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**A STUDY ON THE RELATIONSHIP BETWEEN SERVICE QUALITY AND  
CUSTOMER SATISFACTION AMONG SPORT CENTER USERS IN UNIVERSITY  
UTARA MALAYSIA**



**MASTER OF SCIENCE (MANAGEMENT)**

**UNIVERSITI UTARA MALAYSIA**

**DISEMBER 2018**

A STUDY ON THE RELATIONSHIP BETWEEN SERVICE QUALITY AND CUSTOMER  
SATISFACTION AMONG SPORT CENTER USERS IN UNIVERSITY UTARA MALAYSIA

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Thesis Submitted to

School of Business Management

Universiti Utara Malaysia

In Partial Fulfillment of the Requirement for the Master Sciences

(Management)

## DECLARATION

This declaration is to clarify that all of the submitted contents of this thesis are original in its stature, excluding those, which have been, acknowledge specifically in the references. All the work process involved is from my own idea and work. However, it is recognized that there are quotes, literature, explanation and some other information related to the study are taken and referred to by the authors of previous studies, All of the content of this thesis has been submitted as part of, partial fulfillment of Master of Science in Management Program. I hereby declare that this thesis project is the work of my own excluded for the references document and summaries that have been acknowledged.



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## ABSTRACT

The purpose of this study is to study the relationship between service quality and customer satisfaction among the users of the Sports Center in University Utara Malaysia. The respondents of this study are the UUM students who are using the services in the Sports Center. The factors investigated in this study are five dimensions of service quality which is tangible, responsiveness, reliability, assurance and empathy. Thus, the objectives of this research paper are: (a) To investigate the relationship between tangibility and the student's satisfaction. (b) To identify the relationship between reliability and the student's satisfaction. (c) To determine the relationship between responsiveness and the student's satisfaction. (d) To examine the relationship between assurance and the student's satisfaction. (e) To identify the relationship between empathy and the student's satisfaction. (f) To determine the relationship between overall service quality and the student's satisfaction. In this study, the quantitative method was implemented. 1138 students as the population and 297 students are chosen as a sample size. In assessing the relationship between variables, a total of 297 questionnaires were distributed and analyzed using SPSS 24.0 to produce an accurate finding. Correlation analyses were used to answer the research hypothesis. The findings of the research proves that service quality is significantly related to the student's satisfaction. This study clearly illustrate that tangibility and empathy have the most influence towards increasing the student's satisfaction. This study also contributes to a new scope of research in the business field and discusses the implications, recommendations for future research and a summary of the study as well.

**Keywords:** service quality, student's satisfaction, UUM Sport Center.

## ABSTRAK

Tujuan kajian ini adalah untuk mengkaji hubungan antara kualiti perkhidmatan dan kepuasan pelanggan di kalangan Pusat Sukan UUM. Responden kajian ini adalah pelajar UUM yang menggunakan perkhidmatan di Pusat Sukan. Faktor-faktor yang dikaji dalam kajian ini adalah lima dimensi kualiti perkhidmatan yang ketara, responsif, kebolehpercayaan, jaminan dan empati. Oleh itu, objektif kertas penyelidikan ini adalah: (a) Menyiasat hubungan antara ketangkasan dan kepuasan pelajar. (b) Untuk mengenal pasti hubungan antara kebolehpercayaan dan kepuasan pelajar. (c) Untuk menentukan hubungan antara respons dan kepuasan pelajar. (d) Untuk mengkaji hubungan antara jaminan dan kepuasan pelajar. (e) Untuk mengenal pasti hubungan antara empati dan kepuasan pelajar. (f) Untuk menentukan hubungan antara kualiti perkhidmatan secara keseluruhan dan kepuasan pelajar. Dalam kajian ini, kaedah kuantitatif telah dilaksanakan. 1138 pelajar sebagai populasi dan 297 pelajar dipilih sebagai saiz sampel. Dalam menilai hubungan antara pembolehubah, sejumlah 297 soal selidik diedarkan dan dianalisis menggunakan SPSS 24.0 untuk menghasilkan penemuan yang tepat. Analisis korelasi telah digunakan untuk menjawab hipotesis penyelidikan. Penemuan penyelidikan mendapati bahawa kualiti perkhidmatan sangat berkaitan dengan kepuasan pelajar. Kajian ini dengan jelas menunjukkan bahawa ketara dan empati adalah pengaruh yang paling terhadap peningkatan kepuasan pelajar. Kajian ini juga menyumbang kepada bidang penyelidikan baru dalam bidang perniagaan dan membincangkan implikasi, cadangan untuk penyelidikan masa depan dan ringkasan kajian.

**Kata kunci:** kualiti perkhidmatan, kepuasan pelajar, Pusat Sukan UUM.

## ACKNOWLEDGEMENT

" In the name of Allah, Most Gracious, Most Merciful"

Praised to the God Almighty, for the blessing given to me to complete this study and the research paper. This research paper is the result of continuous, determination, effort and support from many individuals.

Firstly, I would like to express my sincere gratitude to all my beloved family members for their encouragement for me to complete this study, especially to my parents, Husin and Saripah who provide moral and financial support during this research. Not to be forgotten, both of my siblings and their children, who inspires me from a far.

Secondly, I am grateful for having both my dedicated supervisors, Associate Prof Dr Azahari Ramli and Dr Muhammad Shukri Bakar. I am thankful for their aspiring guidance, constructive criticism and friendly advice during this research. Not to forget, the staff at the UUM Sport Center, who kindly assisted in collecting the data for the research.

Thirdly, special thanks to my roommate, Mastura Mokhtar for her moral support and reminds me to focus in completing this research. Sincere thanks to her for being a good roommate from the beginning until the end of this research.

Last but not least, I would like to thank who was involved as well as the respondents of this research that enables this research, may God bless you all.



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## LIST OF ABBREVIATIONS

UUM	Universiti Utara Malaysia
SPSS	Statistical Procedure for Social Science
NCSI	National Customer Satisfaction Index.
MASUM	Malaysian University Sports Council
SUKIPT	Sukan Institut Pengajian Tinggi
COB	College of Business
CAS	College of Art and Science
COLGIS	College of Law, Government and International Studies



# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

In this chapter, the researcher will begin with the discussion on the background of the study and problem statement which highlights the issue that is related to the topic. Then, proceeds with the research question and the research objective to determine the researcher's expectation on to achieve in the study. Next, the significance of the study, which divided into two, which are the theoretical contribution and practical contribution that will be discussed. It follows with the scope and limitations, definition of terms, and the organization of the study.

### 1.1 Background of the Study

Customer satisfaction is the key to measure how the products or services by the company either surpassed or met the customer's expectation. According to Pizam and Ellis (1999) mentioned that customer satisfaction involves psychological notion which includes the feeling of ease and contentment that derive from obtaining what one hopes and expects (as cited in Ganiyu., 2017). Besides that, it relates to the performance of the company and can be used as a differentiator in the competitive marketplace. Furthermore, customer satisfaction can be defined as the customer's expectations, meet the parameters associated with satisfaction (Adamu. M, 2017). Therefore, customer satisfaction is crucial to secure

the company's position in the marketplace and to ensure the company thrives in producing products and services that meets the customer's satisfaction.

In terms of education, the students are considered as the customers as they pay fees to use the services which provided by the universities. Because of that, the management should know the expectations of the students in order to provide services that meets the student's expectations. Based on Tegambwage (2017) who stated that by providing a quality service that meets their students' expectation can achieve a sustainable competitive advantage which differentiates their service with others in both local and international platform. Moreover, the students' satisfaction can give a positive impact to the public that gives recognition to the universities.

The purpose of this research is to determine the relationship between service quality and student's satisfaction at the Sports Center in University Utara Malaysia. University Utara Malaysia is located in Northern of Peninsular Malaysia which is in Sintok, Kedah. There are many types of services that have been offered by the university and one of it is the sports center. As the vision of the university is "to be an eminent management university" which concerns about the quality and how they manage the service in order to gain satisfaction from the students.

As for the sports center, the mission is highlighted to provide the best and conducive service and facilities to the customers. It shows that the sports center focus on the quality of the facilities which related to the objective of the study. These are the list of the facilities have been provided by the university, including the unit:

Table 1:  
*List of sports in the UUM Sport Center.*

Facilities	Unit
Football stadium	1
Football field	4
Hockey field	2
Rugby field and Softball field	2
Bicycle	30
Room Sauna (Men/Woman)	1
Netball arena, Volleyball arena and Squashy arena	6
Achery field and petanque arena	2
Gymnasium (Men/Women)	2
Swimming Pool	1
Tennis arena	10
Basketball arena	2
Sepak Takraw arena	4
Go kart	1

Source: UUM Sport Center website.

## 1.2 Problem Statement

Satisfaction is one of the measurement to determine whether the business is providing a good service to the customers. There are several issues in providing satisfaction towards the customers, which many studies were done on service quality and customer satisfaction in different business and industry. For example, the satisfaction in private hospital industry in Nepal (Devkota & Neupane, 2017), private hospital in Kuching

(Heng, 2011), hospitality industry (Mmutle & Shone, 2017), in fast food restaurants (Hong Qin & Prybutok, 2015) and student's satisfaction in education (Haque, et. al, 2017). The previous studies have different factors that affect customer satisfaction.

However, in this study, the researcher is focused on the services in University Utara Malaysia. Based on the previous study that has been researched regarding the service quality in University Utara Malaysia, the services at the Sports Center is very limited. Eventually, the other services in UUM have been studied such as the services in residential hall (Hamzah, 2009), service quality and satisfaction among postgraduate students (Hanaysha, 2011), international student's satisfaction (Hui, 2014), satisfaction with services at Cultural and Arts Center (Badol, 2016).

In addition, one of the problems involves the services in the sports center is the conditions of the facilities that affect the students to use it. For example, the physical facilities in the women gymnasium is limited and some of the machines has malfunctions. Besides that, the students are divided into local and international which arise an issue that results to the question whether the services from the sports center is suitable for both parties. Furthermore, the student is being charged for RM 20.00 to use the services at the Sports Center. The payment causes the students to have their own expectations towards the services. Because of that, the UUM Sports Center needs to provide services equal to the price charges for the students' satisfaction.

Furthermore, the increase in technology and environment changes affect the sports center of University Utara Malaysia which need to offer a higher quality of services in order to meet the students' satisfaction and expectation. It is because good service can improve the

satisfaction of the students that use sport center services. Besides that, the students' perspective towards the service quality in the Sports Center is important because they are the users who determines whether they are satisfied with the services or otherwise. Moreover, business in services is more focused on the service quality which makes it one of the important research topics. Even though services are difficult to be measured because it depends on an individual's personal thought, it can be classified into five dimensions which are tangible, responsiveness, reliability, empathy and assurance.

Parasuraman, Berry, and Zeithaml (1988) found that these five dimensions are the most essential factors to measure the service quality. These five dimensions have been studied from the past research, such as Ezeokoli and Ayodele (2014) which discussed the dimension of service quality and academic satisfaction in higher education and Saghier (2015) proved that dimensions of service quality played an important role towards customer satisfaction in the hotel industry. Refer to the past researcher, this study decided to find the relationship between service quality and customer satisfaction at the Sports Center of University Utara Malaysia. According to Parasuraman, Berry, and Zeithaml (1988), there are 22 questions that related to measuring the service quality.

In addition, the measurement from Parasuraman, Berry, and Zeithaml (1988) is suitable to use in this study. This study intended to determine the relationship between service quality and the student's satisfaction among UUM Sports Center's user. It will show the student's satisfaction influence the service quality to improve the performance of the UUM Sports Center. Thus, the student's satisfaction is important to make sure the service quality in the sports center is satisfying their needs.

### **1.3 Research Question**

This research seeks to answer the following question on service quality and student satisfaction.

1. Does tangibility have a significant relationship with the student's satisfaction?
2. Does reliability have a significant relationship with the student's satisfaction?
3. Do responsiveness have a significant relationship with the student's satisfaction?
4. Does assurance have a significant relationship with the student's satisfaction?
5. Does empathy have a significant relationship with the student's relationship?
6. Does service quality have a significant relationship to the student's satisfaction?

### **1.4 Research Objective**

The objectives of this study as follows:

1. To investigate the relationship between tangibility and the student's satisfaction.
2. To identify the relationship between reliability and the student's satisfaction.
3. To determine the relationship between responsiveness and the student's satisfaction.
4. To examine the relationship between assurance and the student's satisfaction.
5. To identify the relationship between empathy and the student's satisfaction.
6. To determine the relationship between overall service quality and the student's satisfaction.

## **1.5 Significant of the Study**

This research paper will investigate the relationship between service quality and customer's satisfaction among UUM Sport's Center users. Because of that, this study is expected to contribute to the improvement of the university itself. Specifically, the result of the research can provide the following theoretical and practical contribution.

### **1.5.1 Theoretical Contribution**

This study has contributed to the literature on the service quality and the satisfaction among the UUM Sports Center's users. In addition, it also provides insight and understanding of the dimensions of service quality in relation to the students' satisfaction regarding using the Sports Center. Basically, the result of the study enhanced the knowledge of empirical evidence about the relationship between service quality and students' satisfaction towards UUM Sports Center. Moreover, this study highlight the current satisfaction when the students using the services at the Sports Center.

Besides that, this study is conducted in University Utara Malaysia regarding the services at the Sports Center. It enables UUM to gain new information that are related to the students' satisfaction and the quality of services in order to make improvements.



### **1.5.2 Practical Contribution**

The result of this study may become a guide for UUM to improve their quality of services. For example, current situations which involves the sports equipment influence more in improving the satisfaction. The UUM Sports Center may discuss an effective strategy to improve the condition of the equipment. Moreover, UUM can give training to their staff in order to develop good communication skills which are useful to handle the students' inquiries. The increase in the services can improve the standard of the universities for their customers. Thus, from this study, the UUM Sports Center can identify which dimensions of service quality have more affect on satisfaction.

### **1.6 Scope And Limitations**

There are many facilities provided by University Utara Malaysia such as the library, Culture Center, Transportation, the Sports Center, and others. In this case with a large number of facilities, this study has selected the UUM Sports Center. Furthermore, the respondent of this study is UUM Sports Center's users. It can be either the UUM students or others who use the service facility. However, the respondent of the questionnaire will focus only on the students.

For the limitation in this study, the usages of the secondary data such as previous researchers' journals and articles which obtained from the online database can lead to difficulties to get a relevant journal which is a study of the relationship between service quality and customer's satisfaction among the UUM Sports Center users. Although there

are a lot of articles and journal published in the database, not all journals applies to the current situation. Furthermore, Malaysia and foreign countries have different social conducts and issues, and because of that the journals from foreign countries may not fully apply and suitable in Malaysia current situations.

Secondly, there is no explanation on how readiness and willingness of the respondents to participate and answer the survey. They may have a tendency to answer in a certain way due to their choices and the amount of time they are willing to spend on the survey questionnaire.

### **1.7 Definitions of the Key Terms**

There are several important key terms that need to be clarified to avoid misunderstanding are stated as follows:

#### **Customer**

Customer can be defined as a client, a buyer or a purchaser is the buyer or user of the paid products of an individual or organization, mostly called the supplier or seller.

#### **Satisfaction**

Satisfaction refers to the situation where people feel their perception exceeds the expectations.

#### **Tangibility**

Physical facilities, equipment and appearance of personnel (Liew, & Sedigheh, 2015)

### **Reliability**

Reliability can be defined as the ability to perform the services at the right time such as the services have been delivered at the promised time and didn't make an error of each activity. (Parasuraman et al., 1988).

### **Responsiveness**

It refers the willingness and readiness of the employee to offer the services to the customers, which enclosed the accuracy of the services (Kumar & Charles, 2010).

### **Assurance**

Assurance means the employee's knowledge and courtesy which able to gain the trust and confidence from the customers (Parasuraman, et. al., 1991).

### **Empathy**

Empathy is the customers given a caring and individualized attention from the firm.

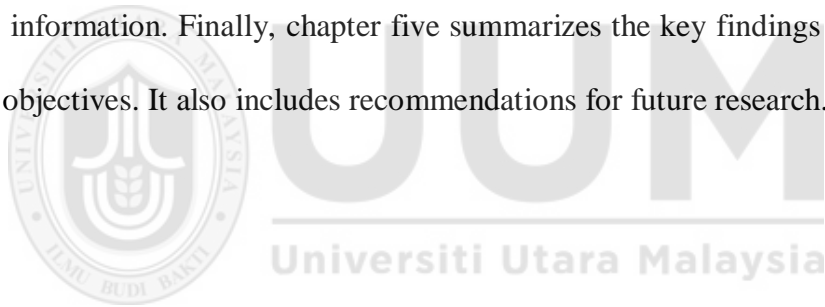
## **1.8 Organization of the Thesis**

This research is presented in five chapters. Here is an overview of the content and information about each presented chapter: Chapter one consists of the discussion regarding the background of the study, the problem statement regarding the topic, research question, and research objective. It also includes the scope and limitation of the study, definition of the key terms.

Chapter two covers the literature review which is the previous study and journal regarding the topic that has been done before. Besides that, the information and explanation in this chapter will be more of understanding the topic.

In addition, chapter three explains the selected methodologies that are suitable and have been used in the project which is research design, population and sampling technique, unit of analysis, questionnaire preparation and scale typed used, measurement of the construct, data collection method, reliability and validity, pilot test and statistical methods.

Chapter four analyzes the data and findings of the research using SPSS to interpret the data into information. Finally, chapter five summarizes the key findings according to the research objectives. It also includes recommendations for future research.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

In this chapter, the researcher will decipher the background of the UUM Sport Center, the dependent and independent variable. Students' satisfaction as the dependent variable and the five dimensions of service quality (tangibles, reliability, responsiveness, assurance and empathy) as the independent variable. After that, it follows with research framework and the hypothesis of the study.

#### 2.1 Background of the UUM Sport Center.

UUM Sports Center has been operating in 1984 situated on temporary campus, which is in Tanah Merah, Jitra, Kedah. At that time, it was known as University Utara Malaysia Sport and Recreation Unit. However, in 1991, The UUM Sports Center has switched to the main campus, which is in Sintok, Kedah. The operation of the Sports Center has been upgraded in order to fulfill the surroundings of the new campus. Because of the developments and the increase in the functioning of the goods and services, in 2002, the Sports and Recreation Unit has been recognized as the Universiti Utara Malaysia Sports Center.

Furthermore, Universiti Utara Malaysia Sports Center is controlled under the Deputy Vice-Chancellor of HEPA which is Assoc. Prof. Dr. Abdul Malek Hj Abdul Karim. He has given the command and obligation to oversee, sort out, plan, and direct sports and

recreational projects for students and staff of the university. A fully developed sports center was constructed which covers a region of 74 acres of land and gives just about 28 sorts of games and recreation exercises particularly to students, staff, and outsiders.

As a wellness arranged unit and mind-testing, a few projects are organized to empower students as the essential users to seize the chance to utilize the sports center for recreational exercises. Besides that, UUM Sports Center also focuses and prioritizes high performing sports events as the participation in activities organized by the Malaysian University Sports Council (MASUM), SUKIPT, IMTGT, and other activities at the highest level.

The idea of "Elite Sports" and "Sports for All" is the principal focal point of the UUM Sports Center in sorting out and differentiating activities towards the quest for mental and physical advancement as an essential medium and in accordance with greatness in information. In light of this idea, the UUM Sports Center attempts to make a change in outlook on 'sports culture' as training in an all-encompassing life framework by keeping up a decent value for wellbeing, security, and physical continuance.

### **2.1.1 Customer Charter in UUM Sport Center**

There are several services that have been provided by the UUM Sports Center in order to satisfy their customers. The charter is written as below:

- Each of the application to use the court and the sports equipment from the students will be processed within 14 working days from the application received.
- The result of renting or booking the sports facilities from the outside agencies be made within 14 working days upon receiving the application and comply with all applicable terms and conditions.
- Always ready to provide a useful facility and equipment for the students. Always support and helped all the activities held by KPT that specifically outside agencies and the non-governmental organizations in general.
- Always helped to give a piece of advice regarding the sports activities to the customers.
- Always support all the activities which involve sports that held by the university in order to cultivate the healthy culture among the universities.

This charter highlights that the sports center must provide a good service and facilities to their customers. It leads to this study, which is to study the relationship between service quality and customer satisfaction.

## **2.2 Customer Satisfaction**

Customer satisfaction has been considered in various sectors from the estimation until the connection between different business perspectives. In this study, customer satisfaction studies among the students in University Utara Malaysia that use the sport center's services.

### **2.2.1 Definition of Customer Satisfaction**

In the beginning, customer satisfaction can be defined as the expectations of the customers towards the services in certain criteria which lead to satisfaction (Adamu, 2017). It means that customer satisfaction depends on the difference between their actual experience and their expectations towards the goods or services. Besides that, according to the English business dictionary stated that customer satisfaction is the level of fulfillment contributed by the products or services of an organization which estimated by the number of repeat customers.

In addition, according to Biesok and Grzegorz (2017), there are three kinds of satisfaction which are partial or global satisfaction, current or accumulated satisfaction, and independent or comparative satisfaction. As for partial or global satisfaction, it can be described as a specific element of the product or service while the global satisfaction is the total of partial satisfaction that relates all the services. The current satisfaction which the customer used the services or product in a certain time that produces a current level of satisfaction.

Meanwhile, the accumulated satisfaction can be described as the result of cumulative anywhere experiences of the customers in certain time for any product and services. As for independent satisfaction, it explained the specific firm offer the service of products in order for the customer to evaluate. Meanwhile, the comparative satisfaction is based on the satisfaction that compares from various companies.



Customer satisfaction that viewed from marketing perspectives can be illustrated as the determination of the intentions and behavior to repurchase that lead to the organization's future revenue and profits (Hong Qin & Prybutok, 2015). It means that, in marketing, the value of the customer satisfaction can help the organization increase their profits by the repurchase products or services. Besides that, in the academic institutional context, customer satisfaction can be defined as the student satisfaction and be measured by their expectations when they satisfied with some of the key factors such as quality management, tuition fee payment system, infrastructure and others (Haque., et al, 2017).

Based on the above definition, it can be concluded that customer satisfaction can be achieved if the customer feels that the services given by the service provider, meets their expectations and needs.

### **2.2.2 The Importance of Customer Satisfaction**

Customer satisfaction plays an important role in service business. There are several benefits that the organizations get from the customer satisfaction. Firstly, customer satisfaction leads to customer loyalty towards the goods or services provided by the company. According to Abdul Ghafoor and Asad-ur (2014) studies the connection between customer satisfaction which comes about that there is a positive relationship between customer relationship and brand faithfulness. They found that, when the customer tends to be satisfied with the services, the higher the actual loyalty. It means customer satisfaction is important to obtain customer

loyalty. Similar to Irfan, Shamsudin, and Hadi (2016), they found that customer satisfaction is important to retain customer loyalty. It is because maintaining and keeping current customers is easier than acquiring new customers.

Secondly, Jagdish (2014) has identified that customer satisfaction is important because it can provide a major competitive advantage. The researcher discusses six competitive advantages that contribute to the company which are 1) economy of offer through lower cost of doing rehash business, 2) Higher costs instructed through separation, 3) Protection from fulfilled customers in an emergency circumstance, 4) Product enhancement development through one-stop shopping, 5) New market development by listening in on others' conversations, 6) New item improvement through lead users. Overall, customer satisfaction is important in order to gain profit in business.

### **2.2.3 The Measurement of Customer Satisfaction**

The previous studies indicated that different industries use different methods and measurement to determine customer satisfaction due to the difference of business nature. Although the literature reveals that different industry has a tendency to emphasize different customer satisfaction measurement, findings from the past studies stated that service quality is the most common measurement of customer satisfaction.

The earlier studies by Parasuraman, Berry, and Zeithaml (1988), which started the measurement of customer satisfaction regarding service quality found that there are

five dimensions of service quality which are tangibility, responsiveness, reliability, empathy, and assurance which are considered as the common measure of the customer satisfaction. According to Jamali (2007) stated that the service quality model is to identify the gaps between expectations and perceptions (as cited in Vu Minh Ngo, 2015). From the five dimensions, there are 22 questions regarding the service quality in order to find the expectations that lead to satisfaction.

Moreover, the other measurement that related to customer satisfaction which is the National Customer Satisfaction Index (NCSI). Customer Satisfaction Index is a method to measure customer satisfaction through a certain characteristic (Constatina, et. al, 2013). There are several versions of NCSI but it's always based on two fundamental properties (Vu Minh Ngo, 2015). First, they must know that CSI is a customer assessment, which can't be estimated specifically.

Furthermore, NCSI must be estimated not only include the utilization experience, as well as forward-looking and measure consumer loyalty as generally. For example, using the NCSI to find customer satisfaction in polyclinic performance (Constatina, et. al, 2013). In addition, using the NCSI can differentiate since they have some conspicuous qualifications in the model's structure and variable's determination so the outcome can't be contrasted with each other (Lee, et.al, 2016). Because of that, the customer satisfaction index must be developed according to the culture of certain countries. It will measure the level of satisfaction based on the country.

In this study, the customer satisfaction is going to be measured by the service quality dimension which is reliability, responsiveness, tangibility, empathy and assurance (Parasuraman, et. al., 1988) will be used in order to identify the customer satisfaction.

### **2.3 Service Quality**

Quality is an important factor to attract customers and delivering the service in order to obtain customer satisfaction. The quality can be divided into two categories which is product quality and service quality. According to Yarimonglu (2014), he stated that quality can be described as natural excellence. It means that the standard of quality is being universally recognized only through experience. Meanwhile, service can be characterized as every financial action which the yield isn't simply viewed as a physical item that for the most part devoured at the time it is delivered, and gives included an incentive in structures (with so many highlights as building squares, which are viewed as markers for service quality) that are basically immaterial worries of its buyer (Prakash, & Mohanty., 2012).

The definition of service quality can be different based on person thinking and the situation. Based on Parasuraman, Berry, and Zeithaml (1988) defined service quality is being seen as the dissimilarity between the expectation from the customer before they receive the services and the perceptions that the customer has received from the service. In addition, service quality can be described as an assessment of how the company

provides and deliver the services that follow the customer's expectations, wants and needs.

Moreover, service quality relates to the satisfaction of the customers which is act as a critical prerequisite for maintaining, establishing, enhancing and sustaining the relationship (Neupane & Devkota, 2017). It shows that the service quality can be a guideline for the company to improve the satisfaction of the customers towards their services. Several recent studies were conducted using service quality in different services to examine the relationship that relates to customer satisfaction.

There are several examples such as a case study of hotel industry in Vietnam, which consist 432 guests of 33 three-star hotels in Vietnam (Nguyen Hue Minh, et al, 2015), students in private colleges of Faisalabad, Punjab, Pakistan (Bharwana., et al, 2013), and 490 patients from different 10 private hospitals in Nepal (Neupane., & Devkota., 2017). These studies reported that the capabilities of service quality (reliability, responsiveness, tangible, empathy, assurance) to affect customer satisfaction.

Furthermore, service quality can be measured by SERQUAL model which provide information on the dimension of service quality which, according to Parasuraman, Berry, and Zeithaml (1988), it consist 22 questions regarding the dimension of the service quality which is reliability, responsiveness, tangible, empathy, assurance. SERQUAL happened because of the gap model of service quality which can be identified based on the figure 1 below:

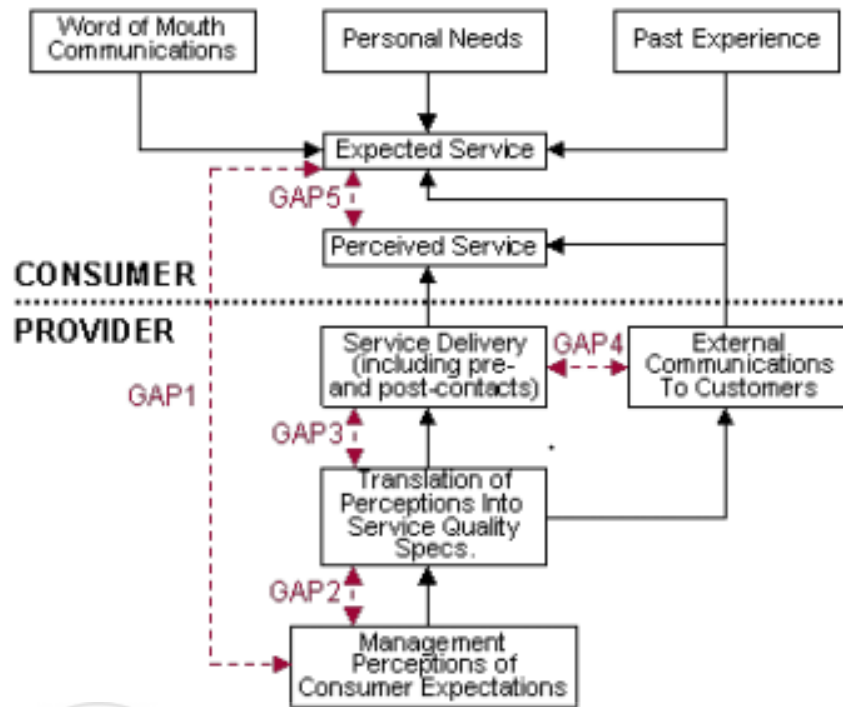


Figure 1:

*The gap model*

Source: Adetunji, Yadavalli and Malada, (2013)

Figure 1 shows that the five gaps are described as the responsible for non-deliver of quality service. In Gap 1, it describes the difference between the management perception towards the customer's needs and wants. One of the diagnostics in this gap is a basis of SERQUAL Gap 2 results from inaccurately interpreting what the administration believes the customer needs into the applicable particular service. Gap 3 results from not having the capacity to sort out an empowering procedure to convey on the administration's determination. Gap 4 identifies with imparting the right incentive to the customer, which additionally influences the desires of the customer.

## **2.4 Dimensions Of Service Quality**

The previous researchers have provided several concepts in service quality which consists of functional and technical quality, and utilizes terms that depict benefit experience attributes which is reliability, responsiveness, tangible, empathy, assurance (Prakash & Mohanty, 2012). In this study, the researcher follows the concept from Parasuraman, Berry, and Zeithaml (1988) which is consist five dimensions of service quality.

### **2.4.1 Tangibility**

It can be defined as the physical evidence and representations of the services or other customers in service facility. It means that, a physical thing that can be seen by the customers and give impacts to them.

### **2.4.2 Responsiveness**

It refers to the willingness and readiness of the employee to offer the services to the customers, which enclosed the accuracy of the services (Kumar & Charles, 2010). Furthermore, it includes the individual attention of the employee, the understanding of the consideration regarding the customer's security and issues in their exchange, and advantageous operating hours. These are the basis in fulfilling the customer's desire that responsiveness will fulfill the customers and improve their probability for the association (Neupane & Devkota, 2017).

### **2.4.3 Reliability**

It relates to have the ability to perform the services at the correct time, for example, the services have been delivered at the guaranteed time and didn't make an error of each activity. Besides that, it includes handling the service problems of customers. Moreover, reliability focus on the accurate order fulfillment, such as making an accurate record, billing, quote and provide a service that have been promised.

### **2.4.4 Assurance**

The employee's knowledge and courtesy which able to gain the trust and confidence from the customers (Parasuraman, et. al., 1991). For example, the hospital assurance which provides a polite staff and highly experienced doctors in order to gain trust and comfort to the customers. Besides that, a bank provides a knowledgeable staff to advise the customers on the financial products and services they provide to ensure the customers' trust and loyalty to the bank.

### **2.4.5 Empathy**

It describes a caring behavior and individual attention towards the customers. For instance, the bank will waive the penalty on late credit card payment if the customers had some difficulties to make the payment or when the customer accidentally mistaken the due date of the credit card payment.



## 2.5 Service Quality and Customer Satisfaction

Service quality relates to the customer satisfaction which based on the previous research conducted by Tegambwage (2017) had found that there is a relationship between service quality and customers' satisfaction. The studies were conducted at a number of higher education institutions, which the population is the students as the customers. From the results, all the dimensions which are reliability, responsiveness, tangibility, empathy, assurance have a relationship with customer satisfaction. However, from all the dimensions, reliability is the most important dimension which is the capacity to give the guaranteed services on time, constantly and precisely.

Furthermore, service quality and customer satisfaction have a relationship in a study of a private hospital in Nepal which studied by Neupane and Devkota (2017). It found that all the dimension of the service quality gives an impact on the level of satisfaction which means the patients is satisfied with the services provided by private hospitals in Nepal. Similarly, Pouragha and Zarei (2016) provide the same result which the dimensions of service quality have a relationship with the patient fulfillment.

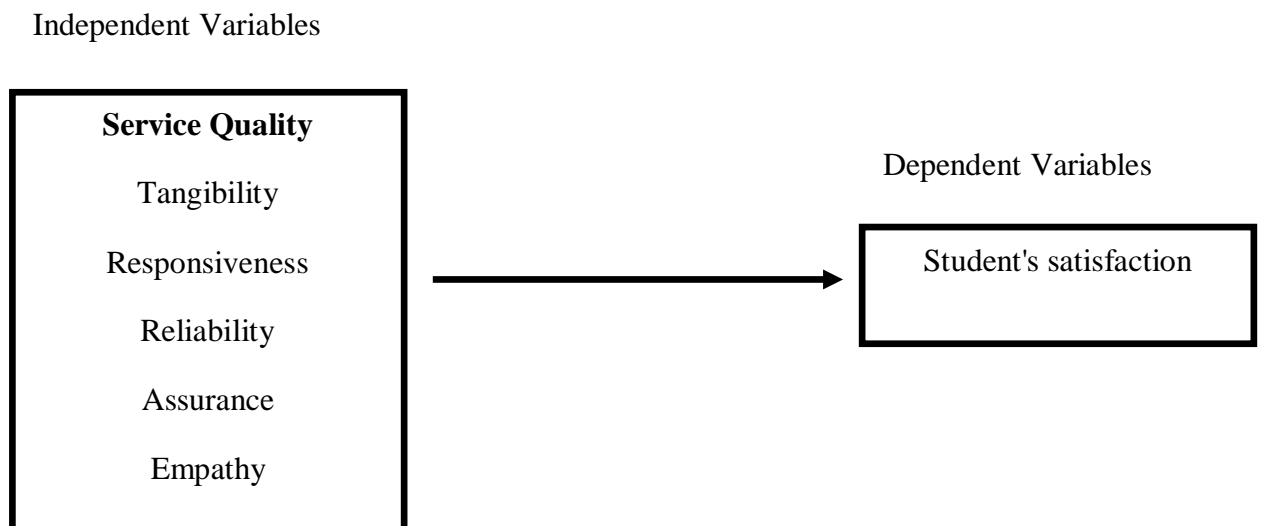
Moreover, Saghier (2015) proved that dimensions of service quality played an important role in customer satisfaction in the hotel industry. Even though there are only three dimensions which are responsiveness, reliability and empathy contribute to the level of satisfaction, overall it still affected the satisfaction. Besides that, a study in educational services found that only tangibility and reliability have a relationship towards customer satisfaction. According to Leonnard (2018), he stated that the two dimensions consist of

the comfortable lecture rooms, library facilities, staff appearance, treatment by staff and lecturers, the knowledge of the staff and lecturers, and appropriate academic services.

In addition, the research being done by Ezeokoli and Ayodele (2014) regarding the connection between the dimension of service quality and academic satisfaction in higher education found that there is a significant relationship with all the dimension which different with the previous studies. Based on the findings from the previous studies which has been discussed, it provides that the dimensions of the service quality relates to the customer satisfaction in different industries. Thus, in this study, the researcher will determine whether there is a relationship between service quality and customer satisfaction in the UUM Sports Center.

## 2.6 Theoretical Framework

In view of the past studies of the connection between service quality and understudy fulfillment, these are the theoretical framework developed for this study.



## 2.7 Hypothesis

This study conducted to determine the relationship between students' satisfaction and service quality. Service quality is explained by several variables which is reliability, responsiveness, tangibility, empathy and assurance. The relationship among these variables are explained by the hypothesis as below:

### 1. Tangibility and students' satisfaction

H<sub>1</sub>: There is a significant relationship between tangibility and student's satisfaction

### 2. Responsiveness and students' satisfaction

H<sub>1</sub>: There is a significant relationship between responsiveness and student's satisfaction

### 3. Reliability and students' satisfaction

H<sub>1</sub>: There is a significant relationship between reliability and student's satisfaction

### 4. Assurance and students' satisfaction

H<sub>1</sub>: There is a significant relationship between assurance and student's satisfaction

### 5. Empathy and students' satisfaction

H<sub>1</sub>: There is a significant relationship between empathy and student's satisfaction

### 6. Service quality and students' satisfaction

H<sub>1</sub>: There is a significant relationship between service quality and student's satisfaction.

## 2.8 Conclusion

In this chapter discuss on the literature related to this study. It discusses the definition, the most important, the measurement of the dependent variable and the dimensions of the service quality as the independent variables. The literature explained in this chapter will provide a review in designing the research methodology of this study, which will be illustrated in the chapter 3.



## CHAPTER 3

### METHODOLOGY

#### 3.0 Introduction

This chapter informs and explains the methodology that will be used in this study, which describe the research design, population and sampling technique, unit of analysis, the questionnaire type of scale, measurement of construct, data collection and methods, pilot test and reliability test. Quantitative approach acts as the primary data through questionnaires and to analyze the data, this study used Software Package for Social Sciences (SPSS).

#### 3.1 Research Design

Research design can be characterized as a guide for the researcher to gather the information and dissect it. The motivation behind this examination is to foresee the elements of service quality towards customer satisfaction. Therefore, a hypothesis testing is adopted in this study to examine the significance level, direction, and magnitude of the standardized evaluations of paths that relates the independent variables with the dependent variable.

Furthermore, quantitative research design will be applied in this study where the primary data are collected through a survey questionnaire. The research design in accordance with the principle cross-sectional field where time and budget are the main constraints. In

addition, handling the questionnaire is practically simple and easy while at the same time produce the speed in term of its coverage.

Besides that, quantitative research uses more structured data collection technique in order to achieve reliability and validity of measures based on the hypothesis which were tested by applying statistical criteria to measure the data collected. Moreover, this research also uses secondary data which obtained from previous journals and articles as references to support this research.

### **3.2 Population and Sampling Technique**

This study has been conducted among the users of University Utara Malaysia Sports Center in Sintok, Kedah. Therefore, the objective population in this study contained the majority of the users including the postgraduate and undergraduate student in University Utara Malaysia. The population in this research, which is according to the UUM Sports Center are 1338 students. Thus, according to the table from Krejcie and Morgan (1970), the sample should be 297 students.

As for the sampling technique, the researcher has chosen the probability sampling, which is simple random sampling conducted for this study. Simple random sampling refers to the collection of information from a group of the population, which randomly selected the respondents (Sekaran & Bougie, 2009). There are some advantages to using this sampling technique. The advantages are quick, convenient and less expensive. Despite the fact that it may not be viewed as a perfect technique for picking the example, still, the outcome got through this strategy has high outside legitimacy or generalizability when contrasted

with some other technique for test determination (Showkat & Parveen, 2017). The respondent is only limited to those who are using the UUM Sports Center.

### **3.3 Units of Analysis**

Units of analysis can be described as the subject of the study whether the person or the object which the researcher have generalize (Karen, 2011). Furthermore, units of analysis will be different based on the study. In this study, the unit of analysis is an individual who is the students that use the services at the Sport Center.

### **3.4 Questionnaire Preparation and Scale Type Used**

This study has adopted the instruments for the questionnaire from the previous study, which was by Parasuraman, Berry, and Zeithmahl (1988). The data from the questionnaire will be evaluated in order to analyze it. The questionnaire is separated into three sections which Section 1, Section 2 and Section 3. The first section which is Section 1 is about the demographic information or known as respondent's personal information. It consist eight (8) questions related to gender, age, race, frequency, college, type of sports, semester and nationality. In Section 2, it will cover questions on all the variables which are tangibility, reliable, responsiveness, assurance, empathy and students' satisfaction.

The summary of the items for each variable shown in the table 3.1 below:

Table 3.1:  
*Summary of the questionnaire.*

<b>Variables</b>	<b>No of Items</b>	<b>Items</b>
<b>Section 1:</b> Demographic data	8	Section 1: Items 1-8
<b>Section 2:</b> Tangible	4	Items 1-4
Responsiveness	5	Items 5-9
Reliability	4	Items 10-13
Assurance	4	Items 14-17
Empathy	4	Items 18-21
<b>Section 3:</b> Student's satisfaction	5	Items 22-26

The questionnaire used is The Likert Seven-point Scale to evaluate the independent variables which are the dimensions of service quality. The scale varied from 1=(strongly disagree) much worse than expected to 7=(strongly agree) much better than expected and the middle points of scale labelled as neutral (Leblanc & Nguyen, 1997). The respondents are required to assess their observation on each given items based on the table 3.2 scale below:-

Table 3.2:  
*Likert Scale for SERVQUAL items*

<b>SCALE</b>	<b>SCORE</b>
Strongly disagree	1
Disagree	2
Relatively Disagree	3
Neutral	4
Relatively agree	5
Agree	6
Strongly Agree	7



In Section 3, the question is about the dependent variable which is students' satisfaction. In this section, the Likert Scale used is similar with section 2 but the scale is different due to the questions are regarding overall satisfaction. The Likert Scale for section 3 is stated as table 3.3 below:-

Table 3.3:  
*Likert Scale for SERVQUAL items*

SCALE	SCORE
Never	1
Not	2
Not partially	3
Undecided	4
Yes partially	5
Yes	6
Always	7

### 3.5 Measurements of Construct

To analyze the data, the questionnaire must be constructed which reliable and capable to fulfill the objectives of the study. The following questionnaire has been adopted from the previous study. According to Parasuraman, Berry, and Zeithaml (1988), the instrument can be used in any service organization after modification. Overall, the instruments have been improvise from the previous studies to fit with the situation of the study.

Table 3.4:  
*Summary of Measurement of Construct*

<b>Constructs</b>	<b>No of Items</b>	<b>Sources and Year</b>
Tangibility	4	Parasuraman et al (1988), Nurul Hamiza Bt Hamzah (2009)
Responsiveness	5	Parasuraman et al (1988) M. Ala M. Ggasan Chaib (2012)
Reliability	4	Parasuraman et al (1988),
Empathy	4	Parasuraman et al (1988) Nurul Hamiza Bt Hamzah (2009)
Assurance	4	Parasuraman et al (1988)
Student's satisfaction	5	Tung Lai Lai (2004), Jalal R. M. Hanaysha ,2011)

Table 3.5:  
*Instrument of tangible*

**The question of the independent variable (tangible)**

1. Equipments used by UUM's sport center are up to date
2. The physical facilities at the sport center are usually appealing
3. The appearance of the physical facilities of sport center is in keeping with the type of service provided
4. Employees at the sport center are always look tidy and well dressed

Table 3.6:  
*Instrument of responsiveness*

**The question of the independent variable (responsiveness)**

1. Employees of the UUM sport center provide their services at the time they promise to do
2. The UUM sport center provides accurate information and services as they promised
3. Employees of the UUM sport center is dependable.
4. The employee do what they promise to do
5. The employee of the sport center keep the accurate record in order to serve the best services

Table 3.7  
*Instrument of Reliability*

---

**The question of the independent variable (reliability)**

---

1. Employees of the sport center are never too busy to respond to my request
2. Sport center's employee is willing to help me
3. Employees of the sport center will inform me exactly when services will be performed
4. Employees of sport center give prompt service to me

---

Table 3.8:  
*Instrument of Assurance*

---

**The question of the independent variable (Assurance)**

---

1. The employees of the sport center can be trusted
2. The employees have the knowledge to answer my questions
3. Employees of the sport center are polite
4. I feel safe in making any transactions with sport center's employee

---

Table 3.9:  
*Instrument of empathy*

---

**The question of the independent variable (empathy)**

---

1. The sport center has operating hours convenient for me
2. The employer of the sport center understands my specific needs
3. Sport center's employee gives personal attention to me
4. Employee in the sport center value, respect and individual attention

---

Table 3.10:  
*Instrument of Student's satisfaction*

---

**The question of the dependent variable (student's satisfaction)**

---

1. I am satisfied with the overall services provided by UUM
2. I am satisfied with the way I was treated in by UUM employees
3. I am satisfied with the information or services I got from the employee of UUM
4. I think the services meets the information sharing needs between the sport center.
5. I am satisfied with the overall services often.

---

### **3.6 Data Collection Method**

In this study, only primary data being used which was focused on the distribution of the questionnaires only. Therefore, the analyst personally disseminated the surveys to the student that already come to the UUM Sport Center within two months which is in September and October. Since the respondent of this study is among UUM Sport Center's user, the researcher using the list provided by the sport center which selected randomly from 1338 students. After that, the researcher personally distributes the questionnaire to the selected respondent's rooms. The respondents have given one week to answer the question before being collected.

### **3.7 Reliability and Validity of Measurement**

#### **3.7.1 Validity**

According to Heale and Twycross (2015), there are three types of validity which is content validity, construct validity and criterion validity. In this study, the validity that has been chosen is content validity, which the subset is face validity. Face validity means that the measurement of the questionnaire has been asked to the expert for their opinion whether the instrument valid or not for the research. Therefore, the researcher showed the questionnaire to the lecturer and the officer in the Sport Center in order to know the question is suitable and valid for the respondent to answer.

### 3.7.2 Reliability

Reliability test will be led to gauge the dependability of everything being equal. The Cronbach's Alpha will be utilized to guarantee the reliability of the instrument or every survey item. According to Heale and Twycross (2015) expressed that reliability is identified with the consistency of an estimation. Other than that, they additionally distinguish that the Cronbach's Alpha coefficient value must be above 0.7 which shows a highly dependable which is adequate. In addition, the scope of Cronbach's Alpha in value is somewhere in the range of zero and one which makes the value that more like one has a higher inner consistency (Paulsen & BrckaLorenz, 2017). Table 3.11 underneath demonstrates the estimation of Cronbach's Alpha and its internal consistency.

Table 3.11:  
*Internal Consistency Measurement*

Cronbach's Alpha	Internal Consistency
$\alpha=0.9$	Excellent
$0.8=\alpha < 0.9$	Good
$0.7=\alpha < 0.8$	Acceptable
$0.6=\alpha < 0.7$	Questionable
$0.5=\alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

### 3.8 Pilot Test

According to Abu, Fracgp. H, Mmed and Fracgp. D (2006) stated that pilot test is important during the research project stages because it help to identify the problem areas and the weakness in the research instruments. In this study, the researcher select thirty (30) students, which are the minimum of students to participate in this pilot test.

Table 3.12 below shows the reliability test based on the data collected in this study. The Cronbach's Alpha from the overall pilot test and real test are higher than 0.8 which is indicated that the items are reliable. Moreover, the Cronbach's Alpha for the independent variables which is tangibility, assurance, empathy and responsiveness a is lower in the real test compared to the pilot test. However, the Cronbach's Alpha for independent variable which is reliability is higher in the real test compared to the pilot test. There is an improvement that the alpha from 0.7 to 0.8 which is good. As for the dependent variable which is the students' satisfaction, the Cronbach's Alpha is lower in the real test compared to the pilot test. Thus, the reliability test in this study is reliable and accepted because the Cronbach's Alpha from every item is higher than 0.7.

Table 3.12:  
*Reliability Test*

Variables	No of Items	Cronbach Alpha:	
		Pilot Test	Real Test
<b>Section B:</b>			
Tangible	4	0.841	0.839
Responsiveness	5	0.916	0.886
Reliability	4	0.795	0.821
Assurance	4	0.915	0.838
Empathy	4	0.914	0.874
Student's Satisfaction	5	0.920	0.869

### 3.9 Statistical Methods

This research utilizes the Software Package for Social Sciences (SPSS) version 24.0 to analyze the information. The following are the arrangements of research that will direct in this exploration to translate from the surveys:

Table 3.13  
*Type of Analysis to Answer the Research Questions*

<b>Research Question</b>	<b>Research Objective</b>	<b>Hypothesis</b>	<b>Type of Analysis</b>
Does tangibility have a significant relationship with student's satisfaction?	To investigate the relationship between tangibility and student's satisfaction.	There is a significant relationship between tangibility and student's satisfaction	Correlation analysis
Does reliability have a significant relationship with student's satisfaction?	To identify the relationship between reliability and student's satisfaction.	There is a significant relationship between responsiveness and student's satisfaction	Correlation analysis
Do responsiveness have a significant relationship with student's satisfaction?	To determine the relationship between responsiveness and student's satisfaction.	There is a significant relationship between reliability and student's satisfaction	Correlation analysis
Does assurance have a significant relationship with student's satisfaction?	To examine the relationship between assurance and student's satisfaction.	There is a significant relationship between assurance and student's satisfaction	Correlation analysis
Does empathy have a significant relationship with student's relationship?	To identify the relationship between empathy and student's satisfaction.	There is a significant relationship between empathy and student's satisfaction	Correlation analysis
Does service quality have a significant relationship to the student's satisfaction?	To determine the relationship between overall service quality and student's satisfaction.	There is a significant relationship between service quality and student's satisfaction	Correlation analysis

### **3.10 Conclusion**

In conclusion, chapter three describes all the research methodology that has been chosen in this study. Specifically, this chapter discusses the research design, population and sampling technique, unit of analysis, questionnaire preparation and scale type used, measurement of construct, data collection method, reliability and validity, pilot test and statistical methods. In the next chapter, which is chapter four will identify the findings of the study.





## **CHAPTER 4**

### **DATA ANALYSIS AND FINDINGS**

#### **4.0 Introduction**

In this chapter, the researcher will discuss the findings of data analysis collected from the respondents. There are several tests to be done using the SPSS in order to obtain the final result.

#### **4.1 Response Rate**

The respondents for the study are the UUM's students that using the services in the Sports Center. There were 300 copies of questionnaires distributed to the students who came to the Sports Center. As for the probability sampling, which the population is 1338 students, the amount of the participant is 300 respondents which answer the questionnaires that based on the students that are easy to access or available (Showkat & Parveen, 2017). As mentioned in chapter 3, the researcher picks a random student from the list given at the Sports Center and distribute the questionnaire at their room personally. It is given two weeks for the students to answer before being collected.

Table 4.0:  
*Summary of distributed questionnaires*

<b>Response Rate</b>	<b>Total</b>	<b>Percentage</b>
Sample Size	297	99%
Number of questionnaires distributed	300	100%
Number of questionnaire returned	147	49.5%
Usable questionnaires	120	40.4%
Invalid questionnaire	13	4.4%
Questionnaire not returned	14	4.7%

Based on the Table 4.0 response rate above, it showed that from the 300 questionnaires, only 147 questionnaires returned. After that, the researcher identified that only 120 questionnaires are usable for the research purpose. A response rate as low 30% is a reasonable for customer satisfaction surveys, while 50% have been measured as quite high and 80% is very high or certainly outstanding (Sitzia & Wood, 1998). Therefore, the response rate in this study is 40.4%, which considered reasonable to be analyzing the data.

Moreover, there is 4.7% for the questionnaire that not been returned and 4.4% for the invalid questionnaire. The questionnaire became invalid because 13 respondents did not fulfill all the questions.

#### **4.2 Data Screening and Cleaning**

Data cleaning and screening were executed towards the data entry in order to detect the missing data. Moreover, the purpose of data screening was conducted using statistical

software to identify the error in the data set. After processing the data cleaning, the missing data that have been found will be removed so that the data will represent the respondent's answer.

In this study, after the data screening and cleaning, it identified that there are 27 out of 147 have been excluded due to the missing data and the outlier problem. Thus, only 120 response were usable for the data analysis. Overall, all the data that have been analyzed will exclude the missing data.

### 4.3 Demographic Background

The data collection obtained from the students' rooms which the researcher personally distributed to the students. After data screening and cleaning, it has a total number of 120 students. The results are shown below:

#### 4.3.1 Gender of the Respondents

Table 4.1:  
*Gender of the respondents*

	Frequency	Percentage (%)
<b>Gender:</b>		
<b>Male</b>	68	56.7%
<b>Female</b>	52	43.3%

Based on Table 4.1, the sample showed a number of male respondents (68) is higher than the female respondents (52). It represents a percentage of 56.7% of male and 43.3% for female respectively. In this study, the amount of students that goes and use the service of the Sport Center of UUM can be concluded the majority is male students.

### 4.3.2 Age of the Respondents

Table 4.2:  
*Age of the respondents*

	Frequency	Percentage (%)
<b>Age:</b>		
<b>19-22</b>	76	63.3%
<b>23-26</b>	28	23.3%
<b>27-29</b>	13	10.8%
<b>30 and above</b>	3	2.5%

Table 4.2 above showed the frequency and the percentage of the age of the respondent. According to table 4.2, it stated that the age range between 19-22 is the highest among the respondents which is, the frequency is 76 and the percentage is 63.3%. The lowest among the respondent is the age range between 30 and above which is the frequency 3 and the percentage is 2.5%. The age range between 23-26 and 27-29 is in the middle, which is, the frequency is 28 and 13, and the percentage is 23.3% and 10.8% respectively.

### 4.3.3 Race of the Respondent

Table 4.3:  
*Race of the respondent*

	Frequency	Percentage (%)
<b>Race:</b>		
<b>Malay</b>	62	51.7%
<b>Chinese</b>	43	35.8%
<b>Indian</b>	8	6.7%
<b>Others</b>	7	5.8%

Based on Table 4.3 above, it showed that the highest percentage of the race that use the services in the Sport Center is Malay which is 51.7%. From the 120 total of respondents participate in this study, there are 62 students that are Malay. Next, the second highest is Chinese which is the frequency 43 respondents and the percentage is 35.8%. As for the Indian and Others, the total of respondents are 8 and 7 while as for the percentage are 6.7% and 5.8% respectively.

#### 4.3.4 The Type of Sport for the Respondent

Table 4.4:  
*The type of sport for the respondent*

	Frequency	Percentage (%)
<b>Type of Sport:</b>		
<b>Indoor</b>	77	64.2%
<b>Outdoor</b>	43	35.8%

There are several types of sports that has been specified as indoor and outdoor. As for the indoor sports (Badminton, Gym, Table tennis, Futsal, Swimming, Sauna) the frequency that the respondents play is 77 and the percentage is 64.2%. The outdoor sports which are Squash, Track, Pentaque, Basketball, Football, Archery, and Volleyball is 43 respondents and 35.8%. It showed that the respondents use the indoor sport services more that outdoor.

### 4.3.5 College of the Respondent

Table 4.5:  
*College of the respondent*

	Frequency	Percentage (%)
<b>College:</b>		
<b>COB</b>	54	45%
<b>CAS</b>	30	25%
<b>COLGIS</b>	36	30%

Based on the Table 4.6 above analyzed that the number of respondents that use the Sport Center services are more in COB college which the number is 54 respondents and 45%. The respondents from CAS college and COLGIS college are not different much because the number is 30 and 36 respondents with the percentage 25% and 30%.

### 4.3.6 Semester of the Respondent

Table 4.6:  
*Semester of the respondent*

	Frequency	Percentage (%)
<b>Semester:</b>		
<b>One</b>	17	14.2%
<b>Two</b>	9	7.5%
<b>Three</b>	33	27.5%
<b>Four</b>	12	10%
<b>Five</b>	21	17.5%
<b>Six and above</b>	28	23.3%

Based on Table 4.6, the results indicate that the respondents from semester three have the highest frequency which is 33 and 27.5%. The respondents from semester six and above have the second highest which is 28 and 23.3%. As for the

respondents from semester one, four and five have a percentage below than 20 percent, which is 14.2%, 10% and 17.5%. The respondents from semester two has the lowest frequency and percentage which is 9 and 7.5%.

#### 4.3.7 Nationality of the Respondent.

Table 4.7:  
*Nationality of the respondent*

	Frequency	Percentage (%)
<b>Nationality:</b>		
<b>Local</b>	103	85.8
<b>International</b>	17	14.2

In table 4.7 above, it showed that the nationality of the respondent is divided into two which is local and international. The frequency and percentage of local (103 and 85.8%) is higher than international (17 and 14.2%) which means the respondents that participate in this study are more from local students.

#### 4.4 Normality Analysis

There are several statistical techniques to analyze the data and one of them is Normality test. According to the iSixSigma Dictionary, it stated that normality test can be defined as a statistical process that being used to determine if the data collected fits a standard normal distribution. It can be shown as mathematically and graphically. In this study, Normal Quantile-Quantile (Q-Q) Plot and skewness and kurtosis will show whether the variables fit the normal distribution. The type of the normality used in this study shown below:

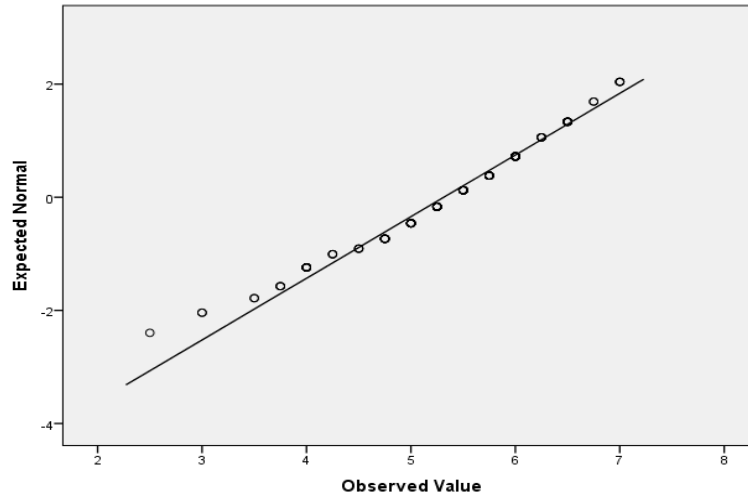


Figure 3: The normal Q-Q plot of independent variables: responsiveness

Table 4.8:  
*Skewness and Kurtosis Frequency Table*

<b>Variables</b>	<b>Skewness</b>	<b>Std. Error of Skewness</b>	<b>Kurtosis</b>	<b>Std. Error of Kurtosis</b>
Tangible	-1.050	0.221	1.587	0.438
Responsiveness	-0.533	0.221	0.151	0.438
Reliability	-0.912	0.221	1.843	0.438
Assurance	-0.803	0.221	0.983	0.438
Empathy	-0.393	0.221	0.205	0.438
Student's satisfaction	-0.874	0.221	1.778	0.438

The Skewness can be identified as the measurement of the asymmetry which the data are skewed to the left or right. Meanwhile, the Kurtosis is to measure the peak of the data distribution (Kim Hae-Young, 2013). From the table above, it showed all the variables of the data is a normal distribution. It is because, the skewness and kurtosis is in the range of the normal distribution that is between 2 and -2.



## 4.5 Mean And Standard Deviation Collected Data

Table 4.9 below show the result of the mean and standard deviation of the dependent variable (student's satisfaction) and independent variables (tangible, responsiveness, reliability, assurance, empathy). The possible mean scores based on seven Likert Scales were categorized into three levels of low (1-3.00), moderate (3.01-5.00), and high (5.01-7). It is based on the class interval formula which is the class interval width=highest scale value-lowest scale value/number of categories (Nunnally & Bernstein, 1994). In this study, which based on seven Likert scale, Class interval width=(7-1)/3.

Table 4.9:  
*Mean and standard deviation of all variables*

Variable	Dimension	Mean	Standard Deviation
<b>Dependent Variable</b>	Student's satisfaction	5.44	0.83
<b>Independent Variables</b>	Tangible	4.85	1.07
	Responsiveness	5.31	0.91
	Reliability	5.37	0.83
	Assurance	5.52	0.80
	Empathy	5.35	0.89

### 4.5.1 Tangible

The Table 4.10 below identifies that the highest mean score (5.43) is from the item "Employees at the sport center are always looking tidy and well dressed". Meanwhile, the lowest mean score (4.48) is from the item "Equipments used by UUM's Sport Center are up to date". Then, the total average for independent variable Tangible is 4.85 which is moderate.

Table 4.10:  
*Mean and standard deviation (Tangible)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
Equipments used by UUM's sport center are up to date	4.48	1.41
The physical facilities at the sport center are usually appealing	4.62	1.33
The appearance of the physical facilities of sport center is in keeping with the type of service provided	4.89	1.26
Employees at the sport center are always looking tidy and well dressed	5.43	1.21
<b>Average (Tangible)</b>	<b>4.85</b>	<b>1.07</b>

#### 4.5.2 Responsiveness

The table 4.11 below showed that the highest mean score is from the item "The employee of the sport center keep the accurate record in order to serve the best services" which is 5.33 mean scores. As for the item that score the lowest mean is from "Employees of the UUM sport center provided their services at the time they promise to do" and " the UUM sport center provides accurate information and services as they promised" which is 5.31 mean scores. The average of the mean score for Responsiveness is 5.31 which is high.

Table 4.11:  
*Mean and standard deviation (Responsiveness)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
Employees of the UUM sport center provided their services at the time they promise to do.	5.31	1.09
The UUM sport center provides accurate information and services as they promised	5.31	1.14
Employees of the UUM sport center is dependable.	5.32	1.04
The employee do what they promise to do	5.32	1.03
The employee of the sport center keep the accurate record in order to serve the best services	5.33	1.02
<b>Average (Responsiveness)</b>	<b>5.31</b>	<b>0.91</b>

### 4.5.3 Reliability

The Table 4.12 below describe the highest mean score (5.53) is from the item "Sport center's employee is willing to help students". As for the items that score lowest mean is from the item "Employee of the sport center are never too busy to respond to the student request" which is 5.23 mean scores. Thus, the average of the score is 5.37 which is high.

Table 4.12:  
*Mean and standard deviation (Reliability)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
Employees of the sport center are never too busy to respond to student request.	5.23	1.02
Sport center's employee is willing to help students.	5.53	1.06
Employees of the Sport center will tell students exactly when services will be performed.	5.45	1.01
Employees of sport center give prompt service to students.	5.31	1.02
<b>Average (Reliability)</b>	<b>5.37</b>	<b>0.83</b>

### 4.5.4 Assurance

The Table 4.13 below determines the highest mean score is from the item "Employees of the sport center are polite" which is 5.56 scores. Meanwhile, the lowest mean score is from the item "The employees have the knowledge to answer students' questions" as the value is 5.45. Overall, the average of the mean scores for Assurance is 5.52 which is considered as high level.

Table 4.13:  
*Mean and standard deviation (Assurance)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
The employees of the sport center can be trusted	5.53	1.00
The employees have the knowledge to answer students' questions	5.45	0.98
Employees of the sport center are polite	5.56	0.98
The students feel safe in making any transactions with sport center's employee	5.55	0.96
<b>Average (Assurance)</b>	<b>5.52</b>	<b>0.80</b>

#### 4.5.5 Empathy

The table 4.14 below describes that the item "The sport center has operating hours convenient for their students" has the highest mean score which is 5.48. As for the lowest mean score is from the item "Sport center's employee give student personal attention" which is 5.13 mean scores. The average of all the Empathy item is 5.35 mean scores which the level is high.

Table 4.14:  
*Mean and standard deviation (Empathy)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
The sport center has operating hours convenient for their students	5.48	1.06
The employer of the sport center understands the specific needs of their students	5.35	1.02
Sport center's employee gives student personal attention	5.13	1.10
Employee in the sport center value, respect and individual attention	5.46	1.05
<b>Average (Empathy)</b>	<b>5.35</b>	<b>0.89</b>

#### 4.5.6 Student's satisfaction

Based on table 4.15 below stated that the highest mean score (5.65) is from the item "I am satisfied with the way I was treated in by UUM employees". Meanwhile, the lowest mean score (5.24) is from the item "I am satisfied with the overall services provided by UUM". Overall, the average for satisfaction is 5.44 which in high level.

Table 4.15:  
*Mean and standard deviation (Satisfaction)*

<b>Item</b>	<b>Mean</b>	<b>Standard deviation</b>
I am satisfied with the overall services provided by UUM	5.24	1.19
I am satisfied with the way I was treated in by UUM employees	5.65	0.95
I am satisfied with the information or services I got from the employee of UUM.	5.47	1.07
I think the services meets the information sharing needs between the sport center.	5.35	0.85
Overall. How often are you satisfied with the service?	5.48	1.05
<b>Average (Satisfaction)</b>	<b>5.44</b>	<b>0.83</b>

#### 4.6 Hypothesis Testing

In this section, correlation test and linear regression analysis will be used in order to analyze the data and summarize all the result of the hypothesis of the study. The analysis uses SPSS 24.0 to identify whether the result is accepted or rejected the hypothesis.

##### 4.6.1 Pearson Correlation Analysis

Table 4.16 describes the summary of the results from the correlation analysis. In this study, the Pearson correlation coefficients were performed to obtain the relationship between all the independent variables and dependent variables. According to Beldjazia and Alatou (2016) mentioned that the positive or negative correlation

are determined by the sign of the correlation coefficient. Moreover, based on Evans (1996) stated that the absolute value of R (as cited in Beldjazia & Alatou, 2016) is at table 4.16 below:

Table 4.16:  
*Pearson correlation coefficient scale.*

<b>R</b>	<b>Level</b>
0.00 to 0.19	Very weak
0.20 to 0.39	Weak
0.40 to 0.59	Moderate
0.60 to 0.79	Strong
0.80 to 1.0	Very strong

Source: Evans (1996) cited in Beldjazia & Alatou (2016)

#### **4.6.1.1 The hypothesis of H1 is on the relationship between tangible and student's satisfaction.**

Based on the Pearson correlation analysis, the Table 4.17 illustrated the result of the analysis. It is found that the p-value < 0.05 which determine that there is a positive relationship between tangible and student's satisfaction which the correlation co-efficient value,  $r=0.667$ . It means that if the value of tangible increase, the value of the student's satisfaction also increased. In terms of the strength of the relationship between tangible and student's satisfaction, the result is strong.

Table 4.17:  
*Correlation between Tangible and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Tangible</b>	Pearson Correlation	.667**
	Sig. (2-tailed)	.000
	N	120

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

#### 4.6.1.2 The hypothesis of H2 is on the relationship between responsiveness and student's satisfaction.

Based on the Pearson correlation analysis, the Table 4.18 illustrated the result of the analysis. It is found that the  $p\text{-value} < 0.05$  which determine that there is a positive relationship between responsiveness and student's satisfaction which the correlation co-efficient value,  $r=0.714$ . It means that if the value of responsiveness increase, the value of the student's satisfaction also increased. In terms of the strength of the relationship between responsiveness and student's satisfaction, the result is strong.

Table 4.18:

*Correlation between Responsiveness and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Responsiveness</b>	Pearson Correlation	.714**
	Sig. (2-tailed)	.000
	N	120

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

#### 4.6.1.3 The hypothesis of H3 is on the relationship between reliability and student's satisfaction.

Based on the Pearson correlation analysis, the Table 4.19 illustrated the result of the analysis. It is found that the  $p\text{-value} < 0.05$  which determine that there is a positive relationship between reliability and student's satisfaction which the correlation co-efficient value,  $r=0.626$ . It means that if the value of reliability increase, the value of the student's satisfaction also increased. In terms of the

strength of the relationship between reliability and student's satisfaction, the result is strong.

Table 4.19:  
*Correlation between Reliability and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Reliability</b>	Pearson Correlation	.626**
	Sig. (2-tailed)	.000
	N	120

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

#### **4.6.1.4 The hypothesis of H4 is on the relationship between assurance and student's satisfaction.**

Based on the Pearson correlation analysis, the Table 4.20 illustrated the result of the analysis. It is found that the  $p\text{-value} < 0.05$  which determine that there is a positive relationship between assurance and student's satisfaction which the correlation co-efficient value,  $r=0.670$ . It means that if the value of assurance increase, the value of the student's satisfaction also increased. In terms of the strength of the relationship between assurance and student's satisfaction, the result is strong.

Table 4.20:  
*Correlation between Assurance and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Assurance</b>	Pearson Correlation	.670**
	Sig. (2-tailed)	.000
	N	120

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



#### 4.6.1.5 The hypothesis of H5 is on the relationship between empathy and student's satisfaction.

Based on the Pearson correlation analysis, the Table 4.21 illustrated the result of the analysis. It is found that the  $p\text{-value} < 0.05$  which determine that there is a positive relationship between empathy and student's satisfaction which the correlation co-efficient value,  $r=0.734$ . It means that if the value of empathy increase, the value of the student's satisfaction also increased. In terms of the strength of the relationship between empathy and student's satisfaction, the result is strong.

Table 4.21:  
*Correlation between Assurance and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Empathy</b>	Pearson Correlation	.734**
	Sig. (2-tailed)	.000
	N	120

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

#### 4.6.1.6 The hypothesis of H6 is on the relationship between service quality and student's satisfaction.

Based on the Pearson correlation analysis, the Table 4.22 showed the result of the analysis. It is found that the  $p\text{-value} < 0.05$  which determine that there is a positive relationship between service quality and student's satisfaction which the correlation co-efficient value,  $r=0.819$ . It means that if the value of service quality increase, the value of the student's satisfaction also increased. In terms

of the strength of the relationship between service quality and student's satisfaction, the result is strong.

Table 4.22:  
*Correlation between Service quality and Student's satisfaction*

		<b>Student's satisfaction</b>
<b>Service Quality</b>	Pearson Correlation	.819**
	Sig. (2-tailed)	.000
	N	120

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

According to the result of the correlation test, it can be concluded that all the hypothesis being accepted. The result of hypothesis testing for correlation test is shown in the table below:

Table 4.23:  
*The result of hypothesis testing for correlation test*

<b>Hypothesis</b>	<b>Description</b>	<b>Result</b>
H1	There is a significant relationship between tangibility and student's satisfaction	Accepted
H2	There is a significant relationship between responsiveness and student's satisfaction	Accepted
H3	There is a significant relationship between reliability and student's satisfaction	Accepted
H4	There is a significant relationship between assurance and student's satisfaction	Accepted
H5	There is a significant relationship between empathy and student's satisfaction	Accepted
H6	There is a significant relationship between service quality and student's satisfaction	Accepted

#### 4.6.2 Regression Analysis of Coefficient

In this section, to analyze the relationship between the independent and dependent variable, the researcher use the linear regression analysis. In this analysis, the interpretation is based on the t-value and the significant level, which to identify whether the independent variables influence the relationship with the dependent variable. The t-value should be more than 2 while the significant level,  $p < 0.05$ . The result of the data will be shown below. Moreover, multiple regression analysis was used in this section to examine the significant influence between between independent variables (tangible, responsiveness, reliability, assurance, empathy) and dependent variables (student's satisfaction).

##### 4.6.2.1 Hypothesis Testing on relationship between tangible, responsiveness, reliability, assurance, empathy and student's satisfaction.

Based on table Regression analysis of coefficient below, it indicates that there is a significant relationship between 1) Tangible and student's satisfaction ( $\beta = .313$ ,  $t = 4.621$ ,  $p < 0.05$ ), 2) Empathy and student's satisfaction ( $\beta = .316$ ,  $t = 3.709$ ,  $p < 0.05$ ). However, the student's satisfaction has no significant relationship with responsiveness ( $\beta = .163$ ,  $t = 1.760$ ,  $p > 0.05$ ), reliability ( $\beta = .048$ ,  $t = 0.545$ ,  $p > 0.05$ ), and assurance ( $\beta = .152$ ,  $t = 3.709$ ,  $p > 0.05$ ).

Table 4.24:  
*Regression Analysis of Coefficient*

<b>Model</b>	<b>B</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
(Constant)	.764		2.381	.019
Tangible	.243	.313	4.621	.000
Responsiveness	.149	.163	1.760	.081
Reliability	.048	.048	.545	.587
Assurance	.158	.152	1.649	.102
Empathy	.294	.316	3.709	.000
R <sup>2</sup>	.689			
Adjusted R <sup>2</sup>	.675			
F	50.526 p=0.000			

Table 4.24 also depicted that overall, the model is significant which  $F= 50.526$ ,  $p<0.05$  indicating that the independent variables explain a significant amount of variance in the dependent variable. The  $R^2$  value is 0.689 described that the independent variables explain 68.9% of student's satisfaction.

#### 4.6 Chapter Conclusion

In this chapter, the statistical analysis that have been discussed were responses rate, data screening and cleaning, descriptive analysis, mean and standard deviation, correlation and multiple linear regression. From the correlation and regression analysis, it can conclude which hypothesis been accept or rejected.

Based on the result of the regression analysis determined that from the five variables only two have been accepted It tends to be presumed that despite the fact that every one of the factors have a huge connection in the correlation test, it might not have a significant influence in the regression test.

## CHAPTER 5

### DISCUSSION AND CONCLUSION

#### 5.0 Introduction

This chapter will discuss the synopsis of the discoveries from the past chapters regarding the independent and dependent variable. Other than that, are the implications of the study and recommendations for future research will also be explained in this chapter.

#### 5.1 Summary of Findings

The objectives of this study are to examine the correlations between independent variables (responsiveness, tangibility, assurance, empathy, reliability) towards the dependent variable (students' satisfaction) of the user of the UUM Sports Center. The study has been done towards 300 respondents which were the students that visited and used the services at the UUM Sports Center, however, only 120 questionnaires were returned. Additionally, the following discussion relates to the findings on the relationship between independent variable and dependent variable which to obtain the research objectives.

Based on the data collection method used by the researcher which was distributing the questionnaire to get the response from the respondents consists of three sections. The first sections, is the demographic background questions such as gender, age, race, type of sport, college, semester and nationality. Furthermore, the second section, is regarding the independent variables that are responsiveness, tangibility, assurance, empathy, reliability.

For the third section, focused on the dependent variable which is students' satisfaction. The study contributed to a better understanding of the service quality in the UUM Sports Center. The respondent was selected at random using simple random sampling.

### **5.1.1 Tangibility and Student's Satisfaction**

According to the results of hypothesis testing, which have been tested in SPSS 24.0, the relationship between tangible and student satisfaction generates the path coefficient value  $0.667^*$  and  $p\text{-value}=0.000<0.05$ , then the hypothesis is accepted. Based on the results stated that there is a positive significant relationship which the higher the tangibility coefficient value, the higher the students' satisfaction. It means that the components in tangibility play an important role towards the customer satisfaction which was similar with the previous studies. According to Leonard (2018), he found that the tangible consist of a comfortable lecture room and library facilities influence the relationship between these two. Beside that, this finding occurs with researchers who found a positive relationship between tangibility and students' satisfaction. (Nurul Hamiza, 2009). Even though, there is a positive relationship between tangibility and satisfaction, the satisfaction rate is average. This indicates that more improvements need to be done within the Sport Center management.

### **5.1.2 Responsiveness and Student's Satisfaction**

Kumar and Charles (2010) stated that responsiveness refers to the willingness and readiness of the employee to offer the services to the customers, which enclosed the

accuracy of the services service. According to the results of hypothesis testing, which have been tested in SPSS 24.0, the relationship between responsiveness and student satisfaction generates the path coefficient value 0.714\* and  $p\text{-value}=0.000 < 0.05$ , then the hypothesis is accepted. Based on the results stated that there is a positive significant relationship which the higher the responsiveness coefficient value, the higher the student's satisfaction. The finding of this study is consistent with the previous studies from Hanaysha (2011) identified that Responsiveness have a significant relationship with student's satisfaction.

### **5.1.3 Reliability and Student's Satisfaction**

Based on the results of hypothesis testing, which have been tested in SPSS 24.0, the relationship between reliability and student satisfaction generates the path coefficient value 0.626\* and  $p\text{-value}=0.000 < 0.05$ , hence, the hypothesis is accepted. According to the results stated there is a positive significance in the relationship whereby the higher the reliability coefficient value, the higher the student's satisfaction. In this study, reliability as described by Parasuraman, Berry, and Zeithmahl (1988) which states the relation of having the ability to perform the services at the right time such as the services have been delivered at the promised time and didn't make an error of each activity

This finding provides a similar result with Agbor (2011) which indicates that there is a significant relationship between reliability and student's satisfaction. Moreover, Tegambwage (2017) studies in the higher educations found that there

is a relationship between reliability and customer satisfaction which consist of the ability to provide the promised service on time, dependably and accurately.

#### **5.1.4 Assurance and Student's Satisfaction**

Assurance is the representative's learning and kindness which ready to pick up the trust and certainty from the customers (Parasuraman et al., 1991). From the results of hypothesis testing, which have been tested in SPSS 24.0, the relationship between assurance and student satisfaction generates the path coefficient value 0.670\* and p-value=0.000<0.05, then the hypothesis is accepted. According to the results, there is a positive significant relationship which the higher the assurance coefficient value, the higher the student's satisfaction. The results are the same with the previous study, Bharwana and Mohsin (2013) who identify that assurance has a significant and positive relationship with satisfaction of the customer.

#### **5.1.5 Empathy and Student's Satisfaction**

According to the results of hypothesis testing, which have been tested in SPSS 24.0, the relationship between empathy and student satisfaction generates the path coefficient value 0.734\* and p-value=0.000<0.05, then the hypothesis is accepted. According to the results stated that there is a positive significant relationship which the higher the empathy coefficient value, the higher the student's satisfaction. Based



from the previous research, Hasan, Ilyas, and Zulkifli (2008) that indicates found that empathy has a significant relationship and influence towards satisfaction.

### **5.1.6 Service quality and Student's Satisfaction**

Based on the results of the multiple regression analysis, only tangibility and empathy influence the students' satisfaction which is the  $p\text{-value} < 0.05$ . However, using the correlation analysis, there is a positive significant relationship which the coefficient value  $0.819^*$  and  $p\text{-value} = 0.000 < 0.05$ . It indicates that the higher the service quality coefficient value, the higher the student's satisfaction. Thus, in this study, service quality has a relationship towards the student's satisfaction at the UUM Sports Center. Similar to the past research, Ezeokoli and Ayodele (2014) proved that all the dimensions of service quality have a relationship towards the student's satisfaction.

## **5.2 Implications of the Study**

There are two implications that we can achieve in this study, which is theoretical and practical. Both of these implications may help the UUM Sport Center to identify the factors that influence the student's satisfaction.

### **5.2.1 Theoretical Implications**

This research paper has added to the writing on the service quality and the fulfillment in the UUM Sport Center's users. Moreover, it likewise gives a comprehension of the elements of service quality relate to the student's satisfaction regarding using the Sport Center. Basically, the result of the study enhanced the knowledge of empirical evidence about the relationship between service quality and student's satisfaction towards UUM Sport Center. Moreover, this study indicates the current satisfaction when the students using the services in the Sport Center.

Besides that, this study was conducted on University Utara Malaysia services at the Sport Center, which assist in UUM to get new information that are related to the student's satisfaction and the quality of services in order to make improvement.

### **5.2.2 Practical Implications**

The result of this study can become a guide for UUM to improve their services. For example, current situations which the services involve the sports equipment influence more in improving the satisfaction. The UUM Sports Center may discuss an effective strategy to improve the equipment. For example, add new another physical equipment in the women's gymnasium that is more suitable for the student or equipment that follow the recent body health trends such as the massage chair. Moreover, the track and the court floor layout need to be changed to minimize unwanted accidents. Besides that, the management of the Sports Center should

provide more appealing physical facilities, personnels, equipments and communication materials (Tegambwage, 2017).

Furthermore, as for the responsiveness variable, due t the high correlation, the Sports Center need to maintain the current quality of services. The students are already satisfied with the services given by the staff. For instance, willingness to provide prompt or favorable services by the staff at the Sports Center for the students (Ezeokoli & Ayodele, 2014). It indicate that the staff has responded to the students immediately regarding the questions being asked which exceed the student satisfaction.

In addition, the reliability variable which relates to the ability to perform the services at the right time such as the services have been delivered at the promised time and errors of each activity, needs an improvement because even though there is a strong positive relationship with the satisfaction, the value is lower than the other variables. The improvement that should be made is that perhaps the staff at the Sports Center should be more focused on providing the services that are promised on time, accurately and dependable, and avoid making false and unrealistic promises which increase the student's expectations (Tegambwage, 2017).

As for assurance variable which derived from the result, provides a strong relationship, the sports center may create improvement in order to increase the student's satisfaction. For example, provide a class and training to ensure the staff has the knowledge regarding the sports center so that the students have the answer

to their questions. Increasing the knowledge of the staff is crucial between the assurance items. This is due to the mean and standard deviation is low which indicate the students are not satisfied with regards to the case highlighted in this question. Moreover, the management should train and develop good communication skills to the staff, which may help the students feel safe in making transactions with the sports center's employee. Besides that, the attitude of the staff, for instance, being friendly to the students would improve satisfaction.

Furthermore, the UUM Sports Center needs to maintain their services in terms of empathy. It is because, based on the result, it has a high and a strong positive relationship between the other variable of service quality. According to Ezeokoli and Ayodele (2014), assurance items can focus on the student's personal development. The staff needs to maintain their attitude that value and respect the student's attention. Besides that, the students are satisfied with the operating hour given by the Sports Center, which provides the information for them to continue the services at that time. However, there is one question from the items that have a lower value which indicates that the staff need to give the student personal attention. It means that the students did not get any attention when they ask the Sports Center's staff with their queries.

In conclusion, overall, service quality gives an impact to the student's satisfaction regarding the Sports Center's usage. The sports Centre's management can use the information from the results which have highlighted the tangibility, reliability and assurance variables. It is due to the fact that three of the service quality dimensions have the lowest relationship towards the student's satisfaction.

### **5.3 Recommendations for Future Research**

For the next research that relate to this study, the future researcher can focus and study on other factors that influence the student's satisfaction towards UUM Sport Center. It is recommended that, the future researcher conducts a study on larger populations to have a larger sample and to improve in the accuracy of the findings. Moreover, time constraints in the questionnaire distribution to the respondents, may cause many shortcomings within this study.

Besides that, the future researcher can expand the scope of their study, which is not only limited to the UUM Sport Center, but in other service sectors within universities. Thus, new findings from an upcoming research can provide new insights regarding this topic.

### **5.4 Conclusion**

In conclusion, the UUM Sport Center needs to improve their services regarding the facilities and their reliability and assurance in terms of communication between the staff and the students. This is due to the findings, which indicates that these dimensions have the relationship between the services and customer satisfaction. Making improvements may help to increase the satisfaction which also leads to a good reputation for the university itself. Besides, having a good service quality may provide a positive outlook for the general public.

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## APPENDIX A



UNIVERSITY UTARA MALAYSIA  
06010 SINTOK  
KEDAH DARUL AMAN, MALAYSIA  
QUESTIONNAIRES

**A STUDY ON THE RELATIONSHIP BETWEEN SERVICE QUALITY AND  
CUSTOMER SATISFACTION AMONG SPORT CENTER USER IN  
UNIVERSITY UTARA MALAYSIA**

I'm a final semester student of Master of Science (Management), College of Business, Universiti Utara Malaysia. I would like to invite you to participate in a survey. This survey is undertaken for academic purpose and part of my graduation. I really hope that you will spend your time to participate in this study by completing all the attached questionnaire. The questionnaire will be collected after two week given. Thank you for your cooperation.

Sincerely,

**NUR FATIHAH BT HUSIN (822402)**

Master of Science (Management)

COB, UUM

**Section 1: Personal Information**

INSTRUCTION: Please tick the following questions in the box based on your personal information.

**1. GENDER:**

- a. Male
- b. Female

**5. COLLEGE:**

- a.  COB
- b.  CAS
- c.  COLGIS

**2. AGE:**

- a.  19- 22
- b.  23-26
- c.  27-30
- d.  30 and above

**6. SEMESTER:**

- a.  One
- b.  Two
- c.  Three
- d.  Four
- e.  Five
- f.  Six and above

**3. RACE:**

- a.  Malay
- b.  Chinese
- c.  Indian
- d.  Others

**7. NATIONALITY:**

- a.  Local
- b.  International

**4) Type of Sport that you play?**

\_\_\_\_\_

## SECTION 2: SERVICE QUALITY

The following statements relate to your feeling about the UUM sport center services. Each of the statements was accompanied by 7 points of the scale, from "Strongly disagree" (1) and "Strongly Agree" (7). Please circle the appropriate answer.

<i>Strongly disagree</i> (1)	<i>Disagree</i> (2)	<i>Relatively Disagree</i> (3)	<i>Neutral</i> (4)	<i>Relatively agree</i> (5)	<i>Agree</i> (6)	<i>Strongly Agree</i> (7)
---------------------------------	------------------------	-----------------------------------	-----------------------	--------------------------------	---------------------	------------------------------

1. Equipments used by UUM's sport center are up to date	1	2	3	4	5	6	7
2. The physical facilities at the sport center are usually appealing	1	2	3	4	5	6	7
3. The appearance of the physical facilities of sport center is in keeping with the type of service provided	1	2	3	4	5	6	7
4. Employees at the sport center are always look tidy and well dressed	1	2	3	4	5	6	7

1. Employees of the UUM sport center provide their services at the time they promise to do	1	2	3	4	5	6	7
2. The UUM sport center provides accurate information and services as they promised	1	2	3	4	5	6	7
3. Employees of the UUM sport center is dependable.	1	2	3	4	5	6	7
4. the employee do what they promise to do	1	2	3	4	5	6	7
5. the employee of the sport center keep the accurate record in order to serve the best services	1	2	3	4	5	6	7

1. Employees of the sport center are never too busy to respond to me	1	2	3	4	5	6	7
2. Sport center's employee is willing to help me	1	2	3	4	5	6	7
3. Employees of the sport center will inform me exactly when services will be performed	1	2	3	4	5	6	7
4. Employees of sport center give prompt service to me	1	2	3	4	5	6	7

1. The employees of the sport center can be trusted	1	2	3	4	5	6	7
2. The employees have the knowledge to answer students' questions	1	2	3	4	5	6	7
3. Employees of the sport center are polite	1	2	3	4	5	6	7
4. The students feel safe in making any transactions with sport center's employee	1	2	3	4	5	6	7

1. The sport center has operating hours convenient for me	1	2	3	4	5	6	7
2. The employer of the sport center understands my specific needs	1	2	3	4	5	6	7
3. Sport center's employee gives me personal attention	1	2	3	4	5	6	7
4. Employee in the sport center value, respect and individual attention	1	2	3	4	5	6	7

### SECTION 3: STUDENT'S SATISFACTION

Use scale to respond to each of the following satisfaction statements

1. I am satisfied with the overall services provided by UUM	1	2	3	4	5	6	7
2. I am satisfied with the way I was treated in by UUM employees	1	2	3	4	5	6	7
3. I am satisfied with the information or services I got from the employee of UUM	1	2	3	4	5	6	7

	Never	Not	Not partially	Undecided	Yes partially	Yes	Always
4. I think the services meets the information sharing needs between the sport center.	1	2	3	4	5	6	7
5. I am satisfied with the overall services often.	1	2	3	4	5	6	7

Thank you for your cooperation and have a nice day!

## APPENDIX B

### RELIABILITY TEST FOR PILOT TEST

#### 1) TANGIBLE

##### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.841	.833	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
4.842	4.467	5.433	.967	1.216	.190	4
1.870	1.357	2.464	1.107	1.815	.238	4

#### 2) RESPONSIVENESS

##### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.916	.916	5

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.560	5.500	5.600	.100	1.018	.002	5
1.150	1.017	1.289	.271	1.267	.016	5



### 3) RELIABILITY

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	.803	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.629	5.414	5.759	.345	1.064	.024	4
1.151	.833	1.323	.490	1.589	.049	4

### 4) ASSURANCE



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.915	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.733	5.600	5.933	.333	1.060	.020	4
.876	.616	1.114	.498	1.808	.051	4

## 5) EMPATHY

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.914	.916	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.525	5.267	5.633	.367	1.070	.030	4
1.562	1.352	1.926	.575	1.425	.063	4

## 6) STUDENT SATISFACTION



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.920	.920	5

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.667	5.500	5.800	.300	1.055	.019	5
1.303	.948	1.444	.495	1.522	.041	5

**APPENDIX C**

**RELIABILITY TEST FOR REAL TEST**

**1) TANGIBLE**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.839	.838	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
4.856	4.483	5.433	.950	1.212	.177	4
1.713	1.475	2.000	.525	1.356	.053	4

**2) RESPONSIVENESS**

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.886	.886	5

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.318	5.308	5.333	.025	1.005	.000	5
1.140	1.048	1.307	.260	1.248	.013	5

### 3) RELIABILITY

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.821	.821	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.379	5.233	5.525	.292	1.056	.018	4
1.064	1.023	1.142	.120	1.117	.003	4

### 4) ASSURANCE



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.838	.838	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.523	5.450	5.558	.108	1.020	.002	4
.968	.922	1.007	.085	1.093	.001	4

## 5) EMPATHY

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.874	.874	4

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.356	5.133	5.483	.350	1.068	.025	4
1.115	1.053	1.209	.156	1.148	.004	4

## 6) STUDENT SATISFACTION

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.869	.874	5

Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
5.440	5.242	5.650	.408	1.078	.024	5
1.066	.734	1.429	.695	1.947	.070	5

**APPENDIX D**  
**DESCRIPTIVE STATISTIC**  
**(DEMOGRAPHIC BACKGROUND)**

**1) GENDER**

**GENDER**

	Frequency	Percent	Valid Percent	Cumulative Percent
MALE	68	56.7	56.7	56.7
Valid FEMALE	52	43.3	43.3	100.0
Total	120	100.0	100.0	

**2) AGE**

**AGE**

	Frequency	Percent	Valid Percent	Cumulative Percent
19-22	76	63.3	63.3	63.3
23-26	28	23.3	23.3	86.7
Valid 27-29	13	10.8	10.8	97.5
30 AND ABOVE	3	2.5	2.5	100.0
Total	120	100.0	100.0	

**3) RACE**

**RACE**

	Frequency	Percent	Valid Percent	Cumulative Percent
MALAY	62	51.7	51.7	51.7
CHINESE	43	35.8	35.8	87.5
Valid INDIAN	8	6.7	6.7	94.2
OTHERS	7	5.8	5.8	100.0
Total	120	100.0	100.0	

#### 4) TYPE OF SPORT THAT YOU PLAY?

Type of sport that you play?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid INDOOR	77	64.2	64.2	64.2
OUTDOOR	43	35.8	35.8	100.0
Total	120	100.0	100.0	

#### 5) COLLEGE

COLLEGE

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid COB	54	45.0	45.0	45.0
CAS	30	25.0	25.0	70.0
COLGIS	36	30.0	30.0	100.0
Total	120	100.0	100.0	

## 6) SEMESTER

SEMESTER				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ONE	17	14.2	14.2	14.2
TWO	9	7.5	7.5	21.7
THREE	33	27.5	27.5	49.2
FOUR	12	10.0	10.0	59.2
FIVE	21	17.5	17.5	76.7
SIX AND ABOVE	28	23.3	23.3	100.0
Total	120	100.0	100.0	

## 7) NATIONALITY



NATIONALITY				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid LOCAL	103	85.8	85.8	85.8
INTERNATIONAL	17	14.2	14.2	100.0
Total	120	100.0	100.0	



**APPENDIX E**  
**DESCRIPTIVE ANALYSIS**

**1) TANGIBLE**

**Descriptive Statistics**

	N	Mean	Std. Deviation
TANGIBLE1	120	4.48	1.414
TANGIBLE2	120	4.62	1.336
TANGIBLE3	120	4.89	1.262
TANGIBLE4	120	5.43	1.214
Valid N (listwise)	120		

**2) RESPONSIVENESS**

**Descriptive Statistics**

	N	Mean	Std. Deviation
RESPONSIVE1	120	5.31	1.098
RESPONSIVE2	120	5.31	1.143
RESPONSIVE3	120	5.32	1.037
RESPONSIVE4	120	5.32	1.030
RESPONSIVE5	120	5.33	1.024
Valid N (listwise)	120		



### 3)RELIABILITY

**Descriptive Statistics**

	N	Mean	Std. Deviation
RELIABILITY1	120	5.23	1.027
RELIABILITY2	120	5.53	1.069
RELIABILITY3	120	5.45	1.011
RELIABILITY4	120	5.31	1.019
Valid N (listwise)	120		

### 4) ASSURANCE

**Descriptive Statistics**

	N	Mean	Std. Deviation
ASSURANCE1	120	5.53	1.004
ASSURANCE2	120	5.45	.986
ASSURANCE3	120	5.56	.986
ASSURANCE4	120	5.55	.960
Valid N (listwise)	120		

## 5) EMPATHY

**Descriptive Statistics**

	N	Mean	Std. Deviation
EMPATHY1	120	5.48	1.045
EMPATHY2	120	5.35	1.026
EMPATHY3	120	5.13	1.100
EMPATHY4	120	5.46	1.052
Valid N (listwise)	120		

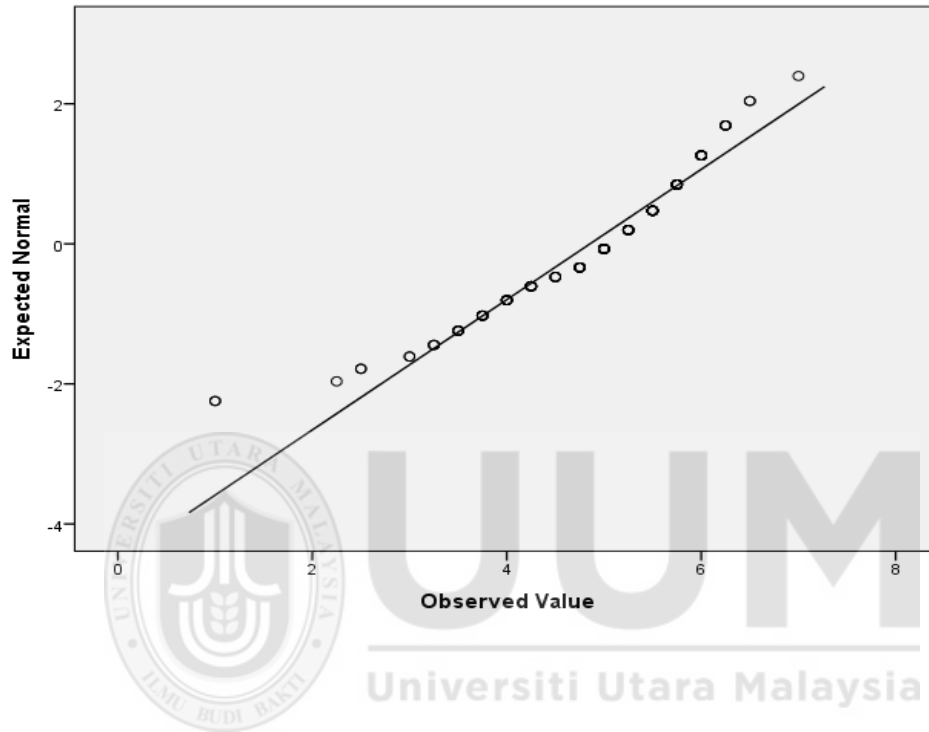
## 6) STUDENT SATISFACTION

**Descriptive Statistics**

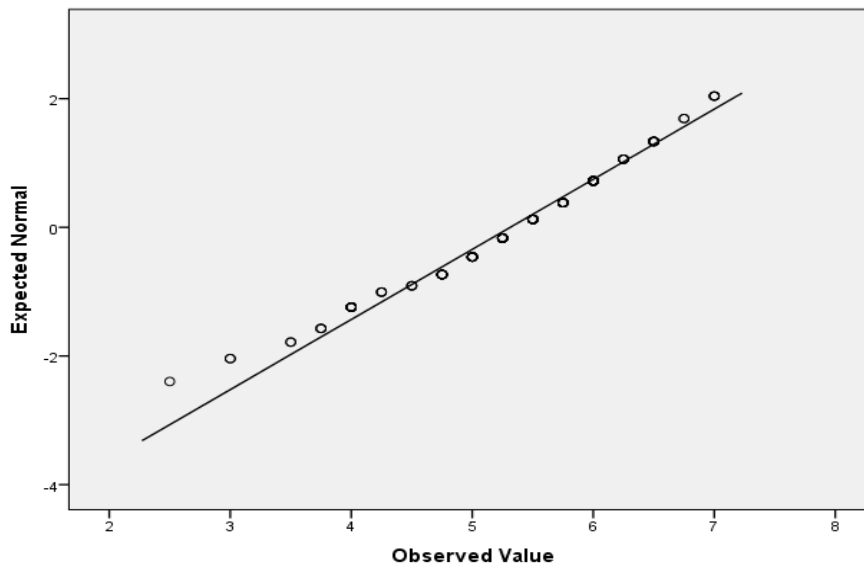
	N	Mean	Std. Deviation
SATISFACTION1	120	5.24	1.195
SATISFACTION2	120	5.65	.950
SATISFACTION3	120	5.47	1.077
SATISFACTION4	120	5.35	.857
SATISFACTION5	120	5.48	1.053
Valid N (listwise)	120		

**APPENDIX F**  
**NORMALITY TEST**

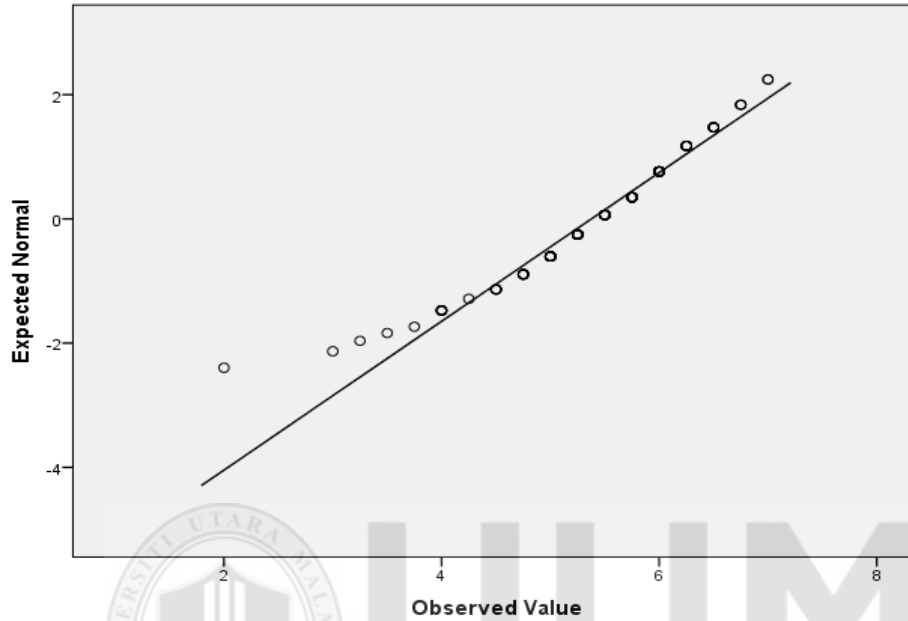
**1) Tangible**



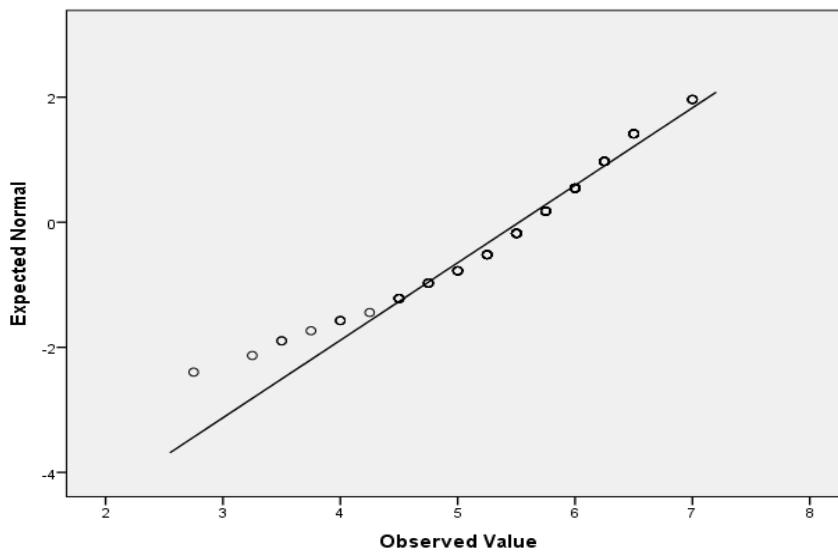
**2) Responsiveness**



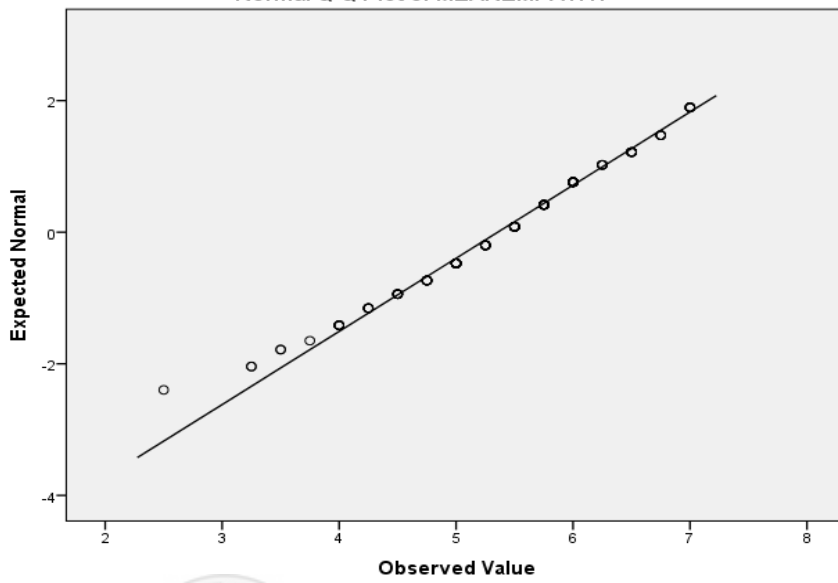
### 3) Reliability



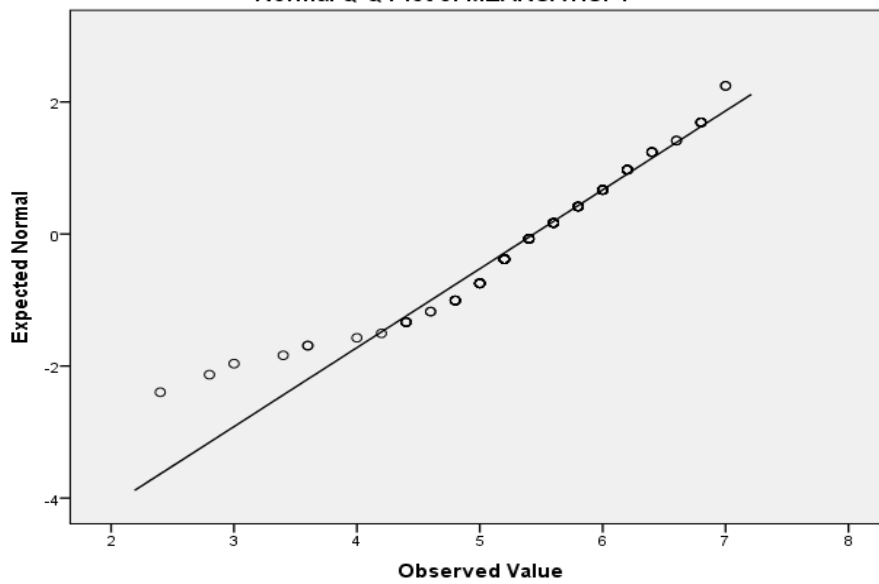
### 4) Assurance



### 5) Empathy



### 6) Student satisfaction



## 7) Skewness and Kurtosis

<b>Variables</b>	<b>Skewness</b>	<b>Std. Error of Skewness</b>	<b>Kurtosis</b>	<b>Std. Error of Kurtosis</b>
<b>Tangible</b>	-1.050	0.221	1.587	0.438
<b>Responsiveness</b>	-0.533	0.221	0.151	0.438
<b>Reliability</b>	-0.912	0.221	1.843	0.438
<b>Assurance</b>	-0.803	0.221	0.983	0.438
<b>Empathy</b>	-0.393	0.221	0.205	0.438
<b>Student's satisfaction</b>	-0.874	0.221	1.778	0.438



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**APPENDIX G**  
**CORRELATION TEST**

Correlations

		MEANTANGI BLE	MEANRESPO NSIVE	MEANRELIA BILITY	MEANASSUR ANCE	MEANEMPATHY	MEANSATISFY
<b>MEANTANGIBLE</b>	Pearson Correlation	1	.620**	.466**	.436**	.520**	.667**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	120	120	120	120	120	120
<b>MEANRESPONSIVE</b>	Pearson Correlation	.620**	1	.736**	.681**	.689**	.714**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	120	120	120	120	120	120
<b>MEANRELIABILITY</b>	Pearson Correlation	.466**	.736**	1	.743**	.629**	.626**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	120	120	120	120	120	120
<b>MEANASSURANCE</b>	Pearson Correlation	.436**	.681**	.743**	1	.741**	.670**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	120	120	120	120	120	120
<b>MEANEMPATHY</b>	Pearson Correlation	.520**	.689**	.629**	.741**	1	.734**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	120	120	120	120	120	120
<b>MEANSATISFY</b>	Pearson Correlation	.667**	.714**	.626**	.670**	.734**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	120	120	120	120	120	120

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



## APPENDIX H

### MULTIPLE LINEAR REGRESSION

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830 <sup>a</sup>	.689	.675	.47651

a. Predictors: (Constant), MEANEMPATHY, MEANTANGIBLE, MEANRELIABILITY, MEANASSURANCE, MEANRESPONSIVE

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.363	5	11.473	50.526	.000 <sup>b</sup>
	Residual	25.885	114	.227		
	Total	83.248	119			

a. Dependent Variable: MEANSATISFY

b. Predictors: (Constant), MEANEMPATHY, MEANTANGIBLE, MEANRELIABILITY, MEANASSURANCE, MEANRESPONSIVE

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.764	.321		2.381	.019
	MEANTANGIBLE	.243	.053	.313	4.621	.000
	MEANRESPONSIVE	.149	.085	.163	1.760	.081
	MEANRELIABILITY	.048	.089	.048	.545	.587
	MEANASSURANCE	.158	.096	.152	1.649	.102
	MEANEMPATHY	.294	.079	.316	3.709	.000

a. Dependent Variable: MEANSATISFY