consistent with the fact that higher education is a service and not a product (Walsh et al., 2009). When a customer is dealing with something intangible, the reputation of the service provider is of utmost importance. For students, pursuing an academic qualification is associated with large monetary cost and time spent. As mentioned earlier, most students spend at least three to four years with an education institution, with some at even longer durations. Parents of students' are willing to pay expensive tuition fees to ensure that their children obtain an academic qualification from a reputable education institution. Therefore, being perceived as being reliable, trust worthy and responsible are important criteria's for students (Awang & Jusoff, 2009).

However, this finding contradicts the findings by Barusman's (2014) study conducted amongst five private universities in Bandar Lampung, Indonesia, which found that university reputation had no direct effect on students' loyalty. Even though, this

study was the closest in terms of context and cultural aspects to this current study, yet the findings were different. Similarly, the study by Thomas (2011) in higher education institutions in India indicated that reputation had no direct effect on students' loyalty and only had an effect on students' loyalty when mediated by student satisfaction, suggesting that reputation is not a strong predictor of students' loyalty as assumed. These differences in results suggest that reputation is very sensitive towards cultural, indigenous and individual factors which temper its effects on students' loyalty.

The significant positive effect of university management on students' loyalty is in line with SET which state that when students perceive that they are receiving high levels of reputational benefits from their education institution, they would reciprocate by increasing their loyalty (Croppanzano & Mitchell, 2005).

#### **5.2.3.3 The effect of relationship benefits on students' loyalty**

Continuing on with the third research objective and the sixth hypothesis (H6) of this study, the result indicated that relationship benefits had a significant positive effect on students' loyalty. The finding indicates that the higher the students' perception of the relationship benefits between them and the higher education institution, the stronger the loyalty of the said students towards the said education institution.

In accordance with the present result, previous studies conducted by Gwinner et al. (1998); Holford and White (1997); Hennig- Thurau et al. (2002) and Patterson and Smith (2001) found similar results in various different consumer industries. In the higher education context, the findings of Adidam et al. (2004) and Wong and Wong (2012)

indicated that relationship benefits when mediated by commitment had an effect on student loyalty.

In the context of this study, plausible explanations for this significant effect is that students in Private HEIs as paying customers would expect the best value for their money spent. The other aspect is the ability of the degree/qualification to provide the student with the best job opportunities upon graduation.

This explanation is consistent with SET; which depicts students and the education institution in a reciprocal and restrictive exchange, involving quid pro quo behaviour. As paying customers, when students pay tuition fees for the services of education, they expect some form of benefits in exchange (Hasel & Lourey, 2005).

As observed earlier, students' would spend large sums of money and time in pursuing an academic qualification at an education institution, thus it would be logical that they would expect something in return.

In a similar vein, Finney and Finney (2010) state that students are like every other paying consumer, they are always looking for some form of benefits in their relationship with their education institution.

#### **5.2.4 The mediating effects of satisfaction**

This section discusses the findings related to the fourth research objective which was to determine the mediating effects of satisfaction on the relationships between service quality, reputation and relationship benefits on students' loyalty. The results of the mediation analyses are discussed in the subsequent sections.

#### **5.2.4.1 Mediating effect of satisfaction on the relationship between service quality on students' loyalty**

The seventh hypothesis (H7) which postulated that satisfaction mediates the relationship between students' perception of the higher education's service quality and their loyalty was supported. For sub hypotheses H7a and H7b, full mediation was found, whilst for sub hypothesis H7c, partial mediation was found.

This finding suggests that academic, program and administrative quality has influence on students' loyalty through satisfaction. It could be surmised that by providing a high standard of service to students, it would satisfy students, and this satisfaction in turn positively affects the students' loyalty levels. Students that are satisfied would be more prone to say positive things about their education institution and re patronize by continuing on with their postgraduate studies at the same institution.

This result is fairly consistent with other studies conducted in the higher education context (Ali et al., 2016; Mansori et al., 2014; Mohamad & Awang, 2009; Sultan & Wong, 2013).

The study by Ali et al. (2016) in a few public universities in Malaysia found that the service quality dimensions of academic and program had an indirect effect on loyalty via satisfaction. Similarly, Mohamad and Awang's (2009) study also in a public university in Malaysia found that service quality did not have a direct effect on loyalty, but had to be mediated by satisfaction to be significant. Similar results were also found in the private higher education context in Malaysia as well. Mansori et al.'s (2014) study in several private colleges and universities in Malaysia found that service quality had

indirect effects on students' loyalty via satisfaction. The finding by these researchers in their respective studies is similar to the results in this study.

The results in this study is also similar to those found by Sultan and Wong's (2013) study in the Australian higher education context which concluded that academic quality had no direct effect on loyalty, and had to be mediated by satisfaction to be significant.

However, the results of the mediation analysis of this study contradict the findings by Brown and Mazzarol (2009) and Dib and Alnazer (2013). Both studies found that service quality had no direct or indirect effect via satisfaction, on students' loyalty. These researchers determined that satisfaction was not a pre prerequisite for service quality to have an effect on student loyalty.

The mediation analyses have shed light on the service quality-satisfaction-loyalty formation process, indicating that academic and program quality is not a pre requisite for loyal students, but satisfaction was. Therefore, management of Private HEIs must strive to achieve high levels of satisfaction for both academic and program quality if they want to increase their students' loyalty levels. As for administrative quality, it is noted that students' loyalty is to a larger extent influenced by administrative quality. However, if there were inappropriate levels of administrative quality, this could induce dissatisfaction which would influence loyalty.

The findings in this study is in line with SET, as students who are satisfied with the benefits provided by the education institution will feel obligated to reciprocate by increasing their loyalty to the education institution (Blau, 1964).

In summary, the management of Private HEIs must ensure that they are providing high levels of administrative services to their students' at all times, understand their

students' needs, react to their concerns and most importantly, keep them satisfied on the aspect of academic and program quality.

#### **5.2.4.2 Mediating effect of satisfaction on the relationship between reputation on students' loyalty**

The eight hypothesis (H8) which postulated that satisfaction mediates the relationship between students' perception of the higher education's reputation and their loyalty was supported. Partial mediation was found for both sub hypotheses H8a and H8b.

This finding suggests that students who have positive perceptions about their education institution' reputation is likely to feel more satisfied which in turn will make them more loyal.

This finding is broadly consistent with results from studies conducted by Barusman, 2014 and Thomas, 2011 in the higher education context, which found the indirect effect of reputation via satisfaction.

As satisfaction acts as a mediator, it transmits the effect of reputation onto student' loyalty. Therefore, the main consideration of the students' satisfaction on the higher education's reputation are ensuring that students are satisfied with the dimensions of university management and academic and media reputation of the institution. Higher education institution must ensure that they keep their promises, be well managed with excellent leadership and receive favourable coverage from the media.

The findings indicate that there is a causal association between the reputation-satisfaction- loyalty relationship. From this mediation analysis, the findings indicate that reputation can be deemed as a predictor of loyalty and a consequence of satisfaction.

It could be surmised that by providing reputational attributes that are important to students, it would satisfy students, and this satisfaction in turn positively affects the students' loyalty levels.

The findings in this study support SET. When students perceive they are receiving the reputational benefits that are important to them, they are likely to be more satisfied and feel obligated to be loyal to the education institution (Blau, 1964).

#### **5.2.4.3 Mediating effect of satisfaction on the relationship between relationship benefits on students' loyalty**

The ninth hypothesis (H9) which postulated that satisfaction mediates the relationship between the students' perception of their relationship benefits with the higher education institution and their loyalty was supported.

This finding suggests that relationship benefits had influenced students' loyalty through satisfaction. It could be surmised that when Private HEIs provide relationship benefits that meet the expectations of their students, it would satisfy them, and this satisfaction in turn positively affects the students' loyalty levels. Students' that are satisfied would be more prone to recommend, say positive things about their education institution (attitudinal loyalty) and re patronize by continuing on with their postgraduate studies at the same institution (behavioural loyalty).

This results describe for the first time the mediating effects of satisfaction on the relationship between relationship benefits and students' loyalty in the higher education context, whether in private or public higher education institutions and whether in Malaysia or in other countries, Western or Asian. Other researchers which examined the effect of relationship benefits in the education context such as Adidam et al. (2004) and Wong and Wong (2012) used commitment as the mediator instead of satisfaction.

The mediation analyses have shed light on the relationship benefits-satisfaction-loyalty formation process, indicating that there is a causal association between the three variables. The findings indicate that students' loyalty is to a larger extent influenced by relationship benefits; however management of Private HEIs must be aware that if there were inappropriate levels of relationship benefits, this could induce satisfaction which would influence their loyalty levels.

Based on this finding, it is imperative for managers of Private HEI's to monitor the satisfaction levels of their students towards the relationship benefits that they are receiving from their education institution. If students' are dissatisfied, they may not become loyal to their education institution even if the relationship benefits received is up to their expectations. Managers of Private HEIs must understand their students' needs; react to their concerns in the quest to keep them satisfied.

The findings in this study is in line with SET, as students who are satisfied with the benefits provided by the education institution will feel obligated to reciprocate by increasing their loyalty to the education institution (Blau, 1964).

In summary, this finding is a step forward in understanding the causal relationship between relationship benefits-satisfaction-loyalty in the higher education context.

### **5.3 Overview of significant findings**

This study found that the loyalty levels of students' in Malaysian private higher education institutions are moderate. All the independent variables in this study had positive relationships with the dependent variable. This study concluded that high levels of students' loyalty exist when there are high levels of service quality: academic quality, program quality and administrative quality; reputation: university management and academic and media reputation; and relationship benefits.

This study found that the independent variables had different degrees of importance in predicting students' loyalty. Overall, they were ranked as follows: reputation, relationship benefits and service quality. More specifically, the dimension of university management in reputation was the most influential, followed by relationship benefits and lastly by the dimension of administrative quality in service quality. The other dimensions of service quality: administrative quality and program quality; and the dimension of reputation: academic and media reputation; had no significant effects on students' loyalty.

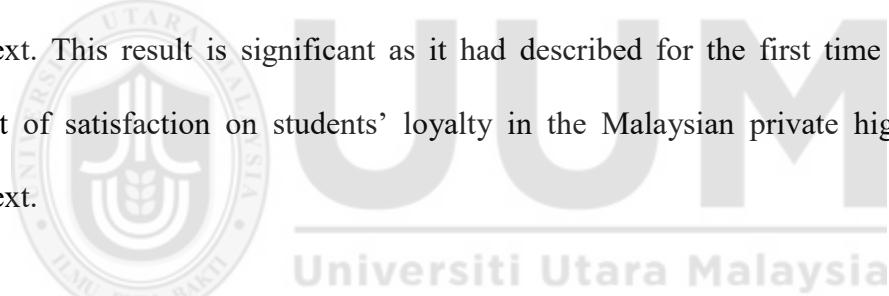
This is the first study, to the researcher's knowledge to examine and empirically validate the effects of relationship benefits on students' loyalty in the Malaysian private higher education context. Therefore, this finding is significant and contributes towards the literature on students' loyalty.

The findings from the mediation analyses are a step forward in uncovering the process through which satisfaction influences students' perception of the service quality, reputation and relationship benefits and ultimately their loyalty in the Malaysian private higher education context. The overall predictive power of all the models were greater

when satisfaction was used as a mediator in the relationships between service quality, reputation and relationship benefits, indicating that satisfaction is a major determinant of students' loyalty.

These findings are not new and are consistent with findings from previous studies in the higher education context by Ali et al. (2016); Leonnard et al. (2013); Mansori et al. (2014); Schlesinger et al. (2016) and Thomas (2011). It would seem that students' wanting to be satisfied is a universal attitude which crosses through country boarders, culture, demographics and psychographics.

What is new is the finding that satisfaction mediates the relationship between relationship benefits on students' loyalty in the Malaysian private higher education context. This result is significant as it had described for the first time the mediating effect of satisfaction on students' loyalty in the Malaysian private higher education context.



#### **5.4 Implications of the study**

Based on the research findings, several implications related to the theoretical and practical aspects of management are discussed.

##### **5.4.1 Theoretical implications**

In general, the findings of this study have contributed to the pool of knowledge on the predictors of students' loyalty. More specifically, the findings from this study add to the body of literature pertaining to the predictors of loyalty in the Malaysian context; with specific reference to Private HEIs.

The empirical confirmation of relationship benefits as a predictor of students' loyalty, to the best of the researcher's knowledge is the first, signifying an important contribution to the loyalty literature. The finding that only administrative quality had an effect on students' loyalty whilst academic quality and program quality did not is another important contribution. This provides deeper understanding on the effects of specific service quality dimensions and their influence on students' loyalty in general, and with specific reference in the Malaysian private higher education context. As to the reputation variable, the finding that the university management dimension had an effect on students' loyalty whilst academic and media reputation did not; adds to the body of knowledge on predictors of student loyalty.

This present study extends previous research by demonstrating that satisfaction plays a mediating role in influencing the impact of the relationships between service quality, reputation, relationship benefits and students' loyalty in the Malaysian private higher education context. Specifically, this study demonstrates that through the development of satisfaction, academic quality, program quality, administrative quality, university management, academic and media reputation and relationship benefits can increase the level of students' loyalty towards their education institution. As this study is the first to examine the mediating effect of satisfaction on the relationship between relationship benefits on students' loyalty, whether in Malaysia or other countries, this specific finding has significantly contributed towards the pool of knowledge on the complex loyalty formation process.

This study utilized Abdullah's (2009) HedPerf scale to measure service quality. It is the first time, to the knowledge of the researcher, that this scale had been validated in the

private higher education context in Malaysia. Previous studies in the higher education context had used the SERVQUAL scale (Husain et al., 2009; Mansori et al., 2014; Munizu & Hamid, 2015) and modified and self-constructed scales (Mohamad & Awang, 2009; Sultan & Wong, 2013). The study by Ali et al. (2016) used the HedPerf scale, however it was in the context of public universities in Malaysia. Similarly, Purgalis and Zaks (2012) used the HedPerf to measure service quality in higher education institution in Latvia. Therefore, the findings in this study indicate that the general dimensions in the HedPerf scale may not be relevant in the Malaysian private higher education context.

The findings of this study have validated SET in the Malaysian private higher education context, which suggests that in any social exchange, feelings of mutual benefits between students and education institutions are involved. By applying this theory, this study shows that students who are satisfied with the benefits offered by the education institution will feel obligated to reciprocate by increasing their loyalty towards the education institution. Specifically, the significant and positive relationships between academic quality, program quality, administrative quality, university management, academic and media reputation, relationship benefits, satisfaction and students' loyalty are compatible with this theory.

### **5.4.2 Practical implications**

The findings from this study have direct practical relevance for managers of Private HEIs in terms of their strategy implementation and marketing activities. As this study found that all the independent variables had different degrees of importance in predicting students' loyalty, it could serve as a guide for managers to know which factors to focus on more. They were ranked as follows: reputation, relationship benefits and service quality.

As reputation was ranked first in importance, it is imperative for private higher education institutions to handle and manage their students' expectations on given reputational attributes.

As the dimension of university management in reputation was found to have a significant effect on students' loyalty, the education institution's top administrators must focus on the efficiency and governance of their education institution. Currently, all Private HEIs in Malaysia are governed by the Private Higher Educational Institution Act 1996 (Act 555), which controls their establishment, registration and management. This act stipulates that all Private HEIs should have adequate and efficient management and administration for the proper conduct of the education institution as well as a proper system of governance with a constitution that shall be approved by the Registrar General of Malaysia. Even though such policies are in place, corporate governance abuses could and do occur. Therefore, the University Senate or the top governing body of an education institution must go the extra mile and put in place policies for self-regulatory checks, due diligence and audits to deter abuse of power. By doing so, this increases the efficiency of their reputation delivery to students.

Beside the university management dimension, Private HEIs also need to pay attention to their academic and media reputation dimension. As an academic institution, the superiority of the academic qualification awarded is of utmost important to students; therefore, it is imperative for management of Private HEIs to maintain high standards when awarding academic qualifications. Even though students in Private HEIs are paying “customers”, management of Private HEs should not comprise on educational standards when passing or failing students, as it would comprise the integrity of the education institution and ultimately its reputation. Management of Private HEIs should also cultivate good working relationships with the media to ensure continuous positive news coverage for their education institutions. By doing so, this can help in enhancing the reputation of the education institution in the eyes of their stakeholders. Private HEIs need to build up their student satisfaction levels with regards to the academic and media reputation dimension, as increasing the level of satisfaction would ultimately lead to loyalty.

In short, reputation management should be a key strategy for Private HEIs to pursue to increase their students’ loyalty levels.

The confirmation of relationship benefits as a predictor of students’ loyalty will provide managers with additional leverage to develop beneficial relationships with their students. As mentioned earlier, students as paying “customers” expect certain benefits in exchange for the money (tuition fees) they spend. Managers must know what benefits are important to their students and focus on these benefits.

As paying “customers” students expect value for money from their education institution. In regards to this, top management of Private HEIs must put in place policies

that safe guard their students' interest as well as their own. As students spend the bulk of their money on tuition fees, accommodation and administrative fees, a proper pricing policy must be implemented. Top management of Private HEIs should look at setting up a specific committee to study fair pricing strategies. They should also put in place policies to check opportunistic behavior on their own part.

Another important aspect of relationship benefits that top management of Private HEIs should look at is increasing their strategic collaborations with the industry. By signing more Memorandum of Understanding (MOU) with industry partners, students would then be able to reap the benefits of better internship opportunities, professional talks and seminars conducted by industry experts and preference in job placement opportunities with strategic industry partners.

The identification of which service quality dimension is influential on students' loyalty and which is not, would serve as a guide to the management of Private HEIs on how best to plan and respond in meeting their students' needs. Top management can then formulate appropriate strategies that focus on the efficiency of their service deliverance.

As students' relationship length with an education institution is long, top management of Private HEIs should continuously monitor the quality of services rendered to their students, paying particular attention to elements that are of importance to their students. Periodic online surveys may be sent to all enrolled students to obtain their feedback and suggestions. As some students may be hesitant or reserved in giving feedback, the option for anonymous feedback should be considered to ensure a higher rate of response.

As the dimension of administrative quality in service quality was found to be important in increasing students' loyalty levels, management of Private HEIs must ensure that front line administrative staff be given the proper training and be well versed with all operational matters. Administrative staff needs to ensure that students' problems and issues are resolved in an efficient and timely manner. In line with this, top management should put in place clear standard operating procedures, policies and time frames on handling students' complaints and grievances. Human Resource Department should also ensure that all administrative staff be sent for customer service training on a regular basis for constant improvement.

Even though the dimension of academic quality and program quality did not have a direct effect on students' loyalty, it did have an indirect effect via satisfaction. As such, management of Private HEIs still need to pay attention to both these dimensions. They need to ensure that their students are highly satisfied with these two dimensions by ensuring superior delivery.

As such, top management of Private HEIs must practice stringent hiring policies with attractive remuneration packages to attract and retain the best academic staff. The management of Private HEIs must ensure that their academic staff are knowledgeable in course content, have good communication skills, are caring and courteous, readily available for academic consultation and sincere in solving students' academic problems. On top of that, academic staff should be sent for regular training to enhance their teaching and knowledge skills.

To improve on program quality, Private HEIs are encouraged to conduct tracer studies regularly on their alumni to get feedback on the curriculum and program

development aspects. Graduated students would be able to provide feedback on the relevancy of the curriculum and program syllabus in meeting the industry needs. Management of Private HEIs should also hire industry experts as industry advisors to advise them on their curriculum and program syllabus. By practising all these strategies, Private HEI would be able to improve on their program quality and ensure that they are delivering the highest quality possible.

As the mediating analyses revealed, satisfaction plays an important role in all the relationships between university management, academic and media reputation, relationship benefits, academic quality, program quality and administrative quality. Therefore, top management of Private HEIs must ensure high levels of satisfaction for all the determinants to ensure their students' loyalty. They must remember that students' satisfaction levels depend on the performance of the Private HEI in fulfilling their students' expectations on the determinants mentioned. If the performance is under the expectations of students, this will lead to dissatisfaction, which in turn would seriously impact their loyalty levels. Therefore, managers of Private HEIs must come up with policies and strategies that ensure superior delivery of the mentioned determinants.

In summary, it is important for managers of Private HEI's in Malaysia to pay attention to all determinants of student loyalty in this study, as they are inter related. The reputation of an education institution may have a lot to do with the attraction of top class academicians which in turn leads to higher satisfaction scores. Having top class academicians can also help in improving service quality levels. A high level of reputation is attractive to students as it is expected that such reputation and prestige would get them better career opportunities. This is linked to the relationship benefits that

students perceive they receive when studying at the education institution, in which they believe that the academic qualifications that they obtain from their education institution would get them a good job.

### **5.5 Limitations of the study**

The findings of this study should be interpreted in light of the limitations of the study. The first limitation is related to the sample surveyed. The sampling frame, comprising the name list of Private HEIs in Malaysia was obtained from the Ministry of Higher Education (MOHE). However, not all Private HEIs provided their names and information to the MOHE for compilation. There could be more Private HEIs not stated in the list. Therefore, the findings of this study should be carefully considered as being representative of the education industry in Malaysia as not all Private HEIs were sampled.

The second limitation is the generalizability of the results. The findings from this study cannot be generalized to other industries as it was conducted specifically in the education industry. This study was conducted in the Malaysian private higher education context, thus the findings should be applied with caution to public higher education institutions in Malaysia. As the final sample obtained deviated from the general student population of Private HEIs in Malaysia, it cannot be deemed to be representative of the population. As such, the findings from this study should only be construed to be representative of students who are of Malaysian nationality only.

Third, this study is positioned on the respondents' perceptions. Intrinsically, the limitations of such studies are recognized. The respondent's responses represent what they consider to be facts rather than what the facts actually are.

Fourth, due to the time and budgetary constraints, a cross sectional study was conducted. Such approach limits the ability of the researcher to infer causal relationships among the variables of this study.

## **5.6 Recommendations for future research**

While this study has advanced the knowledge of students' loyalty in the Malaysian private higher education context, it also provides additional opportunities for future research.

Results indicate that 44 % of variance in students' loyalty is accounted for by the independent variables of service quality: academic quality, program quality and administrative quality; reputation: university management and academic and media reputation and relationship benefits. The remaining variance could be explained by other variables not included in this study. Previous studies have revealed significant influence of image, trust, commitment, shared values, thus, these variables could be incorporated into future student loyalty models for the Malaysian private higher education context.

Future research could benefit from looking at other mediators that would have beneficial effects on students' loyalty, such as value, trust and commitment, which are important variables in relationship marketing. Examining moderators should also be considered as it would provide valuable knowledge for managers of Private HEIs on

whether there are variables that are likely to temper, make unimportant, or increase the importance of determinants on students' loyalty.

Longitudinal studies support stronger inferences, therefore, the model developed in this study could benefit from being tested on a longitudinal design. Genuine relationships between students' loyalty and their predictors can then be more accurately revealed.

Future research could also look at combining both quantitative and qualitative research approach. As quantitative research is concerned with finding the cause and effect relationships between variables, little information is provided about the why and how of the relationships. Therefore, to provide a better understanding on the complex loyalty formation process, a qualitative research approach could be used in tandem with the quantitative approach.

Lastly, future research could benefit from taking into considerations viewpoints of other stakeholders in the higher education process such as the higher education staff (academic and administrative) government and general public. Addressing perspectives of other stakeholders, in addition to the students' viewpoint, would be an interesting avenue for future research.

## **5.7 Conclusion**

The study set out to determine the level of students' loyalty in private higher education institutions in Malaysia, to determine the relationships between service quality, reputation, relationship benefits and students' loyalty, to determine the significant effects of service quality, reputation and relationship benefits on students'

loyalty and lastly, to determine the mediating effects of satisfaction on these relationships.

This study found that the loyalty levels of students' in Malaysian private higher education institutions are moderate. As a further insight into loyalty levels according to the various different statuses of Private HEIs, this study found that students' in Private HEIs with University status, University College status, Foreign University branch campus status and College status, all had moderate loyalty levels.

This study has confirmed that there are positive relationships between service quality: academic quality, program quality and administrative quality; reputation: university management and academic and media reputation; relationship benefits and students' loyalty.

This study has provided empirical evidence that the studied variables have significant effects on students' loyalty. Administrative quality, university management and relationship benefits had significant effects on students' loyalty, whilst academic quality, program quality and academic and media reputation did not.

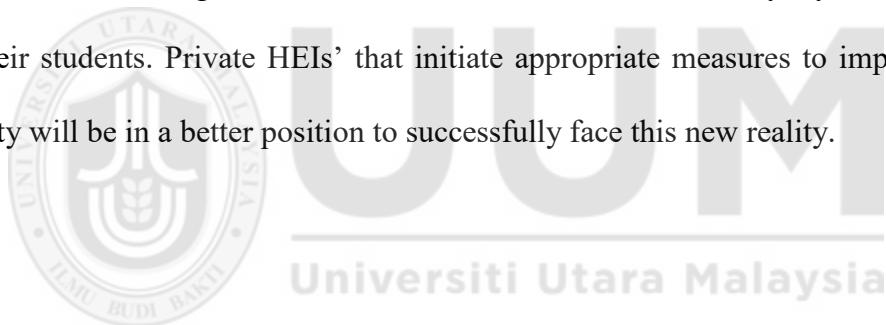
The main significance of this study is the empirical confirmation of the positive direct effect of relationship benefits on students' loyalty and the mediating effect of satisfaction on this relationship in the Malaysian private higher education context.

Satisfaction plays an important role in the loyalty formation process in Private HEIs in Malaysia. Its intervening impact in the relationships between reputation, relationship benefits and service quality has been empirically proven, Students' satisfaction levels depends on the performance of the Private HEIs in fulfilling the students' expectations.

If the performance is under the expectations of the students, this will lead to dissatisfaction, which in turn would seriously impact their loyalty levels.

This study has also presented theoretical and practical implications for academicians/researchers and managers in this area of study. Several limitations have also been highlighted in this study with the hope that these limitations be used as an impetus for further improvement in future studies. In line with this, several recommendations for future research were made.

The increased competition amongst Private HEIs in Malaysia has made students' loyalty as a way to obtain competitive advantage. In this competitive landscape, it is imperative for management of Private HEIs to understand the loyalty formation process of their students. Private HEIs' that initiate appropriate measures to improve students' loyalty will be in a better position to successfully face this new reality.



## REFERENCES

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.

Abd-El-Salam, E.M., Shawky, A.Y., & El-Nahas, T. (2013). The impact of corporate image and reputation on service quality, customer satisfaction and customer loyalty: testing the mediating role. Case analysis in an international service company. *The Business and Management Review*, 3(2), 177-196.

Abd.Manaf, N., Ahmad, K., & Ahmed, S. (2013). Critical factors of service quality in a graduate school of Malaysia. *International Journal of Quality and Service Sciences*, 5(4), 415-431.

Abu-Bader, S.H. (2011). *Using statistical methods in social science research: With a complete SPSS guide*. Oxford University Press.

Adidam, P.T, Bingi, R.P., & Sindhav, B. (2004). Building relationships between business schools and students: an empirical investigation into student retention. *Journal of College Teaching and Learning*, 1(11), 37- 48.

Al-Alak, A, M. (2006). The impact of marketing actions on relationship quality in the higher education sector in Jordan. *Journal of Marketing for Higher Education*, 16(2), 1-23.

Ali Dehghan, A., Dugger, J., Dobrzykowski, D., & Balazs, A. (2014). The antecedents of student loyalty in online programs. *International Journal of Educational Management*, 28(1), 15-35.

Ali, F., Zhou, Y., Hussain, K., Nair, P.K., & Ragavan, N.A. (2016). Does higher education service quality effect student satisfaction, image and loyalty? *Quality Assurance in Education*, 24(1), 70-94.

Ali, I., Alvi, A.K., & Ali, R.R. (2012). Corporate reputation, consumer satisfaction and loyalty. *Romanian Review of Social Sciences*, 3, 13-23.

Ali, R., Gao, L., & Rehman, R. (2014). Factors influencing customer loyalty of banking industry: Empirical evidence from Pakistan. *International Journal of Learning and Development*, 4(2), 9-26.

Alpert, F. (1996). A response to Koku's comments on Alpert, Wilson and Elliot's article on price signaling. *Journal of Consumer Marketing*, 13(6), 59-62.

Alves, H., & Raposo, M. (2010). The influence of university image on student behavior. *International Journal of Educational Management, 24*(1), 73-85.

Aritonang, L.R. (2014). Student Loyalty Modeling. *Trziste, 26*(1), 77-91.

Auruskeviciene, V., Salciuviene, L., & Skudiene, V. (2010). The relationship quality effect on customer loyalty. *Pecvnia, 10*, 23-36.

Awang, Z., & Jusoff, K. (2009). The effects of corporate reputation on the competitiveness of Malaysian telecommunication service providers. *International Journal of Business and Management, 4*(5), 173-178.

Babakus, E., & Mangold, W.G. (1992). Adapting the SERVQUAL scale to hospital services: an empirical investigation. *Health Services Research, 26* (2), 767-786.

Barich, H., & Kotler, P. (1991). A framework for marketing image management. *Sloan Management Review, 32*, 940-104.

Barnett, R. (2011). The marketised university: defending the indefensible. in Molesworth, M., Scullion, R. and Nixon, E. (Eds), *The Marketisation of Higher Education and the Student as Consumer*, Routledge, Oxon, 39-52.

Barusman, A.R.P. (2014). Student satisfaction as a mediating variable between reputation, image and student loyalty. *Proceedings from the 2014 ITMAR Conference on Innovative Trends in Multidisciplinary Academic Research, 1*, 414-436.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual strategic and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bean, J., & Metzner, B. (1985). A Conceptual Model of Non-traditional Undergraduate Student Attrition. *Review of Educational Research, 55*(4), 485-540.

Beh, Y.Y., & Faziharudean. T.M. (2010). Factors affecting customer loyalty of using internet banking in Malaysia. *Journal of Electronic Banking Systems, 1*-21.

Beins, B.C., & McCarthy, M.A. (2012). *Research Methods and Statistics*. USA, New Jersey: Pearson Education.

Blau, P. (1964). *Exchange and power in social life*. New York: John Wiley.

Bloemer, J, De Rutyer, K., & Peters, P. (1998).Investigating drivers of bank loyalty: the complex relationship between image, service quality and satisfaction. *International Journal of Bank Marketing, 16*, 276-286.

Borden, V.M.H. (1995). Segmenting student markets with a student satisfaction and priorities survey. *Research in Higher Education*, 36(1), 73-88.

Bowden, J. (2011). Engaging the student as a customer: a relationship marketing approach. *Marketing Education Review*, 21(3), 211-228.

Bowden, J., & Wood, L. (2011). Sex doesn't matter: The role of gender in the formation of student-university relationships. *Journal of Marketing for Higher Education*, 21(2), 133-156.

Bowden-Everson, J., & Moore, D. (2012). An appealing connection- the role of relationship marketing in the attraction and retention of students in an Australian tertiary context. *Asian Social Science*, 8(4), 65-80.

Brown, R. (2011). The march of the market in Molesworth, M., Scullion, R., and Nixon, E. (Ed). *The marketization of higher education and the student as consumer*. London: Routledge.

Brown, R.M., & Mazzarol, W. (2009). The importance of institutional image to student satisfaction and loyalty within higher education. *Higher Education*, 58, 81-95.

Bryman, A., & Bell, E. (2011). *Business research methods*. Oxford: Oxford University Press.

Burns, A.C., Bush, R.F., & Chen, J. (2003). *Marketing research: Online research applications*. Prentice Hall.

Carvalho, S., & de Oliveira Mota, M. (2010). The role of trust in creating value and student loyalty in relational exchanges between higher education institutions and their students. *Journal of Marketing for Higher Education*, 20(1), 145-165.

Cavana, R.Y, Delahaye, B.L., & Sekaran, U. (2001). *Applied Business Research: Qualitative and Quantitative methods*. Australia: John Wiley and Sons Ltd.

Chang, K.C. (2013). How reputation creates loyalty in the restaurant sector. *International Journal of Contemporary Hospitality Management*, 25(4), 536-557.

Chai, H.C. (2007). The business of higher education in Malaysia. *Commonwealth Education Partnership*, 114-118.

Chen, P.S., & Hu, H.H. (2010). The effect of relational benefits on perceived value in relation to customer loyalty: An empirical study in the Australian coffee outlets industry. *International Journal of Hospitality Management*, 29, 405-412.

Chinomona, E., Chinomona, R., & Sandada, M. (2014). An investigation of shared values, benefits, commitment, trust and retention in the banking sector: A student perspective. *Journal of Economics and Behavioral Studies*, 6(8), 607-615.

Chiu-Han, W., & Sejin, H. (2011). Store attributes influencing relationship marketing: a study of department stores. *Journal of Fashion Marketing and Management*, 15(3), 326-344.

Christou, E. (2003). Guest likelihood in relations to hotel's corporate image and reputation: A study of three countries in Europe. *Journal of Hospitality and Leisure Marketing*, 10(3-4), 85-89.

Chuah, C.H., & Ramalu, S.S. (2011). Student's satisfaction towards the university: does service quality matters? *International Journal of Education*, 3(2), 1-15.

Cochran, W.G. (1977). *Sampling Techniques* (3rd Ed). New York: John Wiley & Sons.

Cohen, J.W. (1988). *Statistical power analysis for the behavioral sciences* (2nd Ed). Hillsdale, NJ: Lawrence Erlbaum Associates.

Collis, D. (n.d.). *When Industries Change: Scenarios for Higher Education*. Retrieved from <https://net.educause.edu/ir/library/pdf/ffp9903s.pdf>

Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing*, 17(6), 411-412.

Cropanzano, R. & Mitchell, M.S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.

Cunningham, R.M. (1956). Brand loyalty – what, where, how much? *Harvard Business Review*, 34(1), 116-28.

Custer, S. (2013, Feb 4). Malaysia: two year moratorium on private HE. *The PIE News*. Retrieved from <http://thepienews.com/news/malaysia-two-year-moratorium-on-private-he/>

Dagger, T.S., David, M.E., & Ng. S. (2011). Do relationship benefits and maintenance drive commitment and loyalty? *Journal of Service Marketing*, 25(4), 273-281.

Day, G.S. (1969). A two-dimensional concept of brand loyalty. *Journal of Advertising Research*, 9(3), 29-35

De Macedo Bergamo, F.V., Giuliani, A. C., de Camargo, S.H., Zambaldi, F., & Ponchio. M.C. (2012). Student loyalty based on relationship quality: an analysis on higher education institutions. *Brazilian Business Review*, 9(2), 24-46.

de Ruyter, K., & Wetzels, M. (1998). On the nature of patient evaluations of general practice service. *Journal of Economic Psychology*, 18(4), 387-406.

DeShields, O. W. Jr., Ali, K., & Kaynak, E. (2005). Determinants of business student satisfaction and retention in higher education: Applying Herzberg's two-factor theory. *The International Journal of Educational Management*, 19(2), 128-139.

Devlin, S.J., Dong, H.K., & Brown, M. (1993). Selecting a scale for measuring quality. *Marketing Research*, 5, 12-17.

Dib, H., & Alnazer, M. (2013). The impact of service quality on student satisfaction and behavioural consequences in Higher Education Services. *International Journal of Economy, Management and Social Sciences*, 2(6), 285-290.

Dick, A.S., & Basu, K. (1994). Customer loyalty: Towards an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22(2), 99-113.

Dimitriadis, S. (2010). Testing perceived relational benefits as satisfaction and behavioral outcomes drivers. *Journal of Bank Marketing*, 28(4), 297-313.

Dlacic, J., & Zabkar, V. (2012). Relationship commitment, relational equity and company image in customer loyalty development. *Economic Research*, 25(2), 503-524.

Dowling, G.R. (1986). Managing your institutional image. *Industrial Marketing Management*, 15, 109-115.

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.

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), 199-209.

Fares, D., Achour, M., & Kachkar, O. (2013). The impact of service quality, student satisfaction and university reputation on student loyalty: A case study of International students in IIUM, Malaysia. *Information Management and Business Review*, 5(12), 584-590.

Feng, X., Zhang, M., & Ye, J. (2015). Empirical study of the influence of customer relationship. Proneness of customer loyalty in service context. *International Journal of Service, Science and Technology*. 8(4), 195-206.

Finney, T.G., & Finney, R.Z. (2010). Are students their universities customers? An exploratory study. *Education and Training*, 52(4), 276-291.

Foa, U. G., & Foa, E. B. 1974. *Societal structures of the mind*. Springfield, IL: Charles C Thomas.

Fombrun, C., Gardberg, N.A., & Sever, J.M. (2000). The Reputation quotient: A multi-stakeholder measure of corporate reputation. *Journal of Brand Management*, 7(4), 241-255.

Gengeswari, K., Chen. W., Choong, S.K., Eoh, L.X., Lee, K.S., & Tan, C.Y. (2013). Retention of Undergraduate student at a private university in Malaysia. Conference proceedings of the International Conference on Business, Accounting, Finance and Economics (BAFE 2013), Universiti Tunku Abdul Rahman, Kampar, Perak.

Giese, J.L., & Cote, J.A. (2002). Defining consumer satisfaction. *Academy of Marketing Science Review*, 2000(1), 1-27.

Gorondutse, A.H., Hilman, H., & Nasidi, M. (2014). Relationship between corporate reputation and customer loyalty on Nigerian food and beverages industry. *International Journal of Management Business Research*, 4(2), 125-136.

Gotsi, M., & Wilson, A.M. (2001). Corporate reputation: seeking a definition. *Corporate Communication: An International Journal*, 6(1), 24-30.

Govindarajo, N.S. & Kumar, M.D. (2012). How to combat attrition? Case study on a Malaysian educational institution. *International Journal of Business and Behavioral Sciences*, 2(8), 24-33.

Gronroos, Christian. (1984). A service quality model and its marketing implications. *European Journal of Marketing*, 18(4), 36-45.

Gronroos, Christian. (1994). From marketing mix to relationship marketing: towards a paradigm shift in marketing. *Management decision*, 32(2), 4-20.

Guest, L. (1944). A study of brand loyalty. *Journal of Applied Psychology*, 28(1), 16-27.

Guest, L. (1955). Brand loyalty: twelve years later. *Journal of Applied Psychology*, 39(6), 405-408.

Gul, R. (2014). The relationship between reputation, customer satisfaction, trust and loyalty. *Journal of Public Administration and Governance*, 4(3), 368-387.

Gwinner, K.P., Grempler, D.D., & Bitner, M.J. (1998). Relational benefits in services industries: the customer's perspective. *Journal of the Academy of Marketing Science*, 26(2), 101-114.

Hasan, H.F.A., Illias, A., Abd. Rahman, R., & Abd. Razak, M.Z. (2008). Service quality and student satisfaction: a case study at private higher education institutions. *International Business Research*, 1(3), 163-175.

Hassel, D., & Lourey, J. (2005). The dearth of student responsibility. *College Teaching*, 53(1), 2-12.

Hashim, N.A., Abdullateef, A.O., & Sarkindaji, B.D. (2015). The moderating influence of trust on the relationship between institutional image/reputation, perceived value on student loyalty in higher education institution. *International Review of Management and Marketing*, 5(3), 122-128.

Hair, J., Money, A., Page, M., & Samouel, P. (2007). *Research methods for business*. West Sussex: John Wiley & Sons.

Hair, J. F. Jr., Black, W. C., Babin, B. J. Anderson, R. E., & Tatham, R.L. (2006). *Multivariate data analysis* (6th Ed.). New Jersey: Prentice Hall.

Hair, Jr., J.F., Black, W.C, Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis. A Global Perspective* (7th Ed). Pearson PLC.

Hair, J.F., Wolfinbarger, M.F., Ortinau, D.J., & Bush R.P. (2008). *Essentials of marketing research*. McGraw- Hill Irwin.

Hayes, A. F. (2012). PROCESS: *A versatile computational tool for observed variable mediation, moderation and conditional process modeling [White paper]*. Retrieved from <http://www.afhayes.com/public/process2012.pdf>

Hennig-Thurau, T., Gwinner, K.P., & Grempler, D.D. (2002). Understanding relationship marketing outcomes. An integration of relational benefits and relationship quality. *Journal of Service Research*, 4(3), 230-247.

Hennig-Thurau, T, Langer, M.F., & Hansen, U. (2001). Modeling and managing student loyalty. An approach based on the concept of relationship quality. *Journal of Science Research*, 3(4), 331-344.

Hennig-Thurau, T., & Klee, A. (1997). The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development. *Psychology and Marketing*, 14(8), 737-764.

Helgesen, O. (2008). Marketing for higher education: A relationship marketing approach. *Journal of Marketing for Higher Education*, 8(1), 50-78.

Helgesen, O., & Nesset, E. (2007a). What accounts for students' loyalty? Some field study evidence. *International Journal of Educational Management*, 21(2), 126-143.

Helgesen, O., & Nessel, E. (2007b). Images, satisfaction and antecedents: Drivers of student loyalty? A case study of a Norwegian University college. *Corporate Reputation Review*, 10, 38-59.

Helgesen, O., & Nessel, E. (2011). Does LibQUAL\_ account for student loyalty to a university college library? *Quality Assurance in Education*, 19(4), 413-440.

Hill, R. (1998). What sample size is “enough” in internet survey research? *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century*, 6(3-4).

Hinkle, D., Wiersma, W., & Jurs, S. (1994). *Applied statistics for the behavioral sciences* (3rd Ed.). Boston: Houghton Mifflin Company

Hinton, P.R., Brownlow, C., McMurray, I., & Cozen, B. (2004). *SPSS Explained*. London: Routledge.

Holford, D., & White, S. (1997). Testing Commitment-Trust Theory in Relationships between Pharmacy schools and students. *American Journal of Pharmaceutical Education*, 61, 249-256.

Homans, G. C. 1958. Social behavior as exchange. *American Journal of Sociology*, 63, 597-606.

Howell, D. (1989). *Fundamental Statistics for the Behavioral Sciences* (2nd Ed).Boston: PWS-Kent Publishing.

Hur, W., Park, J., & Kim, M. (2010). The role of commitment on the customer benefits-loyalty relationship in the mobile service industry. *The Service Industries Journal*, 30(14), 2293-2309.

Husain, F., Hanim, S., Fernando, Y., & Nejati, M. (2009). Education service delivery and students' satisfaction: A study of private colleges in Malaysia. *Global Business and Management Research: An International Journal*, 1(1), 64-72.

Isaac, S., & Michael, W. B. (1995). *Handbook in research and evaluation*. San Diego, CA: Educational and Industrial Testing Services.

Jacoby, J., & Chestnut, R.W. (1978). *Brand loyalty: Measurement and management*. New York: John Wiley and Sons.

Jahari, N.A., Mohamad Ali, S.A., & Musa, A. (2015). The contributions of international students in university to the Malaysian economy. *Global Conference on Economics and Management Science*, 94,101.

Jenkins, G. D., Jr., & Taber, T. D. (1977). A monte carlo study of factors affecting three indices of composite scale reliability. *Journal of Applied Psychology*, 62, 392-398.

Joseph, M., & Joseph, B. (2000). Indonesian students' perception of choice criteria in the selection of a tertiary institution. *International Journal of Educational Management*, 14(1), 40-44.

Julious, S. A. (2005). Sample size of 12 per group rule of thumb for a pilot study. *Pharmaceutical Statistics*, 4, 287-291.

Jurkowitsch, S., Vignal, C., & Kaufmann, H. (2006). A student satisfaction model for Austrian higher education provider considering aspects of marketing communications. *Innovative Marketing*, 2(3), 9-23.

Kheiry, B., Rad, B.M., & Asgari, O. (2012). University intellectual image on satisfaction and loyalty of students (Tehran selected universities). *African Journal of Business Management*, 6(37), 10205-10211.

Kinoti, M.W. & Kibeh, A.W. (2015). Relationship marketing and customer loyalty in mobile telecommunication industry in Nairobi, Kenya. *DBA Africa Management Review*, 5(1), 1-12.

Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.

Kunanusorn, A., & Puttawong, D. (2015). The mediating effect of student loyalty to higher education institution. *European Scientific Journal*, 1, 449-463.

Landau, E. (2017, May 24). UNITAR architecture students stunned as faculty shuts down, less than a year in. *The New Straits Times*. Retrieved from <https://www.nst.com.my/news/nation/2017/05/242361/unitar-architecture-students-stunned-faculty-shuts-down-less-year>

Latif. L.A., & Bahroom, R. (2014). Relationship-based student loyalty model in an open distance learning institution. Paper presented at Widyatama International Seminar 2014. "International Seminar on Quality Assurance and Sustainability of Higher Education Institutions".

Leonard, M., Daryanto. H.K.S., Dadang, S., & Yusuf, E.Z. (2013). The loyalty model of private university student. Study case: STIKOM London School of Public Relations. *International Journal of Information Technology and Business Management*, 20(1), 70-89.

Lim, P., & Williams, G. (2015, May). Crisis ahead for private higher education – and solutions. *Penang Monthly*. Retrieved from <http://penangmonthly.com/crisis-ahead-for-private-higher-education-and-solutions/>

Lin, C.P., & Tsai, Y.H. (2008). Modeling Educational Quality and Student Loyalty: A Quantitative approach based on the Theory of Information Cascades. *Quality and Quantity*, 42, 397-415.

Lissitz, R. W., & Green, S. B. (1975). Effect of the number of scale points on reliability: A monte carlo approach. *Journal of Applied Psychology*, 60, 10-13.

MacMillan, K., Money, K., Downing, S., & Hillenbrand, C. (2005). Reputation in relationships: Measuring experiences, emotions and behaviors. *Corporate Reputation Review*, 8(2), 214-232.

Mansori, S., Vaz, A., & Mohd Ismail, Z.M. (2014). Service quality, Satisfaction and Student Loyalty in Malaysian Private Education. *Asian Social Science*, 10(7), 57-65.

Marton-Williams, J. (1986). *Questionnaire design, in consumer market research handbook*, Robert Worcester and John Downham (Eds). London: McGraw-Hill.

Mavondo, F.T., Tsarenko, Y., & Gabbott, M. (2004). International and Local student satisfaction: Resources and capabilities. *Journal of Marketing for Higher Education*, 14(1), 41-60.

McKelvie, S. J. (1978). Graphic rating scales - How many categories? *British Journal of Psychology*, 69, 185-202.

McKinnon, D.P., Fairchild, A.J. & Fritz, M.S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593- 614.

Ministry of Higher Education (2009). *Perangkaan Pengajian Tinggi Malaysia 2008*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2008/91-perangkaan-pengajian-tinggi-malaysia-2008/file>

Ministry of Higher Education (2010). *Perangkaan Pengajian Tinggi Malaysia 2009*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2009/90-perangkaan-pengajian-tinggi-malaysia-2009/file>

Ministry of Higher Education (2011). *Statistics of Higher Education of Malaysia 2010*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2010/85-perangkaan-pengajian-tinggi-malaysia-2010/file>

Ministry of Higher Education (2012). *Malaysia Higher Education Statistics 2011*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2011/89-perangkaan-pengajian-tinggi-malaysia-2011/file>

Ministry of Higher Education (2013). *National Education Statistic: Higher Education Sector 2012*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2012/84-perangkaan-pendidikan-negara-spt-2012/file>

Ministry of Higher Education (2014). *National Education Statistic: Higher Education Sector 2013*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2013/83-perangkaan-pendidikan-negara-spt-2013/file>

Ministry of Higher Education (2015). *National Education Statistic: Higher Education Sector 2014*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2014/178-perangkaan-pendidikan-tinggi-negara-kpt-2014/file>

Ministry of Higher Education (2015). *2014 Malaysia Statistics of Private Higher Education Institutions (PHEIs)*. Retrieved from <https://drive.google.com/file/d/0B790gK0V4meoMHZUNTN5bjEwck0/view>

Ministry of Higher Education (2015). *2014 Malaysia Profile of Private Higher Education Institutions (PHEIs)*. Retrieved from <https://drive.google.com/file/d/0B790gK0V4meoamFkTkJhY0wtLUU/view>

Ministry of Higher Education (2016). *Chapter 1 Macro-Higher Education Institutions 2015*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2015/215-bab-1-makro-institusi-pendidikan-tinggi-1/file>

Ministry of Higher Education (2016). *Chapter 2 Public Universities 2015*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2015/217-bab-2-universiti-awam-1/file>

Ministry of Higher Education (2016). *Chapter 3[A] Private Higher Education Institutions: Malaysian Students 2015*. Retrieved from <https://www.mohe.gov.my/muat-turun/awam/statistik/2015/218-bab-3-a-institusi-pengajian-tinggi-swasta-pelajar-warganegara/file>

Mohamad, M., & Awang, Z. (2009). Building Corporate Image and Securing Student Loyalty in the Malaysian Higher Learning Industry. *The Journal of International Management Studies*, 4(1), 30-40.

Morgan, R.M., & Hunt, S.D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-39.

Munisamy, S., Mohd. Jaafar, N.J., & Nagaraj, S. (2014). Does reputation matter? Case study of undergraduate choice at a premier university. *Asia Pacific Education Researcher*, 23(3), 451-462.

Munizu, M., & Hamid, N. (2015). Satisfaction and loyalty improvement model on the quality of higher education services. *Jurnal Dinamika Manajemen*, 6(1), 13-24.

Nasional Malaysia Berhad. (2006). *Law of Malaysia: Act 555- Private Higher Educational Institutions Act 1996*. Retrieved from <http://jpt.mohe.gov.my/IPT/Act%20IPTS%20-%20BI.pdf>

Ng, Irene C.L., & Forbes, J. (2009). Education as service: The understanding of university experience through service logic. *Journal of Marketing for Higher Education*, 19 (1), 38-64.

Nguyen, N., & LeBlanc, G. (2001a). Corporate image and corporate reputation in customer's retention decisions in services. *Journal of Retailing and Consumer Services*, 8(4), 227-236.

Nguyen, N., & LeBlanc, G. (2001b). Image and reputation of higher education institutions in students' retention decisions. *The International Journal of Educational Management*. 15(6), 303-311.

Nguyen, N., Leclerc, A., & LeBlanc. G. (2013). The mediating role of customer trust on customer loyalty. *Journal of Service Science and Management*, 6, 96-109.

Nitecki, D.A., & Heron, P. (2000). Measuring service quality at Yale University Libraries. *Journal of Academic Librarianship*, 26(4), 259-273.

Nunnally, J. C. (1978). *Psychometric theory* (2nd Ed.). New York: McGraw-Hill.

O'Keefe, P. (2013). A sense of belonging. Improving student retention. *College Student Journal*, 47, 195-199.

Oliver, R.L. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York: Mc Graw Hill.

Oliver, R.L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63, 33-44.

Oluseye, O. O., Tairat, B. T., & Emmanuel, J.O. (2014). Customer relationship management approach and student satisfaction in higher education marketing. *Journal of Competitiveness*, 6(3), 49-62.

Oxford Dictionaries. (n.d.) *Definition of student*. Retrieved from <http://www.oxforddictionaries.com/definition/english/student>

Pallant, J. (2013). *SPSS Survival Manual. A step by step guide to data analysis using IBM SPSS*, (5th Ed.). England: McGraw Hill.

Parasuraman, A, Zeithaml, Valarie A., & Berry, Leonard L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.

Parasuraman, A, Zeithaml, Valarie A., & Berry, Leonard L. (1988). SERVQUAL: A multiple item scale for measuring consumer perception of service quality. *Journal of Retailing*, 64(1), 12-40.

Patterson, P.G., & Smith, T. (2001). Relationship benefits in services industries: A replication in a Southeast Asia context. *Journal of Services Marketing*, 5(6), 425-443.

Purgailis, M., & Zaksa, K. (2013). The impact of perceived service quality on student loyalty in higher education institutions. *Journal of Business Management*, 6, 138-152.

Raghavan, S., & Ganesh, R. (2015). Addressing Service quality to increase students' satisfaction and retention in Malaysian Private Higher Education Institutions. *American Journal of Economics*, 5(2), 243-250.

RAND Corporation. (2001). *A million random digits with 100,000 normal deviates*. Retrieved from <http://www.rand.org/publications/classics/randomdigits>

Rashid. T., & Raj. R. (2006). Customer Satisfaction: Relationship marketing in Higher Education E-learning. *Innovative Marketing*, 2(3), 24-34.

Rattray, J.C., & Jones, M.C. (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, 16, 234-243.

Rauyruen, P., & Miller, K.E. (2006). Relationship quality as a predictor of B@B customer loyalty. *Journal of Business Research*, 60(1), 21-31.

Reichheld, F. F. (1993). Loyalty-Based Management. *Harvard Business Review*, 72(2), 64-73.

Rojas-Mendez, J., Vasquez-Parraga, A.Z., Kara, A., & Cerdá-Urrutia, A. (2009). Determinants of student loyalty in higher education: a tested relationship approach in Latin America. *Latin American Business Review*, 10, 21-39.

Roscoe, J.T. (1975). *Fundamental Research Statistics for the Behavioural Sciences* (2nd Ed). New York: Holt Rinehart & Winston.

Samy, F., Chin. C., Rajendram, R., & Tan, S.C. (2014, May 20). Students paying the price for AUCMS fiasco. *The Star*. Retrieved from <http://www.thestar.com.my/news/nation/2014/05/20/students-paying-the-price-for-aucms-fiasco/>

Sangodiah, A., Beleya, P., Muniady, M., Heng, L. E., & Spr, C. R. (2015). Minimising student attrition in higher learning institutions in Malaysia using support vector machine, *Journal of Theoretical and Applied Information Technology*, 71(3), 377-385.

Sawmong, S., & Omar, O. (Sept 2004). The Store loyalty of the UK's retail consumers. *Journal of American Academy of Business, Cambridge*, 5(2), 503-509.

Schlesinger, W., Perez-Cabanero, C., & Cervera, A. (2016). Sticking with your university: the importance of satisfaction, trust, image and shared values. *Studies in Higher Education, Feb*, 1-17.

Sekaran, U. (2005) *Research Methods for Business – A skill building approach* (4th Ed). USA: John Wiley and Sons. Inc.

Shah, A. (2009). The impact of quality on satisfaction, revenue and cost as perceived by providers in higher education. *Journal of Marketing for Higher Education, 19*(2), 125-141.

Shah, M., Nair, C.S., & Bennet, L. (2013). Factors influencing student choice to study at private higher education institutions. *Quality Assurance in Education, 21*(4), 402-416.

Shahsavari, A., & Faryabi, M. (2013). The effect of customer based corporate reputation on customer's citizenship behavior in banking industry. *Research Journal of Applied Sciences, Engineering and Technology, 6*(20), 3746-3755.

Shenkar, O., & Yuchtman-Yaar. E. (1997). Reputation, image, prestige and goodwill: An interdisciplinary approach to organizational standing. *Human Relations, 50* (11), 1361-1381.

Sierra, J.J., & Mcquitty, S. (2005). Service providers and customers: Social exchange theory and service loyalty. *Journal of Services Marketing, 19*(6), 392-400.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models in S. Leinhart (Ed.), *Sociological Methodology* (pp. 290-312). San Francisco: Jossey-Bass.

Soedijati, E.K. (2014). Developing student loyalty in higher education. *Journal of Global Management, 7*(1), 34-41.

Standifird, S.S. (2005). Reputation among peer academic institutions: An investigation of the US News and World Report's rankings. *Corporate Reputation Review, 8*(3), 233-244.

Sultan, P., & Wong, H.Y. (2010). Performance-based service quality model: an empirical study on Japanese universities. *Quality Assurance in Education, 18*(2), 126-143.

Sultan, P., & Wong, H.Y. (2013). Antecedents and consequences of service quality in a higher education context. *Quality Assurance in Education, 21*(1), 70-95.

Sung, M., & Yang, S. (2009). Student-university relationships and reputation: a study of the links between key factors fostering students' supportive behavioural intentions towards their university. *Higher Education*, 57(6), 787-811.

Tabachnick, B.G., & Fidell, L.S. (2013). *Using multivariate statistics* (6<sup>th</sup> Ed). Boston: Pearson Education.

Taleghani, M., Gilaninia, S., & Mousavian, S. (2011). The role of relationship marketing in customer orientation process in the banking industry with focus on loyalty. *International Journal of Business and Social Science*, 2(19), 155-166.

Tapsir, S.H. (2016, Jan 19). *A strategy for the next decade of Malaysian higher education*. Paper presented at The Association of Commonwealth Universities Perspectives Speaker Series, London, United Kingdom.

Thibaut, J. W. & Kelley, H.H. (1959). *The Social Psychology of Groups*. New York: John Wiley & Sons, Inc.

Thomas, S. (2011). What drives student loyalty in universities: an empirical model from India. *International Business Research*, 4(2), 183-192.

Thiele, S. R. (2005). Exploring loyal qualities: assessing survey based loyalty measures. *Journal of Services Marketing*, 19(7), 492-500.

Tucker, W.T. (1964). The development of brand loyalty. *Journal of Marketing Research*, 1(3), 32.

Usman, U., Mokhtar, S., & Balewa, A. (2016). Analysis of service quality, university image and student satisfaction on student loyalty in higher education in Nigeria. *International Business Management*, 10(12), 2490-2502.

van Belle, G. (2002). *Statistical rules of thumb*. New York: John Wiley.

Vander Schee, B.A. (2010). Students as consumers: programming for brand loyalty. *Services Marketing Quarterly*, 32, 32-43.

Walsh, G., & Beatty, S.E. (2007). Customer based corporate reputation of a service firm: scale development and validation. *Journal of the Academy of Marketing Science*, 35(1), 127-143.

Walsh, G., Mitchell, V.W., Jackson, P.R., & Beatty, S.E. (2009). Examining the antecedents and consequences of corporate reputation: A customer perspective. *British Journal of Management*, 20, 187-203.

Wan, C.D. (2007). Public and Private Higher Education Institutions in Malaysia: Competing, Complementary or Crossbreeds as Education Providers. *Kajian Malaysia, XXV*(1), 1-14.

Wan, C.D. (2012). The Changing Gender Disparity in Malaysian Higher Education: Where are the boys?" *Bulletin of Higher Education Research 20*. 4-8.

Wangenheim Florian V. (2003). Situational characteristics as moderators of the satisfaction-loyalty link: An investigation in a business-to-business context. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, 16*, 145-156.

Wee, E.K., & Thinavan, P. (2013). Student's expectations and branding strategies among private institutions of higher education in Malaysia. *Malaysian Journal of Chinese Studies, 2*(1), 69-81.

Wei, S., & Wonglorsaichon, P. (2014), *Development of the model of foreign student loyalty studying in Thailand*. University of the Thai Chamber of Commerce E Prints UTCC.

Wong, H., & Wong. R. (2012). Relationship building in private education. *Global Journal of Management and Business Research, 12*(13), 33-48.

Worthington, Roger L.; Whittaker, Tiffany A. (2006). Scale Development Research: A Content Analysis and Recommendations for Best Practices. *Counseling Psychologist, 34*(6), 806-838.

Yamane, T. (1967). Statistics: *An introductory analysis* (2nd Ed.). New York, NY: Harper and Row.

Yang, S. A.; Alessandri, S. W., & Kinsey, D. F. (2008). An Integrative Analysis of Reputation and Relational Quality: A Study of University-Student Relationships. *Journal of Marketing for Higher Education. 18*(2), 145-170.

Zabala, I., Panadero, L.G., Gallardo, C., Amate, M., Sanchez-Galindo, I.T., & Villalba, I. (2005). Corporate reputation in professional service firms: reputation management abased on intellectual capital management. *Corporate Reputation Review, 8*(1), 59-71.

Zakaria, H. (2014, April 23). When Albukhary University fails, can Syed Mokhtar be trusted with national assets. *The Ant Daily*. Retrieved from <http://www.theantdaily.com/Main/When-Albukhary-university-fails-can-Syed-Mokhtar-be-trusted-with-national-assets>

Zeithaml, Valerie A, Berry, Leonard L and Parasuraman, A. (1996). The behavioural consequences of service quality. *Journal of Marketing, 60*, 31-46.

## APPENDICES

### APPENDIX A

#### QUESTIONNAIRE

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#### UNIVERSITI UTARA MALAYSIA OTHMAN YEOP ABDULLAH GRADUATE SCHOOL OF BUSINESS

Dear Valued Respondent,

I am a Doctor of Business Administration (DBA) candidate from Universiti Utara Malaysia (UUM). I am currently undertaking my thesis which is entitled "**DETERMINANTS OF STUDENTS' LOYALTY IN THE MALAYSIAN PRIVATE HIGHER EDUCATION INDUSTRY**"

The purpose of this thesis is to ascertain the factors that determine student loyalty in the Private higher learning industry. I am interested in finding out student's perception towards this issue.

This thesis could not be completed without your cooperation. Therefore, I would be very grateful if you could spare 15 minutes of your valuable time to answer **ALL** questions in the questionnaire based on your honest opinion and experience. Your willingness to help me in completing my dissertation is very much appreciated.

This questionnaire consists of three (3) sections of which **ALL** sections are to be answered according to the given instructions.

Your participation is completely voluntary and the responses received are kept anonymous and strictly confidential.

I thank you for your valuable time and effort in completing this questionnaire.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Lai Meng'.

Ms Lee Lai Meng  
UUM DBA candidate  
Email: lmlee @utar.edu.my  
HP no: 019-5743808

## **SECTION 1: DEMOGRAPHICS**

**Instructions: Please tick (✓) the applicable boxes which best indicate your demographic profile**

Gender:

Male

Female

Nationality

Malaysian

Others: \_\_\_\_\_ (please specify)

Race

Malay

Chinese

Indian

Others: \_\_\_\_\_ (please specify)

Age

17-20

21-24

25-28

29-32

Above 32

How many years have you been studying at your current education institution?

Less than 1 year

1-2 years

2-3 years

3-4 years

4-5 years

More than 5 years

## **SECTION 2: DETERMINANTS OF STUDENT LOYALTY**

**Instructions: Please tick (✓) at the appropriate sections to indicate the extent to which you agree or disagree (based on the 5 point scale given below) for each statement.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1	2	3	4	5

Item	Service quality	1	2	3	4	5
1	The education institution that I am currently studying in has sufficient academic facilities like well-equipped classrooms, up to date computer labs, library with a wide range of resources and clean and safe accommodation.					
2	The education institution that I am currently studying in provides caring and individualized attention.					

3	The education institution that I am currently studying in provides efficient/prompt service when dealing with complaints and shows a sincere interest in solving problems.				
4	The education institution that I am currently studying in provides administrative services within a reasonable time frame.				
5	The education institution that I am currently studying in keeps its promises.				
6	The education institution that I am currently studying in has academic staffs that are knowledgeable in course content.				
7	The education institution that I am currently studying in has academic staffs that have good communication skills.				
8	The education institution that I am currently studying in has academic staffs that are caring and courteous.				
9	The education institution that I am currently studying in has academic staffs that are sincere in solving student's academic problems.				
10	The education institution that I am currently studying in has academic staffs that are readily available for academic consultation.				
11	The education institution that I am currently studying in is easily contactable by telephone and email.				
12	The education institution that I am currently studying in has a system for feedback for improvement on services offered and clear and simple service delivery procedures which are easily accessible to students.				
13	The education institution that I am currently studying in offers flexible syllabus and program structure.				
14	The education institution that I am currently studying in offers a wide variety of programs and specializations.				
15	The education institution that I am currently studying in offers counseling services, health services and a student union.				

**Instructions: Please tick (✓) at the appropriate sections to indicate the extent to which you agree or disagree (based on the 5 point scale given below) for each statement.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1	2	3	4	5

Item	Reputation	1	2	3	4	5
1	I admire and respect the education institution that I am currently studying in.					
2	My choice to study at the education institution that I am currently studying in was a wise one.					
3	The education institution that I am currently studying in is well managed.					
4	The education institution that I am currently studying in always fulfills the promises it makes to its students.					
5	I believe that the education institution in which I am currently studying in has excellent leadership.					
6	I believe that the program that I am currently studying in is superior compared to other programs offered by other education institutions.					
7	I believe that the program that I am currently studying in has a better reputation than its competitors.					
8	The education institution that I am currently studying in has a good reputation with the media.					
9	The education institution that I am currently studying in receives favorable and positive news reports from the media.					

**Instructions: Please tick (✓) at the appropriate sections to indicate the extent to which you agree or disagree (based on the 5 point scale given below) for each statement.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1	2	3	4	5

Item	Relationship benefits	1	2	3	4	5
1	The location of the education institution that I am currently studying in makes this the ideal place to attend.					
2	The education institution that I am currently studying in provides several beneficial opportunities for its students such as exchange programs, internship placement, company visits and professional seminars.					
3	I believe the education institution that I am currently studying in offers the best value for money compared to its competitors.					
4	The monetary cost spent to study in my current education institution is worth it.					
5	When I graduate, I am confident that the degree that I obtain from my current education institution will be able to get me a job.					
6	The education institution that I am currently studying in provides high quality education for its students.					

**Instructions: Please tick (✓) at the appropriate sections to indicate the extent to which you agree or disagree (based on the 5 point scale given below) for each statement.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1	2	3	4	5

Item	Satisfaction	1	2	3	4	5
1	Overall, I am satisfied with the products/services offered by the education institution that I am currently studying in.					
2	My decision to choose the education institution that I am currently studying in was a wise one.					
3	I am satisfied with my decision to register at the education institution that I am currently studying in.					
4	I feel that my experience with the education institution that I am currently studying in has been enjoyable.					
5	Overall, the education institution that I am currently studying in is a good place to study in.					
6	Overall, I am satisfied with the education institution that I am currently studying in.					

### **SECTION 3: STUDENT LOYALTY**

**Instructions: Please tick (✓) at the appropriate sections to indicate the extent to which you agree or disagree (based on the 5 point scale given below) for each statement.**

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
1	2	3	4	5

Item	Student Loyalty	1	2	3	4	5
1	I would recommend the education institution that I am currently studying in to others.					
2	I say positive things about the education institution that I am currently studying in to other people.					
3	I have encouraged others to study at the education institution that I am currently studying in.					
4	I will continue to study with my current education institution even if other education institution's offers are better.					
5	If I still needed to find an education institution to study or start afresh, the education institution that I am currently studying in would be my first choice.					
6	Should I plan to continue my studies to postgraduate level, the education institution that I am currently studying in would be my first choice.					

**\* THANK YOU FOR YOUR TIME AND COOPERATION \***

## APPENDIX B1

### LIST OF PRIVATE HEIS IN MALAYSIA: UNIVERSITY STATUS

	NAME OF UNIVERSITY
01	AIMST University Kedah
02	Al-Madinah International University (MEDIU) Selangor
03	Asia e University (AeU) Kuala Lumpur
04	Asia Metropolitan University Selangor
05	Asia Pacific University of Technology & Innovation Kuala Lumpur
06	Binary University of Management & Entrepreneurship (BUME) Selangor
07	Globalnxt University Kuala Lumpur
08	International Centre for Education in Islamic Finance (INCEIF) Kuala Lumpur
09	International University of Malaya Wales (IUMW) Kuala Lumpur
10	INTI International University Negeri Sembilan
11	MAHSA University Kuala Lumpur
12	Malaysian Institute For Supply Chain Innovation (MISI) Selangor
13	Management and Science University (MSU) Selangor
14	Manipal International University (MIU), Malaysia Negeri Sembilan
15	Multimedia University (MMU), Kampus Cyberjaya Selangor
16	Multimedia University (MMU), Kampus Melaka
17	Multimedia University Kampus Johor
18	Open Universiti Malaysia Kuala Lumpur
19	Perdana University Selangor
20	Putra Business School Graduate School of Management Selangor
21	Quest International University Perak
22	Sekolah Klinikal, Universiti Perubatan Antarabangsa (IMU) Negeri Sembilan
23	Sunway University Selangor
24	Taylor's University Selangor
25	UCSI University Kuala Lumpur
26	UNITAR International University Selangor
27	Universiti Antarabangsa AlBukhary (AIU) Kedah
28	Universiti HELP Kuala Lumpur
29	Universiti Islam Malaysia Selangor
30	Universiti Kuala Lumpur (UNIKL) Kampus Kota
31	Universiti Kuala Lumpur British Malaysia Institute (Unikl-BMI) Selangor
32	Universiti Kuala Lumpur Institute of Product Design and Manufacturing (UniKL IPROM) Kuala Lumpur
33	Universiti Kuala Lumpur Institute of Medical Science (UNIKL-MESTEC) Selangor

34	Universiti Kuala Lumpur Malaysian France Institute (UNIKL- MFI) Selangor
35	Universiti Kuala Lumpur Malaysian Institute of Aviation Technology (UNIKL-MIAT) Selangor
36	Universiti Kuala Lumpur Malaysian Institute of Chemical & Bio-Engineering Technology (UNIKL-MICET) Melaka
37	Universiti Kuala Lumpur Malaysian Institute of Industrial Technology (UNIKL-MITEC) Johor
38	Universiti Kuala Lumpur Malaysian Institute of Marine Engineering Technology (UNIKL-MIMET) Perak
39	Universiti Kuala Lumpur Malaysian Spanish Institute(UNIKL- MSI) Kedah
40	Universiti Kuala Lumpur Royal College of Medicine Perak (UNIKL-RCMP)
41	Universiti Nilai Negeri Sembilan
42	Universiti Perubatan Antarabangsa International Medical University (IMU) Kuala Lumpur
43	Universiti SEGi Selangor
44	Universiti Selangor (UNISEL), Kampus Bestari Jaya Selangor
45	Universiti Selangor (UNISEL), Kampus Shah Alam
46	Universiti Teknologi Kreatif Limkokwing (LUCK) Selangor
47	Universiti Teknologi Petronas Perak
48	Universiti Tenaga Nasional (UNITEN), Kampus Muadzam Shah Pahang
49	Universiti Tenaga Nasional (UNITEN), Kampus Putrajaya Selangor
50	Universiti Terbuka Wawasan (WOU) Pulau Pinang
51	Universiti Tun Abdul Razak (UNIRAZAK) Kuala Lumpur
52	Universiti Tunku Abdul Rahman (UTAR), Kampus Kuala Lumpur
53	Universiti Tunku Abdul Rahman (UTAR), Kampus Perak
54	Universiti Tunku Abdul Rahman (UTAR), Kampus Petaling Jaya Selangor
55	Universiti Tunku Abdul Rahman (UTAR), Kampus Sungai Long Selangor
56	Universiti UCSI (UCSI University), Kampus Terengganu
57	Universiti UCSI, Kampus Sarawak
58	University Malaysia of Computer Science and Engineering Putrajaya

Note: The Private HEIs that were randomly selected are highlighted

## APPENDIX B2

### LIST OF PRIVATE HEIS IN MALAYSIA: UNIVERSITY COLLEGE STATUS

	NAME OF COLLEGE
01	City University College of Science & Technology (CUCST) Selangor
02	<b>KDU University College Selangor</b>
03	Kolej Universiti Bestari Terengganu
04	Kolej Universiti Geomatika Kuala Lumpur
05	<b>Kolej Universiti Hospitaliti Berjaya Kuala Lumpur</b>
06	Kolej Universiti Islam Antarabangsa Selangor (KUIS)
07	Kolej Universiti Islam INSANIAH (KUIN) Kedah
08	Kolej Universiti Islam Melaka
09	<b>Kolej Universiti Islam Perlis</b>
10	Kolej Universiti Islam Sains & Teknologi (KUIST) Kelantan
11	<b>Kolej Universiti Islam Sultan Azlan Shah (KUISAS) Perak</b>
12	<b>Kolej Universiti Lincoln Selangor</b>
13	<b>Kolej Universiti Sains Kesihatan Masterskills Kampus Pasir Gudang Johor</b>
14	Kolej Universiti Sains Perubatan Cyberjaya (CUCMS) Selangor
15	<b>Kolej Universiti Selatan Johor</b>
16	<b>Kolej Universiti Shahputra Pahang</b>
17	Kolej Universiti TATI Terengganu
18	Kolej Universiti Teknologi Antarabangsa Twintech (TWINTECH), Kampus Sri Damansara Kuala Lumpur
19	Kolej Universiti Teknologi Antarabangsa Twintech Kampus Kelantan
20	Kolej Universiti Teknologi Sarawak (KUTS)
21	Kolej Universiti Tunku Abdul Rahman Kampus Cawangan Johor
22	<b>Kolej Universiti Tunku Abdul Rahman Kampus Cawangan Perak</b>
23	Kolej Universiti Tunku Abdul Rahman Kampus Cawangan Pulau Pinang
24	Kolej Universiti Tunku Abdul Rahman Kuala Lumpur
25	Kolej Universiti Yayasan Sabah
26	<b>Kuala Lumpur Metropolitan University College (KLMUC)</b>
27	Vinayaka Mission International University College (VMIUC) Pulau Pinang

Note: The Private HEIs that were randomly selected are highlighted

## APPENDIX B3

### LIST OF PRIVATE HEIS IN MALAYSIA: FOREIGN UNIVERSITY BRANCH CAMPUS STATUS

	NAME OF FOREIGN UNIVERSITY BRANCH CAMPUS
1	Curtin University, Sarawak Malaysia
2	Heriot-Watt University Malaysia (HWUM) Putrajaya
3	Monash University Malaysia Selangor
4	Newcastle University Medicine Malaysia Johor
5	University of Nottingham in Malaysia (UNIM) Selangor
6	University of Reading Malaysia Johor
7	University of Southampton Malaysia Campus (USMC) Johor
8	Swinburne University of Technology Sarawak

Note: The Private HEIs that were randomly selected are highlighted.



## APPENDIX B4

### LIST OF PRIVATE HEIS IN MALAYSIA: COLLEGE STATUS

	NAME OF COLLEGE
001	Akademi Antarabangsa Malvern Kuala Lumpur
002	Akademi Digital Animasi dan Media Kuala Lumpur
003	Akademi IMH Sarawak
004	Akademi Kejururawatan Tung Shin Kuala Lumpur
005	Akademi Kewartawanan & Komunikasi Hanxing Kuala Lumpur
006	Akademi Kreatif Pulau Pinang
007	Akademi Latihan Penerbangan Asia Pasifik Kelantan
008	Akademi Laut Malaysia (ALAM) Melaka
009	Akademi Pertama Rekabentuk dan Komunikasi Selangor
010	Akademi Profesional UCSI Selangor
011	Akademi Seni & Muzik Yamaha Selangor
012	Akademi Seni Lukis Dasein Kuala Lumpur
013	Akademi YES (YES Academy) Kuala Lumpur
014	Alfa College
015	Assyifa' Institute & Allied Health Sciences Perak
016	ATC College Kuala Lumpur
017	Bukit Merah Laketown Institute Off Allied Health Sciences (BMLIAHS) Perak
018	Business and Management International College Kuala Lumpur
019	City College of Business Management Kuala Lumpur
020	Clara International Aesthetic College Kuala Lumpur
021	College Of Yayasan Melaka Kuala Lumpur Branch
022	Creative Art Science and Technology College Kuala Lumpur
023	DSH Institute of Technology Kuala Lumpur
024	ELS International Language Center Kuala Lumpur
025	Equator Academy of Art Pulau Pinang
026	Food Institute of Malaysia
027	German Malaysian Institute (GMI) Selangor
028	HELP ACADEMY Kuala Lumpur
029	ICAN College Kuala Lumpur
030	Institut Akauntan KTC
031	Institut Akauntan KTC (Cawangan Muar)
302	Institut Akauntan KTC Cawangan Johor Bahru
033	Institut Akauntan KTC Kluang
034	Institut Bahasa Teikyo Kuala Lumpur
035	Institut Bakeri Malaysia Selangor

036	Institut CECE Kuala Lumpur
037	Institut Citipro Johor
038	Institut EU Selangor
039	Institut FMM Kuala Lumpur
040	<b>Institut Goon Pulau Pinang</b>
041	Institut Integrasi Utama Avicenna Selangor
042	Institut I-Systems Selangor
043	Institut Jati Negeri Sembilan
044	Institut Kemahiran Teknikal Kuala Lumpur
045	Institut KOMPAS Perak
046	<b>Institut Makanan Malaysia Selangor</b>
047	Institut Mentari Kuala Lumpur
048	Institut Methodist Pilley Sarawak
049	Institut Moden Montessori Selangor
050	Institut Nasional Sains Oftalmik Selangor
051	Institut Omega Johor
052	Institut Optopreneur Kuala Lumpur
053	Institut Paramount Pulau Pinang
054	Institut Pendidikan Teknikal Selangor
055	Institut Pengajian Global Negeri Sembilan
056	Institut Pengajian Tinggi Islam Perlis
057	Institut Pengurusan Global Selangor
058	Institut Profesional Axismatics Kuala Lumpur
059	Institut Profesional Baitulmal Kuala Lumpur
060	Institut Profesional Kedah
061	Institut SAE (SAE Institute) Selangor
062	<b>Institut Sains &amp; Teknologi Darul Takzim (INSTEDT) Johor</b>
063	Institut Sains dan Pengurusan Sabah
064	Institut Sains Kesihatan dan Kejururawatan Mahkota Melaka
065	Institut Seni Lukis Malaysia Kuala Lumpur
066	Institut Seni PIA Perak
067	Institut Seni Sabah
068	Institut Sinaran Sabah
069	Institut Teknologi ANS Kedah
070	Institut Teknologi Baiduri
071	Institut Teknologi Imperia Selangor
072	Institut Teknologi Maklumat Asia Pasific (APIIT) Kuala Lumpur
073	Institut Teknologi Maklumat Nusantara Sarawak
074	Institut Teknologi Pasifik (Pacific Institute of Technology) Selangor
075	Institut Teknologi Perak
076	Institut Teknologi Pertama Negeri Sembilan

077	Institut Teknologi Petroleum Petronas (INSTEP) Terengganu
078	Institut Teknologi RIAM Sarawak
079	INTEC Education College Selangor
080	International Institute of Management and Technology Kuala Lumpur
081	Island Collge of Technology
082	KBU International College Selangor
083	KDU College Penang Campus
084	<b>Kemayan Advance Tertiary College (Cawangan Pulau Pinang)</b>
085	Kinabalu Commercial College Sabah
086	Kolej Adroit Kuala Lumpur
087	Kolej ALC Selangor
088	Kolej Aman Batu Pahat Johor
089	Kolej Antarabangsa Almacrest Sabah
090	Kolej Antarabangsa ATIC Pulau Pinang
091	Kolej Antarabangsa Automotif Pahang
092	Kolej Antarabangsa Cyberlynx Kuala Lumpur
093	Kolej Antarabangsa Cybernetics Cawangan, Pusat Bandar Selangor
094	Kolej Antarabangsa Dunia Melayu Dunia Islam Melaka
095	Kolej Antarabangsa Elite Kuala Lumpur
096	Kolej Antarabangsa Excelpolitan Pulau Pinang
097	Kolej Antarabangsa Fajar Sarawak
098	Kolej Antarabangsa FAME Sarawak
099	Kolej Antarabangsa Flamingo Selangor
100	Kolej Antarabangsa IKIP (Kampus 3) Pahang
101	Kolej Antarabangsa Impiana Selangor
102	Kolej Antarabangsa Inovatif Selangor
103	Kolej Antarabangsa INTI Kuala Lumpur
104	<b>Kolej Antarabangsa INTI Subang Jaya Selangor</b>
105	<b>Kolej Antarabangsa Kejururawatan dan Sains Kesihatan KPJ (Cawangan JB)</b>
106	Kolej Antarabangsa Kejururawatan dan Sains Kesihatan KPJ Cawangan Pulau Pinang
107	<b>Kolej Antarabangsa KFCH Kampus Johor Bahru</b>
108	Kolej Antarabangsa KFCH Selangor
109	Kolej Antarabangsa Kirkby Selangor
110	Kolej Antarabangsa Langkawi Kedah
111	Kolej Antarabangsa Mahsa Prima Kuala Lumpur
112	Kolej Antarabangsa Murni (Murni International College) Putrajaya
113	Kolej Antarabangsa Nightingale Negeri Sembilan
114	Kolej Antarabangsa Optima Selangor
115	Kolej Antarabangsa Pengurusan Hotel YTL Kuala Lumpur
116	Kolej Antarabangsa Putra Intelek Selangor

117	Kolej Antarabangsa Putra Melaka
118	Kolej Antarabangsa Sains Kesihatan Aseana Sabah
119	Kolej Antarabangsa TAJ (TAJ International College) Perak
120	Kolej Antarabangsa Teknologi dan Profesional
121	Kolej Antarabangsa Teknologi Lanjutan Sarawak (ICATS) Cawangan Miri
122	Kolej Antarabangsa Teknologi Lanjutan Sarawak (KATS) Cawangan Kuching
123	Kolej Antarabangsa Teknologi Spektrum Selangor
124	<b>Kolej Antarabangsa Terbuka Selangor</b>
125	Kolej Antarabangsa Timur Barat Negeri Sembilan
126	Kolej Antarabangsa Travex Kuala Lumpur
127	Kolej Antarabangsa Victoria Bandar Tasik Puteri Selangor
128	Kolej Antarabangsa Victoria Kuala Lumpur
129	<b>Kolej Antarabangsa Westminster Selangor</b>
130	Kolej Antarabangsa Yayasan Melaka
131	Kolej ASA Selangor
132	<b>Kolej Asia Pasifik Intelligence Kuala Lumpur</b>
133	Kolej Astin (Astin College) Selangor
134	Kolej ATI Sabah
135	Kolej Bandar Kuala Lumpur
136	Kolej Bayu Selangor
137	Kolej Bena Selangor
138	Kolej Berjaya Kuala Lumpur
139	Kolej Bersepadu Sains Kesihatan Nasional Selangor
140	<b>Kolej Binary (City Campus) Selangor</b>
141	Kolej Bostonweb
142	Kolej Brickfields Asia Kuala Lumpur
143	Kolej Consist Selangor
144	Kolej Cyberputra Selangor
145	Kolej Dar Al-Hikmah Selangor
146	<b>Kolej Despark Selangor</b>
147	Kolej DiKA Selangor
148	Kolej Disted Pulau Pinang
149	Kolej Eksekutif Sarawak
150	Kolej Erican Kuala Lumpur
151	Kolej ETRAIN Selangor
152	Kolej FTMS Kuala Lumpur
153	Kolej Gemilang Kuala Lumpur
154	Kolej Geomatik dan Sains Geospatial Kuala Lumpur
155	Kolej Geomatika Cawangan Keningau Sabah
156	Kolej Global Masterskill Kuching
157	Kolej HAFIZ Selangor

158	Kolej Han Chiang Pulau Pinang
159	Kolej Hospitaliti Imperia Pahang
160	Kolej IACT (International Advertising,Communication and Technology) Selangor
161	Kolej IBS, MIRI
162	Kolej IJN Kuala Lumpur
163	Kolej IKIP di Kuantan (Kampus 5)
164	Kolej Internasional Crescendo Johor
165	Kolej INTI Antarabangsa Pulau Pinang
166	Kolej INTI Sabah
167	Kolej Islam Antarabangsa Kuala Lumpur
168	Kolej Islam Antarabangsa Sultan Ismail Petra Kelantan
169	Kolej Islam As-Sofa (Islamic College As-Sofa) Selangor
170	Kolej Islam Pahang Sultan Ahmad Shah (KIPSAS)
171	Kolej Islam Sains & Teknologi (KIST) Cawangan Pahang
172	Kolej Islam Sains & Teknologi (KIST) Cawangan Perak
173	Kolej Islam Sains dan Teknologi Cawangan Kedah
174	Kolej Islam Sains dan Teknologi Cawangan Terengganu
175	Kolej Islam Sains dan Teknologi Kelantan
176	Kolej Islam Teknologi Antarabangsa (KITAB) Pulau Pinang
177	Kolej I-Systems Bukit Mertajam Pulau Pinang
178	Kolej I-Systems Johor Bahru
179	Kolej I-Systems Kota Kinabalu
180	Kolej I-Systems, Miri
181	Kolej ITA Sarawak
182	Kolej Jesselton Sabah
183	Kolej KDU (PJ) Selangor
184	Kolej Kejururawatan Adventist Pulau Pinang
185	Kolej Kejururawatan dan Kesihatan Nilam Melaka
186	Kolej Kejururawatan Lam Wah Ee Pulau Pinang
187	Kolej Kejururawatan Tun Tan Cheng Lock Selangor
188	Kolej Kemahiran Minda Isbauk Kuala Lumpur
189	Kolej Keris ( Keris College) Perak
190	Kolej Kesihatan Ramsay Sime Darby Selangor
191	Kolej KETENGAH Terengganu
192	Kolej Kiara Sabah
193	Kolej Kingsley (Kingsley College) Selangor
194	Kolej Laila Taib Sarawak
195	Kolej Life Selangor
196	Kolej Mahsa Kuala Lumpur
197	Kolej Mantissa Kuala Lumpur

198	Kolej MASA Selangor
199	Kolej Masterskill Kampus Metro Kota Kinabalu
200	Kolej Maxwell Ipoh
201	Kolej MCS Selangor
202	Kolej MDIS Malaysia Johor
203	Kolej Megatech (Megatech College) Selangor
204	<b>Kolej Methodist Kuala Lumpur Kuala Lumpur</b>
205	Kolej Metro Prima
206	Kolej Metropoint Johor
207	Kolej Mont Royale Kuala Lumpur
208	Kolej Multimedia (Kolej Latihan Telekom Kuala Lumpur)
209	Kolej Multimedia (Sabah)
210	Kolej Multimedia (Sarawak)
211	Kolej Multimedia (Timur) Terengganu
212	Kolej Multimedia (Utara) Perak
213	Kolej Multimedia In-House
214	Kolej Mutiara Selangor
215	Kolej Muzik Antarabangsa (ICOM) Kuala Lumpur
216	Kolej New Era Selangor
217	Kolej Nirwana Kuala Lumpur
218	Kolej Oasis Kuala Lumpur
219	Kolej Olympia Cawangan Kuantan
220	Kolej Olympia Cawangan Pulau Pinang
221	Kolej Olympia Johor Bharu
222	<b>Kolej Olympia Kuala Lumpur</b>
223	Kolej Otomotif TOC Selangor
224	Kolej Pacific Kuantan
225	Kolej Pendidikan Perdana (KOPEDA) Selangor
226	Kolej Penerbangan Admal Selangor
227	Kolej Pengajian Siswazah Segi Selangor
228	Kolej Pengajian Tinggi Islam Johor (MARSAH)
229	Kolej Pengurusan dan Sains Melaka
230	Kolej Pengurusan Penerbangan Selangor
231	Kolej Pergigian Antarabangsa Pulau Pinang
232	<b>Kolej Perkembangan Awal Kanak-Kanak Bukit Merah Perak</b>
233	Kolej Perkembangan Awal Kanak-Kanak Selangor
234	Kolej Perniagaan KYS (KYS Business School) Melaka
235	Kolej Perubatan Antarabangsa Melaka
236	Kolej Perubatan Antarabangsa Subang Jaya, Malaysia
237	Kolej Perubatan Melaka-Manipal
238	Kolej Perubatan Pulau Pinang

239	Kolej Point Selangor
240	Kolej Poly-Tech MARA Bangi Selangor
241	Kolej Poly-Tech MARA Cawangan Semporna Sabah
242	Kolej Poly-Tech Mara Ipoh
243	Kolej Poly-Tech MARA KESEDAR Kelantan
244	Kolej Poly-Tech MARA Kota Bharu
245	<b>Kolej Poly-Tech MARA Kuala Lumpur (KPTM)</b>
246	Kolej Poly-Tech MARA Kuantan
247	Kolej Poly-Tech Mara, Batu Pahat Johor
248	Kolej Poly-Tech Mara, Kedah
249	Kolej Portman Selangor
250	Kolej Presiden Kuala Lumpur
251	Kolej Profesional Mara Beranang Selangor
252	Kolej Profesional Mara Indera Mahkota Pahang
253	<b>Kolej Profesional Mara Melaka</b>
254	Kolej PSDC , Pahang
255	Kolej Reliance Caw. Pulau Pinang
256	Kolej Renaissance Johor
257	Kolej Restu Selangor
258	Kolej Risda Melaka
259	Kolej Sacred Heart, Sibu
260	Kolej SAFA Terengganu
261	Kolej Sains Pengurusan Sarawak Sarawak
262	Kolej Saito Selangor
263	Kolej Sayfol Sabah
264	Kolej Sedamai Sarawak
265	Kolej SEGi Kota Damansara Selangor
266	<b>Kolej Segi Pulau Pinang</b>
267	Kolej SEGI Seri Kembangan Selangor
268	<b>Kolej SEGI Subang Jaya</b>
269	Kolej Seni dan Teknologi HELP Kuala Lumpur
270	Kolej Sentral Pahang
271	Kolej Sentral Pulau Pinang (Sentral College Penang)
272	Kolej Shahputra Cawangan Pekan
273	Kolej SIDMA Sabah
274	Kolej Sinar Melaka
275	Kolej Space Kuala Lumpur
276	Kolej Sri Kuala Lumpur
277	Kolej Stamford (Cawangan Melaka)
278	Kolej Stamford Petaling Jaya
279	Kolej Sunway (Kuala Lumpur)

280	Kolej Sunway Ipoh
281	Kolej Sunway, Kuching
282	Kolej Surya Pulau Pinang
283	Kolej TAFE Negeri Sembilan
284	Kolej Taylor's Sri Hartamas Kuala Lumpur
285	Kolej Taylor's Subang Jaya
286	Kolej Teknologi Alpha Negeri Sembilan
287	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Seremban
288	Kolej Teknologi Antarabangsa Cosmopoint (Cawangan Melaka)
289	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Ipoh
290	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Johor Bahru
291	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Kota Bharu
292	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Kota Kinabalu
293	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Kuantan
294	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Kuching
295	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Pulau Pinang
296	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Sungai Petani
297	Kolej Teknologi Antarabangsa Cosmopoint Cawangan Terengganu
298	Kolej Teknologi Antarabangsa Cybernetics Caw. Pusat Kuala Lumpur
299	Kolej Teknologi Dan Inovasi KRIM Terengganu
300	Kolej Teknologi dan Pengurusan Bostonweb Kuala Lumpur
301	Kolej Teknologi dan Senireka RENG Selangor
302	Kolej Teknologi Darul Naim Kelantan
303	Kolej Teknologi MEA Selangor
304	Kolej Teknologi Pulau
305	Kolej Teknologi Sarawak
306	Kolej Teknologi Timur PJ
307	Kolej Teknologi Unifield Melaka
308	Kolej TESDEC Terengganu
309	Kolej TMC Kuala Lumpur
310	Kolej Unikop Kuala Lumpur
311	Kolej UNITI Negeri Sembilan
312	Kolej Universiti KPJ Healthcare Negeri Sembilan
313	Kolej Universiti Linton Negeri Sembilan
314	Kolej VETA Selangor
315	Kolej WIM Kuala Lumpur
316	Kolej WIT Selangor
317	Kolej Yayasan Pelajaran Johor
318	Kolej Yayasan UEM Selangor
319	Kolek Putra Intelek
320	Limkokwing Institute Creative Technology Sarawak

321	Melaka International College of Science & Technology (MICOST)
322	Netherlands Maritime Institute of Technology (NMIT) Johor
323	Ocean Institute of Audio Technology Kuala Lumpur
324	PJ College of Art and Design Selangor
325	Pusat Pembangunan Kemahiran Pulau Pinang (PSDC)
326	Pusat Teknologi dan Pengurusan Lanjutan (PTPL) Terengganu
327	Pusat Teknologi Pengurusan Lanjutan (PTPL) Ampang
328	Pusat Teknologi Pengurusan Lanjutan (PTPL) Kota Bharu
329	Pusat Teknologi Pengurusan Lanjutan (PTPL) Penang
330	Pusat Teknologi Pengurusan Lanjutan (PTPL) Sabah
331	Pusat Teknologi Pengurusan Lanjutan (PTPL) Sarawak
332	Pusat Teknologi Pengurusan Lanjutan (PTPL) Seremban
333	Pusat Teknologi Pengurusan Lanjutan (PTPL) Shah Alam
334	Pusrawi International College of Medical Sciences (PICOMS) Kuala Lumpur
335	Queens College Kuala Lumpur
336	Raffles College of Higher Education Kuala Lumpur
337	RANACO Education and Training Institute (RETI) Terengganu
338	Reliance College Johor
339	Reliance College Kuala Lumpur
340	SEGi College Kuala Lumpur
341	Straford International College Pulau Pinang
342	Strategy College Sabah
343	Sunway College Johor
344	The One Academy Penang
345	TPM College Kuala Lumpur
346	Windfield International College

Note: The Private HEIs that were randomly selected are highlighted.

## APPENDIX C

### FACTOR ANALYSIS

Factor analysis for service quality (first run)

#### **KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.909	
Bartlett's Test of Sphericity	Approx. Chi-Square	2252.245
	df	105
	Sig.	.000

#### **Communalities**

	Initial	Extraction
SQ_1	1.000	.459
SQ_2	1.000	.456
SQ_3	1.000	.703
SQ_4	1.000	.640
SQ_5	1.000	.584
SQ_6	1.000	.540
SQ_7	1.000	.611
SQ_8	1.000	.641
SQ_9	1.000	.669
SQ_10	1.000	.586
SQ_11	1.000	.380
SQ_12	1.000	.480
SQ_13	1.000	.509
SQ_14	1.000	.669
SQ_15	1.000	.641

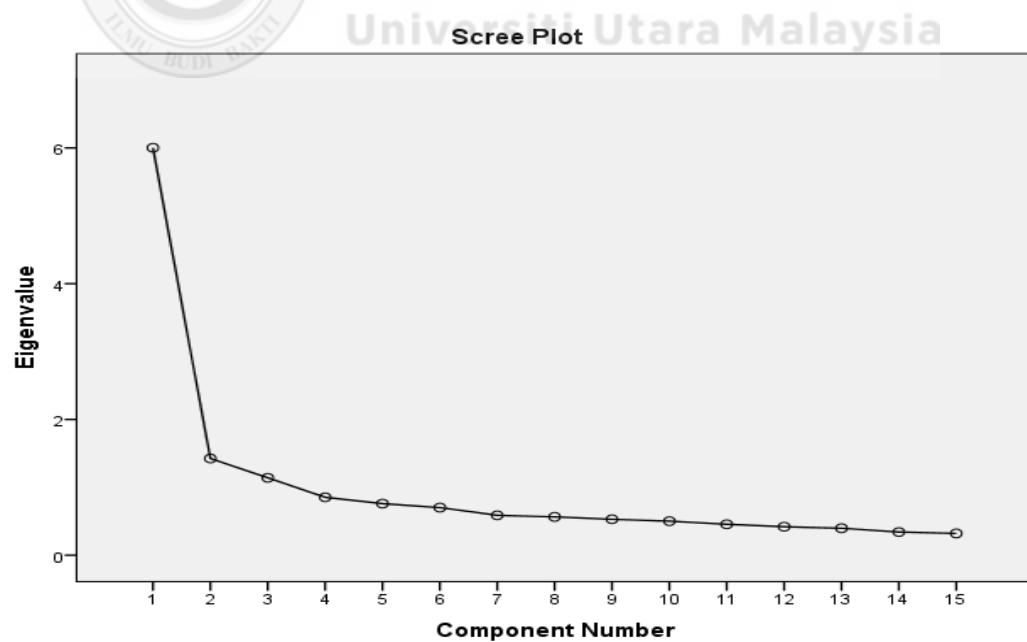
Extraction Method: Principal

Component Analysis.

**Total Variance Explained**

Component				Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Initial Eigenvalues			Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	Total	% of Variance	Cumulative %						
1	6.002	40.011	40.011	6.002	40.011	40.011	3.456	23.039	23.039
2	1.425	9.498	49.509	1.425	9.498	49.509	2.679	17.859	40.898
3	1.141	7.606	57.115	1.141	7.606	57.115	2.433	16.217	57.115
4	.853	5.690	62.805						
5	.760	5.068	67.874						
6	.701	4.675	72.549						
7	.587	3.915	76.464						
8	.565	3.764	80.228						
9	.529	3.528	83.756						
10	.502	3.346	87.102						
11	.456	3.038	90.140						
12	.420	2.797	92.936						
13	.397	2.649	95.586						
14	.341	2.275	97.861						
15	.321	2.139	100.000						

Extraction Method: Principal Component Analysis.



	Component Matrix <sup>a</sup>			Rotated Component Matrix <sup>a</sup>			
	Component			Component			
	1	2	3		1	2	3
SQ_10	.704	-.244	.174	SQ_9	.789	.181	.117
SQ_5	.690	-.033	-.327	SQ_8	.770	.189	.112
SQ_6	.688	-.244	.088	SQ_7	.759	.167	.085
SQ_9	.687	-.423	.137	SQ_10	.688	.201	.269
SQ_8	.676	-.411	.122	SQ_6	.653	.260	.215
SQ_7	.643	-.427	.122	SQ_11	.485	.188	.331
SQ_2	.641	-.004	-.212	SQ_3	.161	.815	.114
SQ_12	.635	.262	-.089	SQ_4	.157	.767	.164
SQ_3	.620	.150	-.544	SQ_5	.395	.639	.139
SQ_13	.615	.287	.221	SQ_2	.373	.527	.196
SQ_4	.615	.176	-.481	SQ_12	.220	.485	.443
SQ_11	.591	-.064	.161	SQ_14	.154	.067	.800
SQ_1	.590	.330	-.037	SQ_15	.108	.134	.782
SQ_14	.531	.461	.418	SQ_13	.275	.232	.616
SQ_15	.529	.495	.342	SQ_1	.157	.434	.496

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Component Transformation Matrix			
Component	1	2	3
1	.670	.560	.488
2	-.689	.224	.689
3	.277	-.798	.536

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

## Factor analysis for service quality (final run)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.856
Bartlett's Test of Sphericity	Approx. Chi-Square	1371.853
	df	45
	Sig.	.000

### Communalities

	Initial	Extraction
SQ_3	1.000	.774
SQ_4	1.000	.772
SQ_6	1.000	.566
SQ_7	1.000	.634
SQ_8	1.000	.650
SQ_9	1.000	.677
SQ_10	1.000	.579
SQ_13	1.000	.571
SQ_14	1.000	.700
SQ_15	1.000	.661

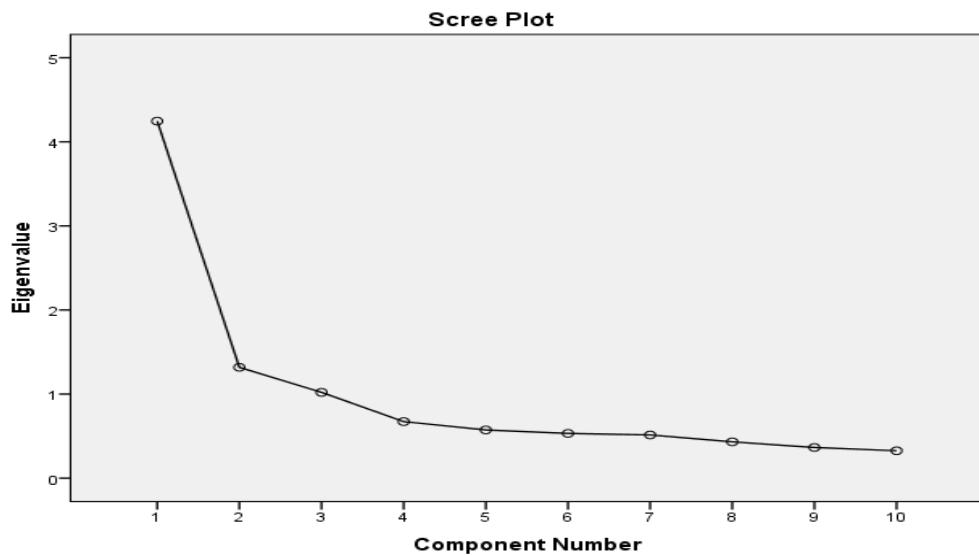
Extraction Method: Principal

Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Loadings			Total	% of Variance	Cumulative %
				Total	% of Variance	Cumulative %			
1	4.246	42.461	42.461	4.246	42.461	42.461	3.023	30.230	30.230
2	1.318	13.182	55.643	1.318	13.182	55.643	1.956	19.562	49.791
3	1.020	10.204	65.847	1.020	10.204	65.847	1.606	16.056	65.847
4	.673	6.727	72.574						
5	.574	5.735	78.309						
6	.532	5.320	83.629						
7	.514	5.141	88.770						
8	.432	4.320	93.091						
9	.365	3.648	96.739						
10	.326	3.261	100.000						

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component		
	1	2	3
SQ_9	.748	-.333	
SQ_10	.733		
SQ_8	.727	-.335	
SQ_6	.706		
SQ_-7	.678	-.405	
SQ_13	.631	.400	
SQ_15	.529	.566	
SQ_14	.538	.546	-.336
SQ_3	.583		.643
SQ_4	.596		.609

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
SQ_9	.792		
SQ_-7	.787		
SQ_8	.780		
SQ_6	.707		
SQ_10	.688		
SQ_14		.821	
SQ_15		.794	
SQ_13		.661	
SQ_3			.843
SQ_4			.834

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

**Component Transformation Matrix**

Component	1	2	3
1	.766	.486	.421
2	-.605	.767	.216
3	-.218	-.420	.881

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser

Normalization.

Factor analysis for reputation (first run)

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.841
Bartlett's Test of Sphericity	Approx. Chi-Square	1433.943
	df	36
	Sig.	.000

**Communalities**

	Initial	Extraction
REP_1	1.000	.559
REP_2	1.000	.566
REP_3	1.000	.625
REP_4	1.000	.493
REP_5	1.000	.573
REP_6	1.000	.470
REP_7	1.000	.610
REP_8	1.000	.796
REP_9	1.000	.738

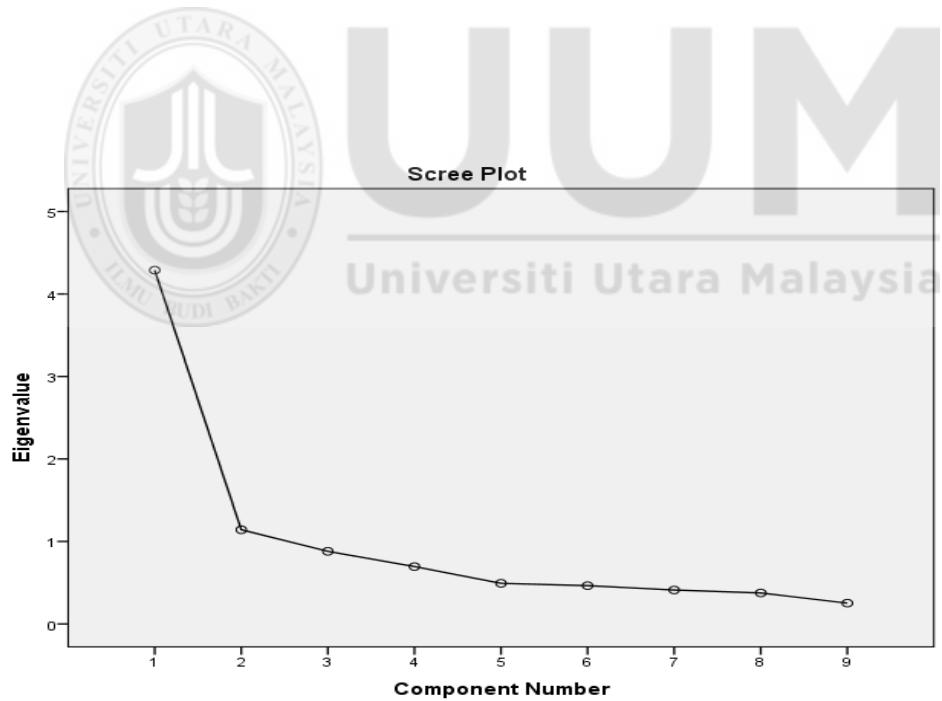
Extraction Method: Principal

Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.289	47.655	47.655	4.289	47.655	47.655	3.067	34.081	34.081
2	1.142	12.688	60.343	1.142	12.688	60.343	2.364	26.262	60.343
3	.880	9.777	70.120						
4	.695	7.725	77.845						
5	.492	5.469	83.315						
6	.464	5.151	88.465						
7	.411	4.569	93.034						
8	.375	4.169	97.204						
9	.252	2.796	100.000						

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component	
	1	2
REP_3	.722	-.321
REP_1	.711	-.231
REP_5	.699	-.291
REP_9	.692	.509
REP_7	.690	.366
REP_6	.686	-.010
REP_8	.683	.575
REP_2	.670	-.343
REP_4	.658	-.245

Extraction Method: Principal

Component Analysis.

a. 2 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
REP_3	.765	.199
REP_2	.738	.150
REP_5	.728	.208
REP_1	.700	.262
REP_4	.667	.218
REP_6	.542	.420
REP_8	.176	.875
REP_9	.224	.829
REP_7	.312	.716

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with  
Kaiser Normalization.

a. Rotation converged in 3  
iterations.

**Component Transformation Matrix**

Component	1	2
1	.782	.623
2	-.623	.782

Extraction Method: Principal Component  
Analysis.

Rotation Method: Varimax with Kaiser  
Normalization.

## Factor analysis for reputation (final run)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.822
Bartlett's Test of Sphericity	Approx. Chi-Square	1237.529
	df	28
	Sig.	.000

### Communalities

	Initial	Extraction
REP_1	1.000	.560
REP_2	1.000	.568
REP_3	1.000	.643
REP_4	1.000	.514
REP_5	1.000	.582
REP_7	1.000	.586
REP_8	1.000	.818
REP_9	1.000	.756

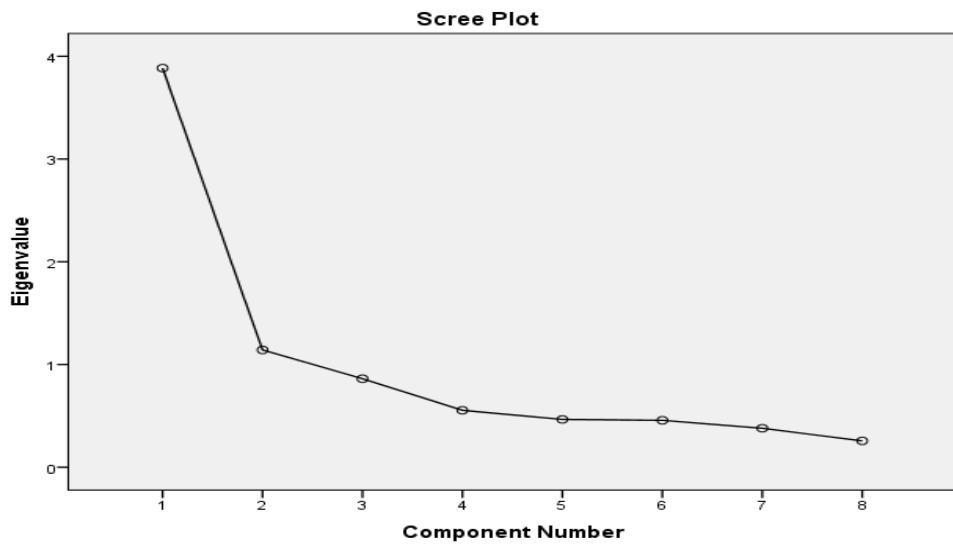
Extraction Method: Principal

Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.885	48.560	48.560	3.885	48.560	48.560	2.807	35.094	35.094
2	1.142	14.273	62.833	1.142	14.273	62.833	2.219	27.739	62.833
3	.862	10.770	73.603						
4	.554	6.927	80.530						
5	.466	5.819	86.349						
6	.456	5.706	92.054						
7	.379	4.740	96.795						
8	.256	3.205	100.000						

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component	
	1	2
REP_3	.734	
REP_1	.712	
REP_9	.707	.507
REP_5	.704	
REP_8	.700	.573
REP_4	.673	
REP_7	.672	.367
REP_2	.671	

Extraction Method: Principal

Component Analysis.

a. 2 components extracted.

**Rotated Component Matrix<sup>a</sup>**

	Component	
	1	2
REP_3	.774	
REP_2	.738	
REP_5	.732	
REP_1	.700	
REP_4	.680	
REP_8		.885
REP_9		.838
REP_7		.707

Extraction Method: Principal

Component Analysis.

Rotation Method: Varimax with  
Kaiser Normalization.

a. Rotation converged in 3  
iterations.

**Component Transformation Matrix**

Component	1	2
1	.779	.627
2	-.627	.779

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Factor analysis for relationship benefits (first run)

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.763
Bartlett's Test of Sphericity	677.703
df	15
Sig.	.000

**Communalities**

	Initial	Extraction
RB_2	1.000	.423
RB_3	1.000	.524
RB_4	1.000	.523
RB_5	1.000	.594
RB_6	1.000	.592
RB_1	1.000	.234

Extraction Method: Principal Component Analysis.

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.889	48.142	48.142	2.889	48.142	48.142
2	.995	16.578	64.720			
3	.827	13.783	78.503			
4	.529	8.820	87.323			
5	.410	6.836	94.159			
6	.350	5.841	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
RB_5	.771
RB_6	.769
RB_3	.724
RB_4	.723
RB_2	.650
RB_1	.483

Extraction Method:  
Principal Component  
Analysis.  
a. 1 components  
extracted.

## Factor analysis for relationship benefits (final run)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.756
Bartlett's Test of Sphericity	608.126
df	10
Sig.	.000

### Communalities

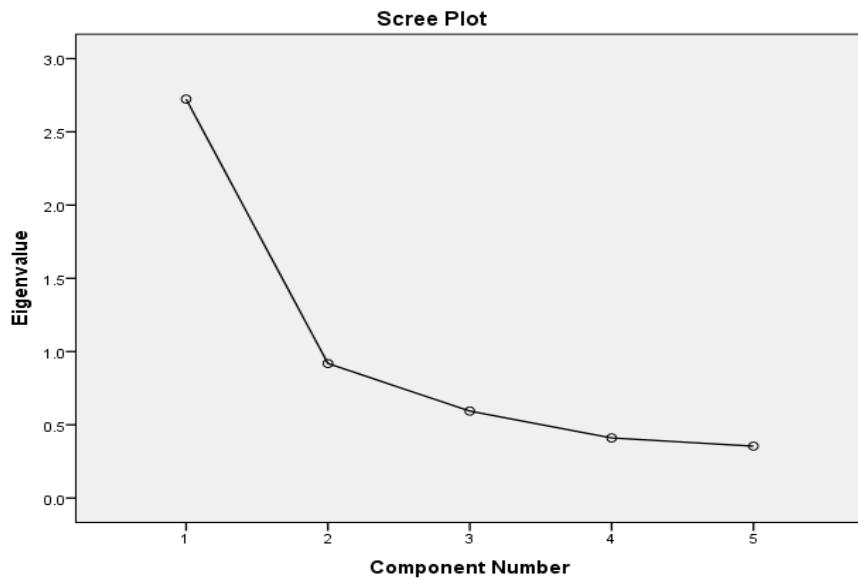
	Initial	Extraction
RB_2	1.000	.388
RB_3	1.000	.548
RB_4	1.000	.547
RB_5	1.000	.630
RB_6	1.000	.611

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.724	54.471	54.471	2.724	54.471	54.471
2	.918	18.369	72.839			
3	.594	11.873	84.713			
4	.410	8.205	92.918			
5	.354	7.082	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
RB_5	.794
RB_6	.782
RB_3	.740
RB_4	.739
RB_2	.623

Extraction Method:

Principal Component

Analysis.

a. 1 components

extracted.



## Factor analysis for satisfaction

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.876
Bartlett's Test of Sphericity	1311.993
df	15
Sig.	.000

### Communalities

	Initial	Extraction
SAT_1	1.000	.553
SAT_2	1.000	.715
SAT_3	1.000	.696
SAT_4	1.000	.581
SAT_5	1.000	.624
SAT_6	1.000	.743

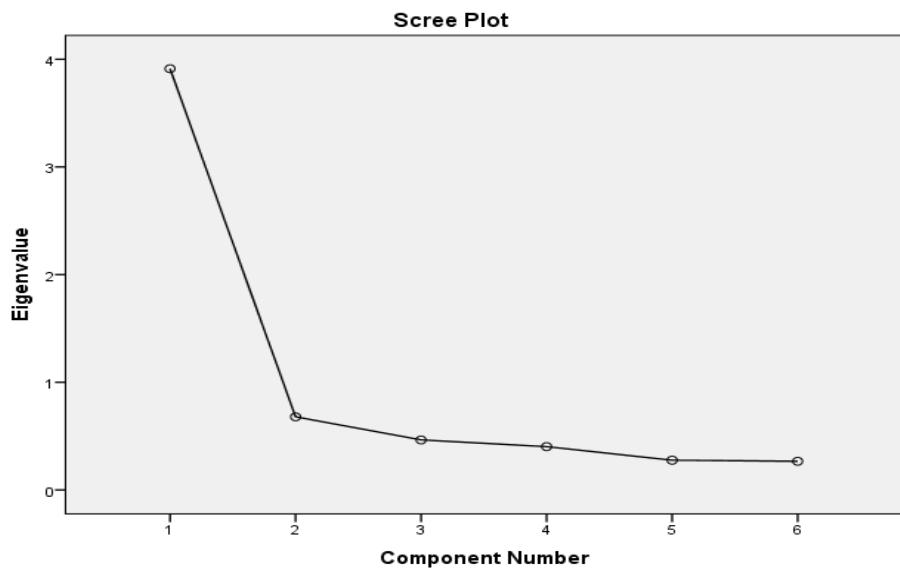
Extraction Method: Principal

Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.912	65.202	65.202	3.912	65.202	65.202
2	.679	11.320	76.521			
3	.465	7.744	84.265			
4	.402	6.698	90.963			
5	.276	4.599	95.562			
6	.266	4.438	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
SAT_6	.862
SAT_2	.846
SAT_3	.834
SAT_5	.790
SAT_4	.762
SAT_1	.744

Extraction Method:

Principal Component

Analysis.

a. 1 components  
extracted.

## Factor analysis for student loyalty

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.848
Bartlett's Test of Sphericity	1032.274
df	15
Sig.	.000

### Communalities

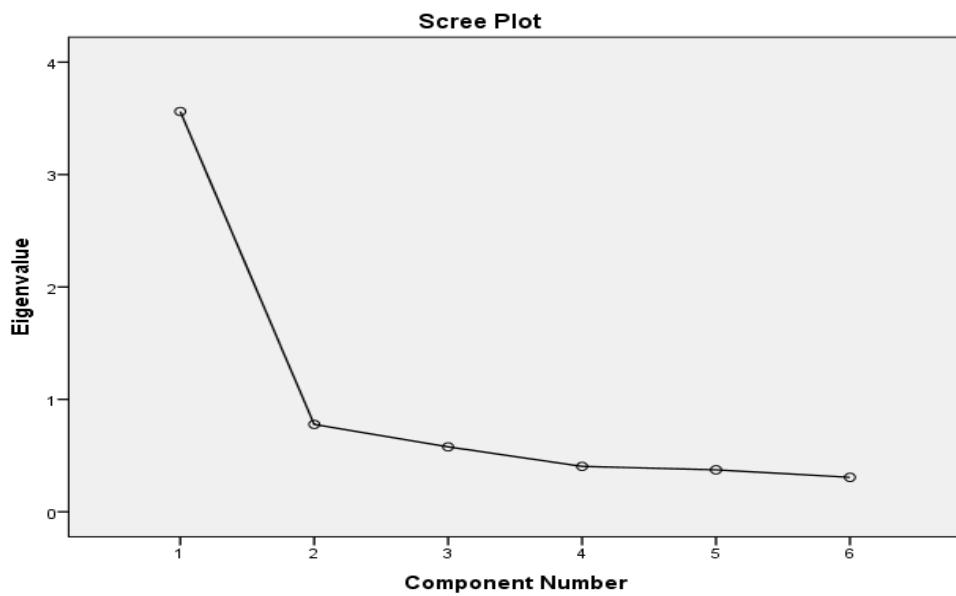
	Initial	Extraction
SL_1	1.000	.624
SL_2	1.000	.618
SL_3	1.000	.644
SL_4	1.000	.513
SL_5	1.000	.623
SL_6	1.000	.540

Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.562	59.359	59.359	3.562	59.359	59.359
2	.777	12.958	72.317			
3	.578	9.625	81.942			
4	.404	6.729	88.672			
5	.373	6.221	94.892			
6	.306	5.108	100.000			

Extraction Method: Principal Component Analysis.



**Component Matrix<sup>a</sup>**

	Component
	1
SL_3	.803
SL_1	.790
SL_5	.789
SL_2	.786
SL_6	.735
SL_4	.716

Extraction Method:

Principal Component

Analysis.

a. 1 components

extracted.

## APPENDIX D

### RELIABILITY ANALYSIS

Reliability analysis for pilot study

Service quality

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.829	.835	15

	Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SQ_1	50.25	35.372	.553	.606	.813
SQ_2	50.43	36.969	.494	.565	.818
SQ_3	50.73	37.435	.225	.449	.834
SQ_4	50.55	35.895	.462	.572	.818
SQ_5	50.60	35.836	.504	.543	.816
SQ_6	50.18	35.122	.577	.619	.811
SQ_7	49.95	36.254	.458	.613	.818
SQ_8	50.48	35.640	.439	.727	.819
SQ_9	50.28	36.563	.400	.618	.822
SQ_10	50.40	35.221	.488	.655	.816
SQ_11	50.40	36.451	.374	.452	.823
SQ_12	50.48	36.102	.322	.447	.829
SQ_13	50.40	34.144	.581	.456	.810
SQ_14	50.28	34.871	.474	.641	.817
SQ_15	50.28	34.974	.484	.555	.816

## Reputation

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.759	.758	9

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
REP_1	30.00	11.949	.244	.349	.764
REP_2	30.00	12.205	.144	.289	.782
REP_3	30.27	10.922	.480	.510	.731
REP_4	30.45	10.767	.495	.374	.728
REP_5	30.30	9.446	.610	.587	.705
REP_6	30.42	10.917	.498	.413	.729
REP_7	30.10	10.554	.489	.636	.729
REP_8	30.02	10.538	.536	.455	.721
REP_9	30.02	11.102	.476	.528	.732

## Relationship benefits

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.752	.765	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
RB_1	18.75	7.833	.456	.328	.729
RB_2	18.80	9.087	.332	.279	.755
RB_3	18.85	7.105	.723	.630	.647
RB_4	18.85	7.926	.399	.421	.750
RB_5	18.65	8.541	.568	.508	.703
RB_6	18.60	8.400	.554	.556	.704

## Satisfaction

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.889	.890	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SATISFACTION_1	19.62	8.240	.758	.603	.862
SATISFACTION_2	19.50	7.487	.775	.615	.859
SATISFACTION_3	19.50	8.308	.677	.514	.874
SATISFACTION_4	19.28	8.871	.614	.388	.884
SATISFACTION_5	19.07	7.866	.731	.569	.866
SATISFACTION_6	19.15	8.695	.700	.500	.872

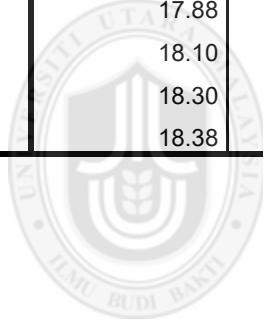
Student loyalty

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Items	N of Items
.794	.802	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SL_1	17.90	10.913	.532	.570	.765
SL_2	17.83	11.687	.520	.521	.770
SL_3	17.88	10.215	.751	.741	.718
SL_4	18.10	9.938	.546	.313	.765
SL_5	18.30	10.728	.514	.425	.770
SL_6	18.38	10.907	.470	.489	.781



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Reliability analysis for full scale study

Service quality: Academic quality

**Reliability Statistics**

Cronbach's Alpha	N of Items
.843	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SQ_6	14.89	7.702	.614	.821
SQ_7	15.00	7.444	.637	.815
SQ_8	15.13	7.398	.669	.806
SQ_9	15.05	7.045	.700	.797
SQ_10	15.05	7.391	.626	.818

Service quality: Program quality

**Reliability Statistics**

Cronbach's Alpha	N of Items
.712	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SQ_13	7.23	2.611	.507	.651
SQ_14	7.08	2.497	.554	.594
SQ_15	7.21	2.405	.532	.622

Service quality: Administrative quality

**Reliability Statistics**

Cronbach's Alpha		N of Items
	.711	2

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SQ_3	3.50	.792	.553	.
SQ_4	3.32	.882	.553	.

Reputation: University management

**Reliability Statistics**

Cronbach's Alpha		N of Items
	.813	5

Universiti Utara Malaysia

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
REP_1	14.73	6.669	.595	.778
REP_2	14.88	6.461	.581	.782
REP_3	15.03	6.215	.658	.758
REP_4	15.24	6.661	.561	.788
REP_5	14.99	6.230	.610	.773

Reputation: Academic and media reputation

**Reliability Statistics**

Cronbach's Alpha		N of Items
.802		3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
REP_7	7.67	2.452	.553	.823
REP_8	7.71	1.973	.731	.637
REP_9	7.67	2.222	.667	.710

Relationship benefits

**Reliability Statistics**

Cronbach's Alpha		N of Items
.785		5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RB_2	15.35	7.357	.445	.786
RB_3	15.29	7.059	.564	.745
RB_4	15.28	7.274	.563	.745
RB_5	15.19	6.844	.632	.722
RB_6	15.18	7.150	.622	.727

## Satisfaction

**Reliability Statistics**

Cronbach's Alpha		N of Items
	.891	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SAT_1	18.98	10.962	.630	.884
SAT_2	18.79	10.537	.759	.864
SAT_3	18.77	10.916	.746	.867
SAT_4	18.90	10.622	.657	.881
SAT_5	18.82	10.631	.696	.874
SAT_6	18.73	10.511	.785	.860

## Student loyalty

**Reliability Statistics**

Cronbach's Alpha		N of Items
	.859	6

Universiti Utara Malaysia

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SL_1	17.62	13.626	.667	.833
SL_2	17.60	13.916	.663	.834
SL_3	17.65	13.577	.686	.830
SL_4	17.89	13.499	.597	.845
SL_5	17.95	12.847	.692	.827
SL_6	18.01	12.825	.619	.844

## APPENDIX E

### NORMALITY

Skewness and kurtosis for all variables

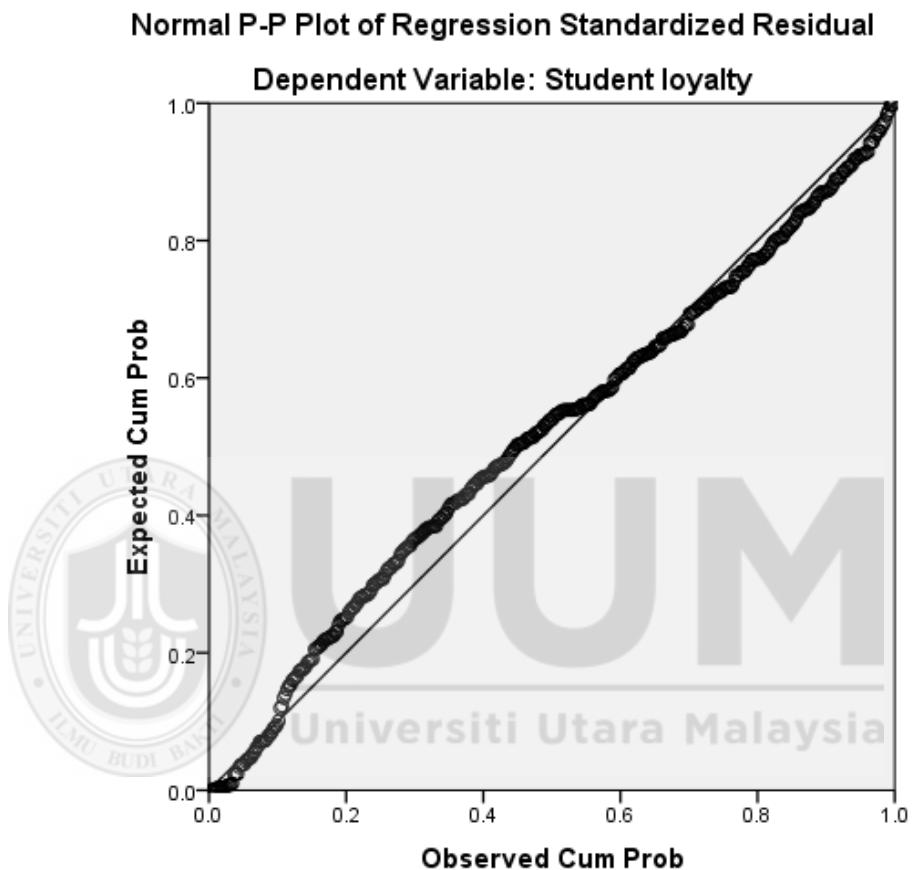
**Descriptives**

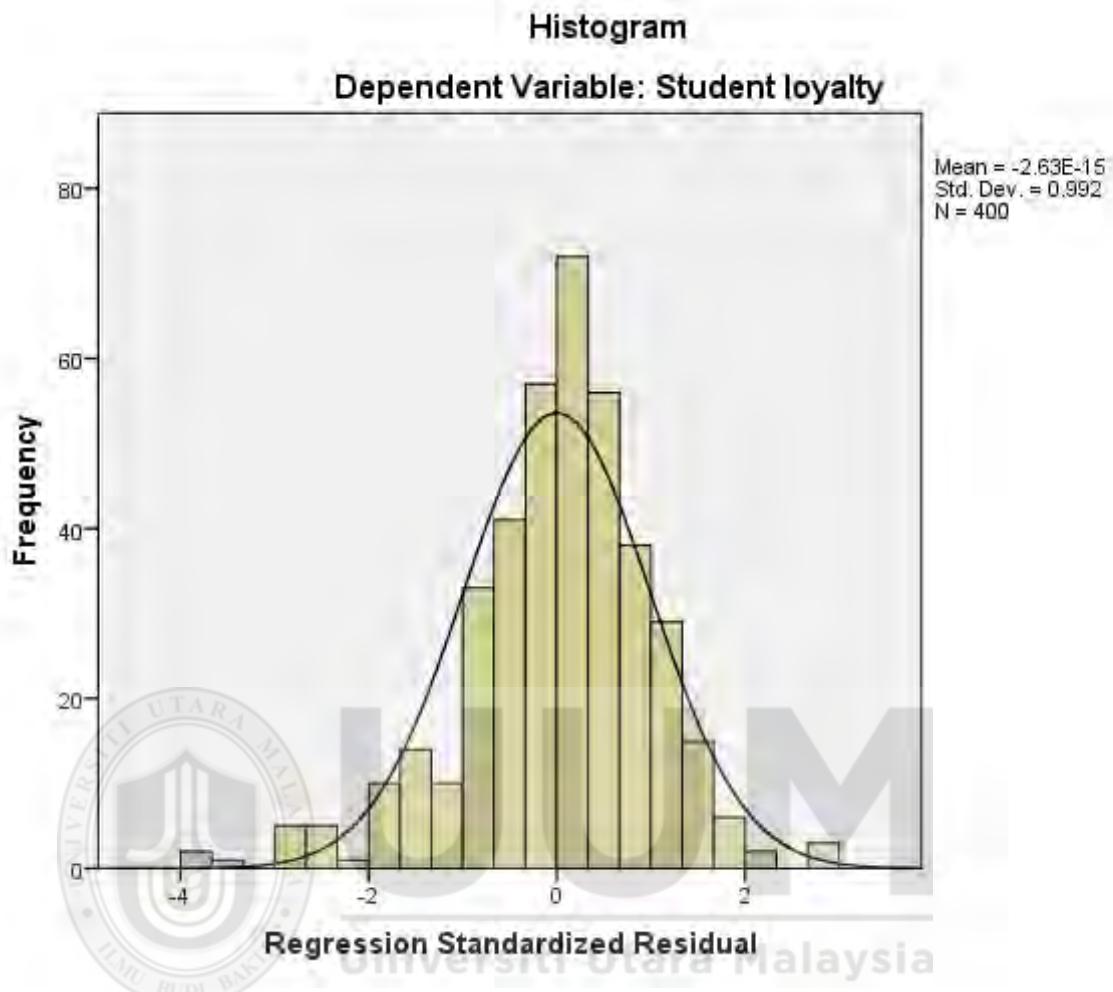
		Statistic	Std. Error
SQ_Academic	Mean	3.7555	.03335
	95% Confidence Interval for Mean	Lower Bound	3.6899
		Upper Bound	3.8211
	5% Trimmed Mean	3.7761	
	Median	3.8000	
	Variance	.445	
	Std. Deviation	.66696	
	Minimum	1.60	
	Maximum	5.00	
	Range	3.40	
	Interquartile Range	.80	
	Skewness	-.417	.122
	Kurtosis	.245	.243
SQ_Program	Mean	3.5858	.03699
	95% Confidence Interval for Mean	Lower Bound	3.5131
		Upper Bound	3.6586
	5% Trimmed Mean	3.6056	
	Median	3.6667	
	Variance	.547	
	Std. Deviation	.73982	
	Minimum	1.33	
	Maximum	5.00	
	Range	3.67	
	Interquartile Range	1.00	
	Skewness	-.399	.122
	Kurtosis	-.061	.243
SQ_Adminstrative	Mean	3.4113	.04029
	95% Confidence Interval for Mean	Lower Bound	3.3320

	Mean	Upper Bound	3.4905	
	5% Trimmed Mean		3.4181	
	Median		3.5000	
	Variance		.649	
	Std. Deviation		.80584	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-.215	.122
	Kurtosis		-.109	.243
REP_Uni_Mgt	Mean		3.7430	.03102
	95% Confidence Interval for	Lower Bound	3.6820	
	Mean	Upper Bound	3.8040	
	5% Trimmed Mean		3.7483	
	Median		3.8000	
	Variance		.385	
	Std. Deviation		.62041	
	Minimum		1.60	
	Maximum		5.00	
	Range		3.40	
	Interquartile Range		.80	
	Skewness		-.171	.122
	Kurtosis		.264	.243
REP_Academic_Media	Mean		3.8408	.03550
	95% Confidence Interval for	Lower Bound	3.7711	
	Mean	Upper Bound	3.9106	
	5% Trimmed Mean		3.8694	
	Median		4.0000	
	Variance		.504	
	Std. Deviation		.70992	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		1.00	
	Skewness		-.440	.122
	Kurtosis		.557	.243
Relationship benefits	Mean		3.8145	.03253

	95% Confidence Interval for Mean	Lower Bound	3.7505	
	Mean	Upper Bound	3.8785	
	5% Trimmed Mean		3.8367	
	Median		3.8000	
	Variance		.423	
	Std. Deviation		.65065	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		.80	
	Skewness		-.572	.122
	Kurtosis		1.106	.243
Satisfaction	Mean		3.7650	.03228
	95% Confidence Interval for Mean	Lower Bound	3.7015	
	Mean	Upper Bound	3.8285	
	5% Trimmed Mean		3.7755	
	Median		3.8333	
	Variance		.417	
	Std. Deviation		.64570	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		.79	
	Skewness		-.343	.122
	Kurtosis		.883	.243
Student loyalty	Mean		3.5567	.03608
	95% Confidence Interval for Mean	Lower Bound	3.4857	
	Mean	Upper Bound	3.6276	
	5% Trimmed Mean		3.5750	
	Median		3.6667	
	Variance		.521	
	Std. Deviation		.72152	
	Minimum		1.00	
	Maximum		5.00	
	Range		4.00	
	Interquartile Range		.83	
	Skewness		-.419	.122

Kurtosis	.612	.243
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## APPENDIX F

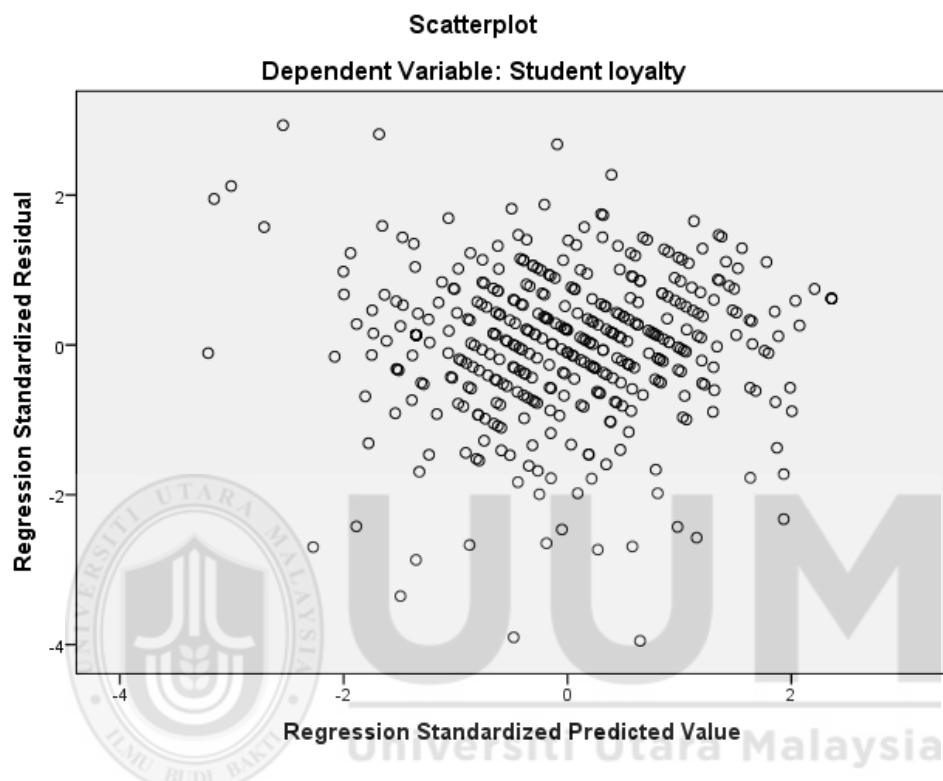
### MULTICOLLINEARITY

#### Tolerance and Variance Inflation Factor (VIF)

Model	Coefficients <sup>a</sup>											
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error				Lower Bound	Upper Bound	Zero- order	Partial	Part	Tolerance	VIF
1 (Constant)	.282	.198		1.421	.156	-.108	.671					
SQ_Academic	-.094	.051	-.087	1.840	.067	-.194	.006	.346	-.093	-.067	.591	1.693
SQ_Program	-.010	.044	-.010	-.227	.821	-.096	.076	.359	-.011	-.008	.658	1.519
SQ_Administrative	.095	.040	.106	2.392	.017	.017	.172	.396	.120	.087	.675	1.481
REP_Uni_Mgt	.278	.066	.239	4.214	.000	.148	.408	.599	.208	.153	.409	2.446
REP_Academic_Media	.047	.048	.047	.984	.326	-.047	.142	.427	.050	.036	.590	1.696
Relationship benefits	.102	.056	.092	1.816	.070	-.008	.212	.484	.091	.066	.516	1.939
Satisfaction	.459	.065	.411	7.094	.000	.332	.587	.651	.337	.257	.392	2.551

a. Dependent Variable: Student loyalty

**APPENDIX G**  
**LINEARITY AND HOMOSCEDASTICITY**



## APPENDIX H

### FREQUENCIES OF REPSONDENTS

Gender of respondents

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	156	39.0	39.0	39.0
	Female	244	61.0	61.0	100.0
	Total	400	100.0	100.0	

Nationality of respondents

		Nationality			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malaysian	380	95.0	95.0	95.0
	Others	20	5.0	5.0	100.0
	Total	400	100.0	100.0	

Race of respondents

		Race			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	41	10.3	10.3	10.3
	Chinese	243	60.8	60.8	71.0
	Indian	95	23.8	23.8	94.8
	Others	21	5.3	5.3	100.0
	Total	400	100.0	100.0	

### Age group of respondents

Age					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	17-20	216	54.0	54.0	54.0
	21-24	166	41.5	41.5	95.5
	25-28	13	3.3	3.3	98.8
	29-32	3	.8	.8	99.5
	Above 32	2	.5	.5	100.0
	Total	400	100.0	100.0	

### Years studying at current institution

Years studying at current institution					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Less than 1 year	84	21.0	21.0	21.0
	1-2 years	204	51.0	51.0	72.0
	2-3 years	58	14.5	14.5	86.5
	3-4 years	32	8.0	8.0	94.5
	4-5 years	15	3.8	3.8	98.3
	More than 5 years	7	1.8	1.8	100.0
	Total	400	100.0	100.0	

## APPENDIX I

### DESCRIPTIVE ANALYSIS

Descriptive statistics for all variables

	<b>Statistics</b>								
	SQ_Academic	SQ_Program	SQ_Administrative	REP_Uni_Mgt	REP_Academic_Media	Relationship benefits		Satisfaction	Student loyalty
N	400	400	400	400	400	400		400	400
Missing	0	0	0	0	0	0		0	0
Mean	3.7555	3.5858	3.4113	3.7430	3.8408	3.8145	3.7650	3.5567	
Median	3.8000	3.6667	3.5000	3.8000	4.0000	3.8000	3.8333	3.6667	
Std.	.66696	.73982	.80584	.62041	.70992	.65065	.64570	.72152	
Deviation									
Minimum	1.60	1.33	1.00	1.60	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Descriptive statistics for student loyalty (overall)

<b>Statistics</b>		
Student loyalty		
N	Valid	400
	Missing	0
Mean		3.5567
Median		3.6667
Mode		4.00
Std. Deviation		.72152
Minimum		1.00
Maximum		5.00
Percentiles	33.333	3.3333
	66.667	3.8333

Descriptive statistics for student loyalty: University status

<b>Statistics</b>		
Student loyalty		
N	Valid	188
	Missing	0
Mean		3.5621
Median		3.6667
Mode		3.67
Std. Deviation		.70689
Minimum		1.17
Maximum		5.00
Percentiles	33.333	3.3333
	66.667	3.8333

Descriptive statistics for student loyalty: University college status

<b>Statistics</b>		
Student loyalty		
N	Valid	52
	Missing	0
Mean		3.6538
Median		3.6667
Mode		4.00
Std. Deviation		.52378
Minimum		2.67
Maximum		5.00
Percentiles	33.333	3.3333
	66.667	4.0000

Descriptive statistics for student loyalty: Foreign University Branch campus status

<b>Statistics</b>		
Student loyalty		
N	Valid	12
	Missing	0
Mean		3.4444
Median		3.4167
Mode		3.50
Std. Deviation		.69024
Minimum		2.50
Maximum		4.67
Percentiles	33.333	3.0555
	66.667	3.5000

Descriptive statistics for student loyalty: College status

<b>Statistics</b>		
Student loyalty		
N	Valid	148
	Missing	0
Mean		3.5248
Median		3.5000
Mode		4.00
Std. Deviation		.80069
Minimum		1.00
Maximum		5.00
Percentiles	33.333	3.1667
	66.667	4.0000

## APPENDIX J

### CORRELATION ANALYSIS

Bivariate correlation between service quality and students' loyalty

Academic quality

Correlations			
		Student loyalty	SQ_Academic
Student loyalty	Pearson Correlation	1	.371**
	Sig. (2-tailed)		.000
	N	398	398
SQ_Academic	Pearson Correlation	.371**	1
	Sig. (2-tailed)	.000	
	N	398	398

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

Program quality

Correlations			
		Student loyalty	SQ_Program
Student loyalty	Pearson Correlation	1	.377**
	Sig. (2-tailed)		.000
	N	398	398
SQ_Program	Pearson Correlation	.377**	1
	Sig. (2-tailed)	.000	
	N	398	398

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

### Administrative quality

**Correlations**

		Student loyalty	SQ_Administrative
Student loyalty	Pearson Correlation	1	.411**
	Sig. (2-tailed)		.000
	N	398	398
SQ_Administrative	Pearson Correlation	.411**	1
	Sig. (2-tailed)	.000	
	N	398	398

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

### Bivariate correlation between reputation and students' loyalty

#### University management

**Correlations**

		Student loyalty	REP_Uni_Mgt
Student loyalty	Pearson Correlation	1	.603**
	Sig. (2-tailed)		.000
	N	398	398
REP_Uni_Mgt	Pearson Correlation	.603**	1
	Sig. (2-tailed)	.000	
	N	398	398

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

### Accademic and media reputation

**Correlations**

		Student loyalty	REP_Academic_Media
Student loyalty	Pearson Correlation	1	.431**
	Sig. (2-tailed)		.000
	N	398	398
REP_Academic_Media	Pearson Correlation	.431**	1
	Sig. (2-tailed)	.000	
	N	398	398

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

Bivariate correlation between relationship benefits and students' loyalty

		Correlations	
		Student loyalty	Relationship benefits
Student loyalty	Pearson Correlation	1	.529 <sup>**</sup>
	Sig. (2-tailed)		.000
	N	398	398
Relationship benefits	Pearson Correlation	.529 <sup>**</sup>	1
	Sig. (2-tailed)	.000	
	N	398	398

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



## APPENDIX K

### MULTIPLE REGRESSION ANALYSIS

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.666 <sup>a</sup>	.444	.435	.54243

a. Predictors: (Constant), Relationship benefits, SQ\_Administrative, SQ\_Program, REP\_Academic\_Media, SQ\_Academic, REP\_Uni\_Mgt

b. Dependent Variable: Student loyalty

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.867	6	15.311	52.038	.000 <sup>b</sup>
	Residual	115.045	391	.294		
	Total	206.912	397			

a. Dependent Variable: Student loyalty

b. Predictors: (Constant), Relationship benefits, SQ\_Administrative, SQ\_Program, REP\_Academic\_Media, SQ\_Academic, REP\_Uni\_Mgt

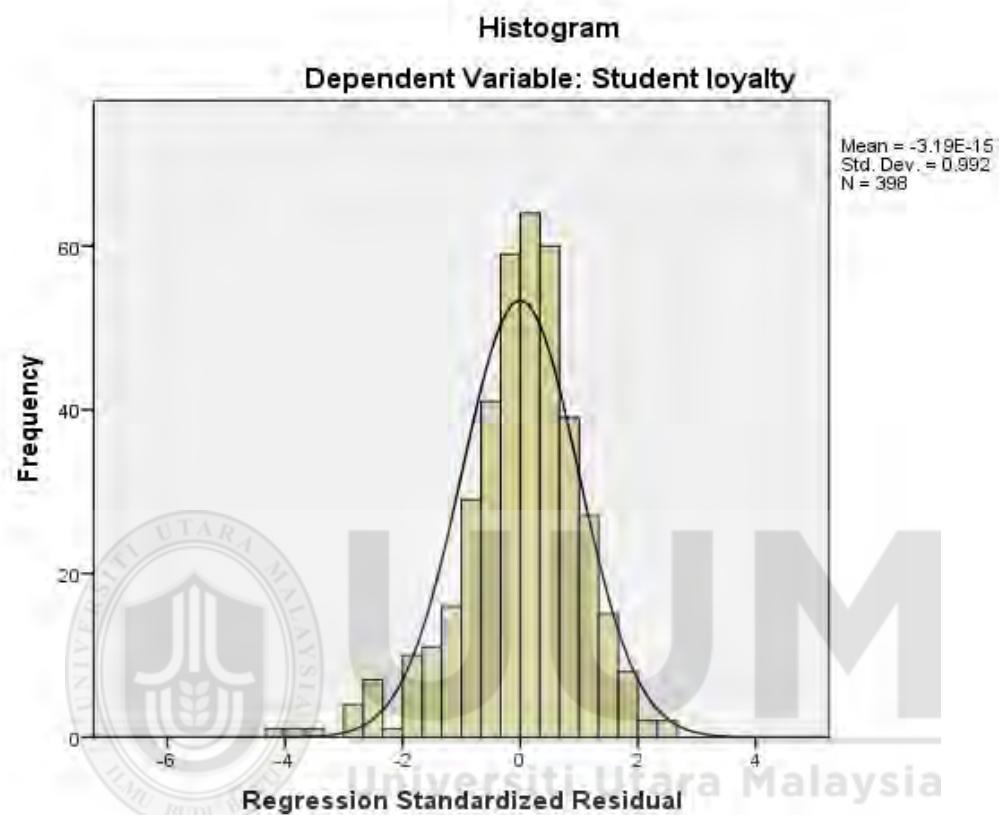
Model	Coefficients <sup>a</sup>												
	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta				Lower Bound	Upper Bound	Zero- order	Partial	Part	Tolerance	VIF
1 (Constant)	.104	.211			.490	.624	-.312	.519					
SQ_Academic	-.017	.053	-.015	-.315	.753		-.120	.087	.371	-.016	-.012	.630	1.588
SQ_Program	.048	.045	.048	1.057	.291		-.041	.137	.377	.053	.040	.684	1.461
SQ_Administrative	.103	.041	.114	2.514	.012		.023	.184	.411	.126	.095	.688	1.455
REP_Uni_Mgt	.427	.063	.367	6.758	.000		.303	.551	.603	.323	.255	.482	2.074
REP_Academic_Media	.058	.050	.057	1.159	.247		-.040	.156	.431	.059	.044	.592	1.689
Relationship benefits	.305	.057	.262	5.365	.000		.193	.417	.529	.262	.202	.595	1.680

a. Dependent Variable: Student loyalty

#### Collinearity Diagnostics<sup>a</sup>

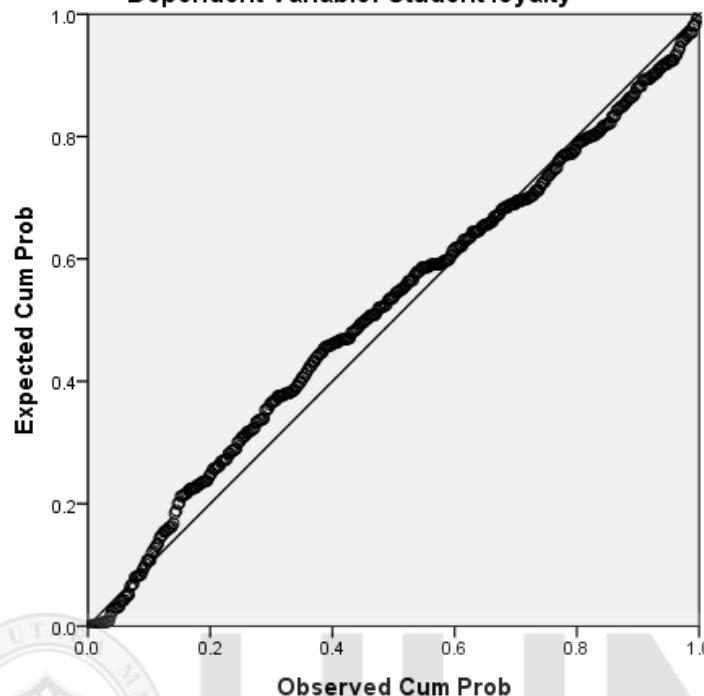
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SQ_Academic	SQ_Program	SQ_Administrative	REP_Uni_Mgt	REP_Academic_Media	Relationship benefits	
1	1	6.883	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.037	13.701	.01	.00	.00	.67	.00		.12	.02
	3	.024	17.018	.02	.00	.93	.04	.01		.03	.05
	4	.021	18.066	.06	.42	.02	.18	.01		.27	.01
	5	.013	22.661	.79	.24	.01	.03	.14		.03	.00
	6	.012	23.781	.11	.02	.04	.02	.23		.04	.81
	7	.010	26.445	.00	.32	.01	.07	.62		.51	.12

a. Dependent Variable: Student loyalty



Normal P-P Plot of Regression Standardized Residual

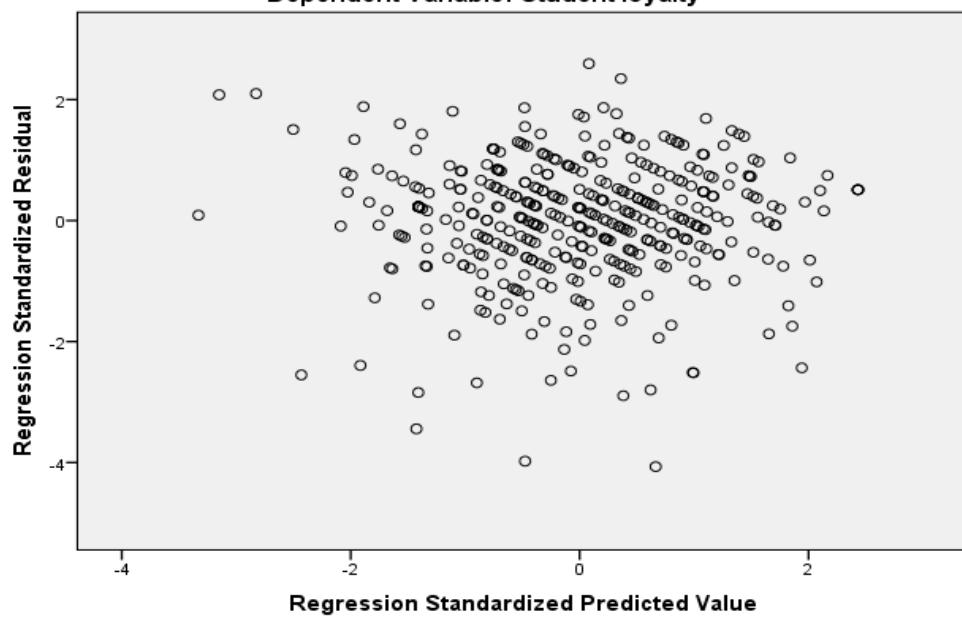
Dependent Variable: Student loyalty



Universiti Utara Malaysia

Scatterplot

Dependent Variable: Student loyalty



## APPENDIX L

### MEDIATION ANALYSIS

#### Mediation analysis for service quality

##### Academic quality

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.16.3 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
 Documentation available in Hayes (2013). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
 Model = 4  
 Y = SL  
 X = SQ\_Acade  
 M = SAT  
 Sample size  
 398  
 \*\*\*\*\*  
 Outcome: SAT  
 \*\*\*\*\*  
 Model Summary  

	R	R-sq	MSE	F	df1	df2	p
	.5042	.2542	.2977	134.9718	1.0000	396.0000	.0000

 Model  

	coeff	se	t	p	LLCI	ULCI
constant	1.9326	.1608	12.0166	.0000	1.6164	2.2488
SQ_Acade	.4889	.0421	11.6177	.0000	.4061	.5716

 \*\*\*\*\*  
 Outcome: SL  
 \*\*\*\*\*  
 Model Summary  

	R	R-sq	MSE	F	df1	df2	p
	.6805	.4631	.2813	170.3304	2.0000	395.0000	.0000

 Model  

	coeff	se	t	p	LLCI	ULCI
constant	.5438	.1826	2.9778	.0031	.1848	.9028
SAT	.7559	.0488	15.4774	.0000	.6599	.8520
SQ_Acade	.0417	.0474	.8805	.3791	-.0514	.1348

 \*\*\*\*\*  
 TOTAL EFFECT MODEL \*\*\*\*\*  
 Outcome: SL  
 \*\*\*\*\*  
 Model Summary  

	R	R-sq	MSE	F	df1	df2	p
	.3707	.1374	.4507	63.1004	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.0047	.1979	10.1313	.0000	1.6157	2.3937
SQ_Acade	.4113	.0518	7.9436	.0000	.3095	.5130

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.4113	.0518	7.9436	.0000	.3095	.5130

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.0417	.0474	.8805	.3791	-.0514	.1348

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
SAT	.3696	.0424	.2928

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
SAT	.5119	.0540	.4113

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
SAT	.3331	.0346	.2687

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
SAT	.8986	.1304	.6952

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI
SAT	8.8626	998.9511	2.0607

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI
SAT	.1364	.0340	.0729

Normal theory tests for indirect effect

Effect	se	z	p
.3696	.0398	9.2790	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----

## Program quality

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.16.3 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2013). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model = 4

Y = SL

X = SQ\_Progr

M = SAT

Sample size

398

\*\*\*\*\*

Outcome: SAT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4625	.2139	.3138	107.7663	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.3336	.1416	16.4856	.0000	2.0553	2.6119
SQ_Progr	.4006	.0386	10.3811	.0000	.3247	.4764

\*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6834	.4670	.2792	173.0527	2.0000	395.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4941	.1734	2.8500	.0046	.1533	.8350
SAT	.7354	.0474	15.5157	.0000	.6422	.8286
SQ_Progr	.0790	.0411	1.9246	.0550	-.0017	.1597

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3771	.1422	.4482	65.6330	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2103	.1692	13.0657	.0000	1.8777	2.5429
SQ_Progr	.3736	.0461	8.1014	.0000	.2829	.4643

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.3736	.0461	8.1014	.0000	.2829	.4643

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.0790	.0411	1.9246	.0550	-.0017	.1597

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.2946	.0389	.2242	.3768

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.4081	.0480	.3197	.5070

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.2973	.0355	.2318	.3704

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.7885	.1133	.6058	1.0485

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	3.7286	145.8645	-8.6797	55.2912

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.1372	.0331	.0770	.2060

Normal theory tests for indirect effect

Effect	se	Z	p
.2946	.0342	8.6156	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----

## Administrative quality

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.16.3 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2013). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model = 4

Y = SL

X = SQ\_Admin

M = SAT

Sample size

398

\*\*\*\*\*

Outcome: SAT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4039	.1631	.3341	77.1983	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6830	.1275	21.0435	.0000	2.4323	2.9336
SQ_Admin	.3190	.0363	8.7863	.0000	.2476	.3904

\*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6958	.4842	.2702	185.3776	2.0000	395.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4000	.1669	2.3968	.0170	.0719	.7281
SAT	.7024	.0452	15.5431	.0000	.6136	.7913
SQ_Admin	.1470	.0357	4.1189	.0000	.0768	.2172

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4107	.1687	.4344	80.3513	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2846	.1454	15.7149	.0000	1.9988	2.5704
SQ_Admin	.3711	.0414	8.9639	.0000	.2897	.4525

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.3711	.0414	8.9639	.0000	.2897	.4525

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.1470	.0357	4.1189	.0000	.0768	.2172

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.2241	.0350	.1596	.2956

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3104	.0440	.2235	.3944

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.2480	.0349	.1807	.3165

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.6038	.0998	.4370	.8337

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	1.5242	4.8352	.7694	4.8726

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.1465	.0336	.0841	.2154

Normal theory tests for indirect effect

Effect	se	Z	p
.2241	.0293	7.6368	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----

## Mediation analysis for reputation

### University management

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.16.3 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2013). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model = 4

Y = SL

X = REP\_Uni\_

M = SAT

Sample size

398

\*\*\*\*\*

Outcome: SAT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6999	.4898	.2037	380.2254	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.1099	.1385	8.0154	.0000	.8377	1.3822
REP_Uni_	.7114	.0365	19.4994	.0000	.6397	.7831

\*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7026	.4937	.2652	192.5974	2.0000	395.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.2868	.1704	1.6833	.0931	-.0482	.6217
SAT	.5780	.0573	10.0800	.0000	.4653	.6908
REP_Uni_	.2899	.0583	4.9733	.0000	.1753	.4045

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6029	.3635	.3326	226.1375	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.9283	.1770	5.2461	.0000	.5804	1.2762
REP_Uni_	.7011	.0466	15.0379	.0000	.6094	.7927

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.7011	.0466	15.0379	.0000	.6094	.7927

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.2899	.0583	4.9733	.0000	.1753	.4045

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.4112	.0568	.3058	.5301

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.5696	.0744	.4280	.7202

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3536	.0456	.2681	.4457

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.5865	.0883	.4205	.7631

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	1.4185	1.6368	.7256	3.2205

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3318	.0341	.2648	.3991

Normal theory tests for indirect effect

Effect	se	Z	p
.4112	.0460	8.9450	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----

## Academic and media reputation

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Release 2.16.3 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
 Documentation available in Hayes (2013). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model = 4

Y = SL

X = REP\_Acad

M = SAT

Sample size

398

\*\*\*\*\*

Outcome: SAT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5036	.2536	.2980	134.5581	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.0545	.1507	13.6309	.0000	1.7582	2.3508
REP_Acad	.4474	.0386	11.5999	.0000	.3715	.5232

\*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6874	.4725	.2763	176.9262	2.0000	395.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.4135	.1759	2.3503	.0192	.0676	.7594
SAT	.7092	.0484	14.6567	.0000	.6141	.8044
REP_Acad	.1206	.0430	2.8057	.0053	.0361	.2051

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

Outcome: SL

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4309	.1857	.4255	90.2849	1.0000	396.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.8706	.1801	10.3859	.0000	1.5165	2.2247
REP_Acad	.4379	.0461	9.5018	.0000	.3473	.5285

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS \*\*\*\*\*

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.4379	.0461	9.5018	.0000	.3473	.5285

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.1206	.0430	2.8057	.0053	.0361	.2051

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3173	.0437	.2388	.4095

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.4395	.0567	.3345	.5549

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3122	.0388	.2397	.3936

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.7246	.1059	.5390	.9537

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	2.6307	42.0805	1.0617	13.8466

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.1752	.0330	.1136	.2437

Normal theory tests for indirect effect

Effect	se	Z	p
.3173	.0349	9.0829	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----

## Mediation analysis for relationship benefits

Run MATRIX procedure:

```
*****
  PROCESS Procedure for SPSS Release 2.16.3 *****
  Written by Andrew F. Hayes, Ph.D.      www.afhayes.com
  Documentation available in Hayes (2013). www.guilford.com/p/hayes3
  *****

Model = 4
Y = SL
X = RB
M = SAT

Sample size
398

*****
Outcome: SAT

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .6098   .3719   .2507  234.4849   1.0000  396.0000   .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant  1.4004  .1570  8.9187  .0000  1.0917  1.7091
RB        .6199  .0405  15.3129  .0000  .5403  .6995
  *****

Outcome: SL

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .6948   .4828   .2709  184.3744   2.0000  395.0000   .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant  .2879  .1789  1.6095  .1083  -.0638  .6395
SAT       .6507  .0522  12.4565  .0000  .5480  .7533
RB        .2116  .0531  3.9857  .0001  .1072  .3160
  *****

***** TOTAL EFFECT MODEL *****
Outcome: SL

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .5288   .2797   .3764  153.7346   1.0000  396.0000   .0000

Model
      coeff      se      t      p      LLCI      ULCI
constant  1.1990  .1924  6.2328  .0000  .8208  1.5772
RB        .6150  .0496  12.3990  .0000  .5175  .7125
  *****

***** TOTAL, DIRECT, AND INDIRECT EFFECTS *****
Total effect of X on Y
      Effect      SE      t      p      LLCI      ULCI
      .6150  .0496  12.3990  .0000  .5175  .7125
```

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.2116	.0531	3.9857	.0001	.1072	.3160

Indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.4034	.0474	.3181	.5055

Partially standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.5587	.0583	.4494	.6777

Completely standardized indirect effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.3468	.0381	.2781	.4272

Ratio of indirect to total effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.6559	.0840	.5073	.8390

Ratio of indirect to direct effect of X on Y

Effect	Boot SE	BootLLCI	BootULCI	
SAT	1.9059	1.4818	1.0298	5.2109

R-squared mediation effect size (R-sq\_med)

Effect	Boot SE	BootLLCI	BootULCI	
SAT	.2589	.0357	.1906	.3303

Normal theory tests for indirect effect

Effect	se	Z	p
.4034	.0418	9.6507	.0000

\*\*\*\*\* ANALYSIS NOTES AND WARNINGS \*\*\*\*\*

Number of bootstrap samples for bias corrected bootstrap confidence intervals:  
5000

Level of confidence for all confidence intervals in output:  
95.00

NOTE: Kappa-squared is disabled from output as of version 2.16.

----- END MATRIX -----