SERVICE QUALITY IN

UNIVERSITI KEBANGSAAN MALAYSIA (UKM)

AZANEE BINTI OTHMAN

UNIVERSITI UTARA MALAYSIA
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ABSTRACT

The study was done in UKM. The purpose of the study is to examine students opinion about the attributed of quality and service in UKM. The objectives are to study the perception and expectation of students about service quality at UKM. Population study is UKM students. There are 200 respondents selected as a sample in this study based upon a simple random sampling. From the study the main finding had found that UKM do not achieve service quality standard expected by the students. The study suggests some recommendation to improve UKM quality service.

ABSTRAK

Kajian ini dibuat di UKM. Kajian bertujuan untuk melihat pendapat pelajar berkenaan dengan dengan kriteria kualiti dan perkhidmatan yang diberikan oleh UKM. Objektif kajian adalah untuk mengkaji persepsi dan jangkaan pelajar berkenaan kualiti perkhidmatan di UKM. Populasi kajian adalah pelajar di UKM. Sebanyak 200 responden diambil sebagai sampel dalam kajian ini berdasarkan kepada sampel rawak mudah. Hasil dapatan kajian mendapati UKM tidak mencapai kualiti perkhidmatan yang dijangkakan oleh pelajar. Kajian mendorong kepada beberapa cadangan ke arah penambahbaikan UKM.

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ABBREVIATIONS

MOHE	Ministry of Higher Education
SERVQUAL	Service Quality
SPM	Sijil Pelajaran Malaysia
SPSS	Statistical Package for Social Science
STPM	Sijil Tinggi Pelajaran Malaysia
UDM	Universiti Darul Iman Malaysia
UIAM	Universiti Islam Antarabangsa Malaysia
UiTM	Universiti Teknologi MARA
UKM	Universiti Kebangsaan Malaysia
UM	University Malaya
UMK	Universiti Malaysia Kelantan
UMP	Universiti Malaysia Pahang
UMS	Universiti Malaysia Sabah
UMT	Universiti Malaysia Terengganu
UniMAP	Universiti Malaysia Perlis
UNIMAS	Universiti Malaysia Sarawak
UPM	Universiti Putra Malaysia
UPNM	Universiti Pertahanan Nasional Malaysia
UPSI	Universiti Pendidikan Sultan Idris
USIM	Universiti Sains Islam Malaysia
USM	Universiti Sains Malaysia
UTeM	Universiti Teknikal Malaysia Melaka
UTHM	Universiti Tun Hussein Onn Malaysia

UTM	Universiti Teknologi Malaysia
UUM	Universiti Utara Malaysia

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Universiti Malaya (UM) has dropped from the top 200 of the prestigious 2010 QS World University Rankings, slipping to 207 this year compared to 180 in 2009. But Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM) and Universiti Putra Malaysia (UPM) all improved on their 2009 positions. UKM is ranked 263 this year compared to 291 in 2009, USM at 309 (314) and UPM is 319 (345). Universiti Teknologi Malaysia (UTM) dropped to 365 this year compared to 320 in 2009.

Higher Education Minister Datuk Seri Mohamed Khaled Bin Nordin mentions that it was normal to see fluctuation in the rankings. The ministry had its own strategic plan which was benchmarked against world's best practices, and would take note of the rankings. QS Quacquarelli Symonds Ltd Managing Director Nunzio Quacquarelli said the QS which conducts and compiles the annual World University Rankings measures university research quality, graduate employability, teaching commitment and international commitment. QS rankings use a combination of global surveys and audited data, including citation counts from Scopus, the world's largest database of academic publishing. (The Star, UM Drop From Top 200 List of World Ranking: 8 September 2010).

Malaysia is a country that very particular about service quality at university, the World University Rankings is a stepping stone for Malaysia to improve the quality of education from time to time. For example, on 2004, the Ministry of Education was separate so that a new Ministry for Higher Education was created. This situation shown that Malaysia is very focus, aspire and ambitious to be an excellent country in provide excellent of education. Any negative comment or declaration ranking of Malaysia university is a tool for Malaysia to improve the service quality of university.

1.2 Public Universities in Malaysia

Until 2011, Malaysia have 20 universities, there are University Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Islam Antarabangsa Malaysia (UIAM), Universiti Malaysia Sarawak (UNIMAS), Universiti Malaysia Sabah (UMS), Universiti Darul Iman Malaysia (UDM), Universiti Malaysia Kelantan (UMK), Universiti Malaysia Pahang (UMP), Universiti Malaysia Perlis (UniMAP), Universiti Malaysia Terengganu (UMT), Universiti Pendidikan Sultan Idris (UPSI), Universiti Pertahanan Nasional Malaysia (UPNM), Universiti Putra Malaysia (UPM), Universiti Sains Islam Malaysia (USIM), Universiti Sains Malaysia (USM), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Teknologi Malaysia (UTM), Universiti Teknologi MARA (UiTM), Universiti Tun Hussein Onn Malaysia (UTHM) and Universiti Utara Malaysia (UUM).

Universiti Malaya (UM) is Malaysia's oldest university, is situated on a 750 acre (309 hectare) campus in the southwest of Kuala Lumpur, the capital of Malaysia.

It was established in April 1949 in Singapore with the merger of the King Edward VII College of Medicine (founded in 1905) and Raffles College (founded in 1928).

The UM derives its name from the term 'Malaya' as the country was then known. The Carr-Saunders Commission, which recommended the setting up of the university, noted in its Report in 1948: *"The University of Malaya would provide for the first time a common centre where varieties of race, religion and economic interest could mingle in joint endeavour ... For a University of Malaya must inevitably realize that it is a university for Malaya."*

The growth of the university was very rapid during the first decade of its establishment and this resulted in the setting up of two autonomous Divisions in 1959, one located in Singapore and the other in Kuala Lumpur. In 1960, the government of the two territories indicated their desire to change the status of the Divisions into that of a national university. Legislation was passed in 1961 and the University of Malaya was established on 1st January 1962.

On June 16th 1962, UM celebrated the installation of its first Chancellor, Tunku Abdul Rahman Putra Al-Haj, who was also the country's first prime minister. The first Vice-Chancellor was Professor Oppenheim, a world-renowned Mathematician. Currently, His Royal Highness The Sultan of Perak Darul Ridzuan is the Chancellor of the University of Malaya. Ghauth Jasmon was appointed as the tenth Vice-Chancellor of University of Malaya on 8th November 2008.

UM mission is to advance knowledge and learning through quality research and education for the nation and for humanity and vision is to be an internationally renowned institution of higher learning in research, innovation, publication and teaching. Quality Policy of the UM is to intends to undertake teaching and learning, conduct research and services of quality, generate and advance knowledge through continuous improvement efforts for the benefit of all customers, in particular the students of the University of Malaya.

1.3 Problem Statement

University is a place to increase the knowledge and experience. In Malaysia total of university is increase from time to time. Every university is trying the best to compete each other to be the best university in Malaysia, Asian and world. University always make an effort to provide excellent service quality that include courses/program available, facilities such as library, lecture hall, classroom, lab, hostel, transportation, sport facilities, auditorium, mosque and cafeteria.

To make sure that, the university offer the excellent service quality, research or study is a measurement to get information about the level of service quality, perception of student at university, requirement of student and expectation of student. It hope that the outcome of the study will be use to improve the quality service of university. Furthermore, Malaysia now is trying very hard to improve the World University Rankings at least to be top 200 universities in the world.

1.4 Research Questions

The research questions are as follow:

i. What is the perception of students about service quality in UKM;

ii. What is the expectation of students about service quality in UKM.

1.5 Research Objective

The main objective of the study is to identify the service quality at UKM. To achieve the above objective, the sub objectives are as follow:

i. To study the perception of students at about service quality in UKM;

ii. To study the expectation of students about service quality in UKM.

1.6 Significant of the Study

This study is significant because public university is a vital role in the Malaysian economy. This study is important to provide the information for public university to improve the quality service. Besides that, the study can be a tool for government, decision maker, academics and researcher to develop an excellent plan to increase the World University Rankings. Finally, the study can contribute the new idea and innovation especially in measuring the service quality in public university.

1.7 Scope and Limitation of the Study

The scope of study is limited into several areas. To measure the service quality of public university in Malaysia, there is several important aspects have been narrow down. The study only focused on the perceptions and the expectations of students about service quality provided by the public university. The UKM is a local university that will be the scope of the study. The respondents are the students from UKM.

1.8 Organisation of the Thesis

UKM is the organisation of the thesis. The need for the establishment of an institution of higher learning for the Malays was first brought up at the Malay Rulers' Durbar (Mesyuarat Raja-raja Melayu) in 1903. Za'ba, a renowned Malay scholar, wrote about the setting up of such an establishment in the Lembaga Melayu (Malay Board), a Malay newspaper in 1917.

Serious discussions and debates on it with Bahasa Melayu as the medium of instruction began in 1923 when Abdul Kadir Adabi, another Malay scholar submitted a memorandum suggesting the setting up of such an institution to the DYMM Sultan of Kelantan. Unfortunately the suggestion was not given its due because of various factors and especially pressures from the colonial powers. The idea remained on the shelf and only resurrected after the country attained its independence in 1957.

The move to have a national university gained momentum during the 10 years after independence. This culminated with the setting up of a steering committee by a group of Malays scholars in 1968 to seriously work towards the setting up of such an institution. Various discussion groups as well as forums were held to garner support from the people and the authorities for the establishment of such a university to lend greater respectability to Bahasa Melayu through its usage as the medium of instruction in all fields of study and knowledge.

All the efforts and passion of the group of nationalists paid off when UKM was founded on 18 May 1970. The first batch of undergraduate students was registered and enrolled in the first three faculties set up; the Faculty of Science, Faculty of Arts and Faculty of Islamic Studies in May 1970. UKM has since seen tremendous growth in being able to provide an increasing number of places of learning for the people as well undertaking research in various disciplines and fields of study. It now has 12 faculties, a Graduate School of Business (GSB-UKM), as well as 14 research institutes. UKM has also set up the UKM Holdings Sdn. Bhd, operating as a commercial entity to benefit from all the expertise it has while also generating income for the University.

UKM Holdings Sdn. Bhd was founded in 2001 to coordinate the administration of the various sub-entities under its management, namely the Centre of Educational Expansion (PKP), UKM Kesihatan Sdn. Bhd., UKM Pakarunding Sdn. Bhd., UKM Perunding Kejuruteraan dan Arkitek Sdn. Bhd., Akademi Latihan Kebersihan dan Keselamatan Makanan (ALKEM), Food Quality Research Unit (Unipeq), Puri Pujangga and Talent Enhancement Academy.

The university's main campus in Bangi, Selangor Darul Ehsan spans an area of 1,096.29 hectares approximately 35 kilometres from Kuala Lumpur. The campus is situated in a valley surrounded by hills and green areas, providing a serene and conducive environment for learning and knowledge exploration. The faculties and institutes housed in the main campus are the Faculty of Economics and Business, Faculty of Engineering and Built Environment, Faculty of Islamic Studies, Faculty of Science and Technology, Faculty of Social Sciences and Humanities, Faculty of Law, Faculty of Education, Faculty of Technology and Information Sciences, Graduate School of Business (GSB-UKM), Institute of Malay World and Civilisation (ATMA), Institute of Environment and Development (LESTARI), Institute of Malaysian and International Studies (IKMAS), Institute of Occidental Studies (IKON), Institute of Space Science (ANGKASA), Institute of Microengineering and Nanoelectronics (IMEN), Institute of Systems Biology (INBIOSIS), Institute of Solar Research (SERI), Fuel Cell Institute (SEL FUEL), Institute of Islamic Hadhari (HADHARI), Institute of West Asian Studies (IKRAB), Institute of Ethnic Studies (KITA), Institute of South East Asian Disaster Prevention Research UKM (SEADPRI-UKM), Centre of Graduate Management, Centre of General Studies, Students Development Centre and other centres of service.

In addition UKM also has a 20 hectares medical campus in Jalan Raja Muda Abdul Aziz, Kuala Lumpur which houses the Faculty of Medicine (Pre-clinical), Faculty of Allied Health Sciences, Faculty of Dentistry and Faculty of Pharmacy. UKM Medical Centre (UKMMC), which is located in Cheras, Kuala Lumpur cover an area of 22.3 hectares, is to meet the needs of medical services education as well as

medical research. UKMMC consists of a hospital, the Faculty of Medicine and the Institute of Medical Molecular Research (UMBI).

In its 39 years of existence, UKM has produced a total of 131,259 graduates consisting of 113,975 first degree holders, 15,895 masters graduates and 1,389 PhDs. This is from more than 103 undergraduate and 170 postgraduate programmes offered. There is also an increasing number of foreign students studying at the university lending credence to international acceptance of its various fields of study and research. Currently a total of 2,415 international students from 55 countries are enrolled at the university.

Based on its record of excellence in multi-discipline researches in the past three decades, UKM has been chosen as one of the four research universities in Malaysia in 2006. That recognition has gained further ground when the Malaysia Genome Institute (MGI) and the International Institute of Global Health, United Nations University were set up at the university. Its areas of research were further consolidated and enhanced with the identification of eight niche areas; Challenges to Nation Building, Sustainable Territorial Development, Renewable Energy, Health and Medical Technology, Climate Change, Nanotechnology and Advanced Materials, Biological Diversity in Biotechnology Development and ICT: Content Informatics.

UKM is also the recipient of the Prime Minister's Quality Award 2006, a recognition of its excellent achievements in the academic and management fields. With these strong foundations, UKM aims at not just sustaining but also enhancing its level of

excellence via its 2000-2020 (PS2020) Strategic Plan in line with its slogan, 'Inspiring Hopes, Nurturing The Future'. All these developments has brought about greater confidence among its staff to continue upgrading their capabilities while enhancing their talents in a conducive, healthy and supportive environment as provided by the university.

According to QS Asian University Rankings 2010, UKM is at ranking 58 (The Star, Five Varsities Make It: 16 May 2010), and at World University Rankings, UKM is ranked 263 in 2010 compared to 291 in 2009. (The Star, UM Drop From Top 200 List Of World Ranking: 8 September 2010). This shows that UKM have improvement from year to year.

The university adapted a collegiate system which was based on Oxford and Cambridge. It consists of 13 residential colleges, namely Dato Onn, Aminuddin Baki, Ungku Omar, Burhanuddin Helmi, Ibrahim Yaakob, Rahim Kajai, Ibu Zain, Keris Mas, Pendeta Za'ba, Tun Hussein Onn, Tun Syed Nasir, Tun Dr. Ismail, and Idris al-Marbawi. Of the 13 residential colleges, Tun Syed Nasir and Tun Dr. Ismail are located in the Kuala Lumpur and Cheras campuses respectively, while Idris al-Marbawi is located outside of the Bangi campus.

Since UKM is one of the four research universities in Malaysia, Research and Development (R&D) is an area that is given special emphasis in UKM. Its Vice-Chancellor Prof Tan Sri Dr Sharifah Hapsah Syed Hasan Shahabudin has restructured the organisation to fit in with the university's status as a research institution. Vice-Chancellor mission is to bring people together in multi disciplinary

teams in eight niche areas, so that UKM research is focused. The areas include challenges for nation building, regionable sustainable development, renewable energy, health technology and medicine, climate change, nanotechnology and advanced materials, biodiversity for biotechnology development, and content-based informatics. They form the research clusters which in turn bring together several research groups.

Vice-Chancellor said example of research that varsity staff have been involved in, include improved techniques when performing heart bypass surgeries, initiating new varieties in roselle (*Hibiscus sabdariffa L.*), and also research in nuclear power.

UKM cardiothoracic surgeon and senior lecturer Assoc Prof Dr Mohd Ramzisham Abdul Rahman's current area of interest has been on conduit harvest an innovative technology where a vein is taken from the patient's leg for a coronary bypass operation. The harvesting technique has improved so much and is minimally invasive compared to before when the only choice it had was open surgery.

Dr Ramzisham who recently performed the heart bypass surgery at the UKM Medical Centre (UKMMC), using the technology, says he made a small incision in the patient to extract the vein using the Vascular-Micro-Milling-System (VMMS-100).It works like a boring instrument where it track the vein down to the bottom of the leg and then cut it without having to cut up the entire stretch of the leg. With this new technology, he says the operation and the recovery process for the patient is faster.

More operations can be performed and this will reduce the long waiting list for patients awaiting heart bypass surgeries. UKMMC started performing heart and lung surgery from 1998, and established a Heart and Lung Centre in 2006 lead by Assoc Prof Dr Mohd Zamrin Dimon.

In 1999, Prof Dr Mohamad Osman who is from the School of Environmental and Natural Resource Sciences in the Faculty of Science and Technology initiated the research project on roselle, a type of plant, at UKM. The varsity also launched the three new roselle varieties, UKMR-1, UKMR-2 and UKMR-3 in April last year. "Roselle as a health drink has a high content of vitamin C and anthocyanins (antioxidants)." Prof Mohamad explains that certain types of roselle contain high levels of an organic acid called hydroxycitric acid (HCA) which is the main ingredient used for body slimming. On commercialisation, Prof Mohamad says he was selected as one of 10 recipients under the UKM-Malaysian Technology Development Corporation (MTDC), to commercialise roselle products through a start-up company.

Deputy vice-chancellor (Student and Alumni Affairs) Prof Datuk Dr Mohamad Abd Razak's interests is in research related to the spine, particularly scoliosis. This means the spine is bent and it is common among adolescent girls. It could result in a patient having a cosmetic disfigurement and in severe cases could lead to respiratory problems. Prof Mohamad who is a senior consultant of spinal surgery at UKMMC says his team has invented a new surgical approach known as the HUKM Spinal Instrumentation System to treat scoliosis among adolescents. UKM have used this

system on more than 100 cases and the spine centre at UKMMC is the first in the country.

Amongst Faculty of Education Dean Prof Datin Dr Siti Rahayah Ariffin's many research products, is one called the Malaysian Generic Skills Inventory (My GSI) which has been adopted by the university. It has been introduced to all first year students from 2008 and tests their soft skills in 13 areas including critical thinking, ethics and problem- solving.

Each lecturer (mentor) will have five students and they meet five times each semester to work on these skills. This means that in addition to the degree that the students receive upon graduation, they would receive the diploma supplement which is a cumulative grade point average of their soft skills.

The first batch will receive their diploma supplement when they graduate in 2011. Prof Siti Rahayah and her team won a gold medal for the research product in a competition, adding that the Higher Education Ministry has expressed an interest in adopting it for other public university (The Star, Focus On R&D: 16 May 2010)

1.9 Definition of Terms

1.9.1 Quality

Orr (1973) defines quality as relating to how good a service is, and not necessarily how large or extensive. If a library manages to provide its users with sufficient information at a reasonable time, in the right form and with a reasonable comfort, it

can be discussed that the library is maintaining a good level of quality; one that can meet all users' requirements and expectations. As Thapisa and Gamini (1999) believe, quality can also be seen as relating to the fitness of a service or product to its intended purpose or use, subject to the expectations of the customer, user or public. Assessment of the performance of institutions delivering educational services has become a matter of particular interest to governments around the world seeking to increase the effectiveness of educational provision and maximize value for money (Belcher, 1997).

Quality can also be seen as relating to the fitness of a service or product to its intended purpose or use, subject to the expectations of the customer or user. Quality, therefore, must be in conformity with the customer's requirements or needs. This means that the quality of a service can be a definition of the customer's perception of what is good or bad, acceptable or not acceptable service. Therefore, quality is an ongoing process where the user is a key determinant (Thapisa and Gamini, 1999). According to Zeithaml (1991), four (4) elements must be addressed in order to exceed customer expectations:

i. Assurance;
ii. Responsiveness;
iii. Empathy; and
iv. Communication.

Quality of services is a difficult and elusive concept to measure (Grounroos, 1990). The customer is usually involved in the delivery of service and his/her perceptions of quality depend on contentment and satisfaction with both the result of the service and

the service process itself.

1.9.2 Service

Excellent service and happy customers mean bigger profits. Poor service can be measured in lost revenue. In libraries, however, happy customers may not translate into direct profits but they do mean a more highly regarded and valued library service (Pinder and Melling, 1996).

As Parasuraman (1986) notes, there is fairly widespread agreement in the literature concerning the characteristics which tend to differentiate services from goods. These are: intangibility, perishability, inseparability of production and consumption and heterogeneity. With regard to intangibility, this has been described as one of the few fairly stable generalizations that can be made about services.

Outstanding service is considered one of the most important attributes of specialty store retailing. For the service industry, Gronroos (1984) categorized service quality into two categories: technical quality, primarily focused on what consumers actually received from the service; and functional quality, focused on the process of service delivery. These types of service quality divisions translate well with apparel specialty stores.

1.9.3 Service Quality

The concept of service quality was defined as the difference between a library user's expectations and perceptions of service performance to the mid 1970s (Oldman and Wills, 1977). Parasuraman *et al.*'s (1988) customer based approach to conceptualize and measure service quality, on the other hand, suggest intriguing alternative to view and measure the quality of library services. They identified five dimensions with which consumers judge services:

i. Reliability – the ability to perform the promised service both dependably and accurately;
ii. Responsiveness – the willingness to help customers and to provide prompt service;
iii. Assurance – the knowledge and courtesy of employees as well as their ability to convey trust and confidence;
iv. Empathy – the provision of caring, individualized attention to customers; and
v. Tangibles – the appearance of physical facilities, equipment, personnel, and communication materials (Fitzsimmons and Fitzsimmons, 2000).

Peter Hernon and John R. Whitman (2000) argued that it is possible to examine expectations from two coequal and probably interrelated concepts, service quality and satisfaction. Service quality deals with those expectations that the library chooses to meet, and satisfaction is more of an emotional and subjective reaction to a time-limited event or the cumulative experiences that a customer has with a service provider.

Different approaches to measure service quality are emerging. One centers on the use of SERVQUAL, a survey instrument based on the Gaps Model of Service Quality. The model summarizes a set of five gaps showing the discrepancy between:

i. Customers' expectations and management's perceptions of these expectations (Gap 1);
ii. Management's perceptions of customers' expectations and service quality specifications (Gap 2);
iii. Service quality specifications and actual service delivery (Gap 3);
iv. Actual service delivery and what is communicated to customers about it (Gap 4); and
v. Customers' expected services and perceived service delivered (Gap 5). Zeithaml, Parasuraman, & Berry (1996).

The first four (4) gaps are the major contributors to the service quality gap that customers may perceive. The fifth gap is the basis of a customer-oriented definition of service quality; it is the discrepancy between customers' expectations for excellence and their perceptions of actual service delivered. This discrepancy is the conceptual basis for the SERVQUAL instrument.

Armstrong (1991) contends that the criteria of quality, which customers ascribe to service, include:

i. Accessibility;
ii. Responsiveness or timeliness;
iii. Reliability or accuracy, up-to-dateness and relevance;
iv. Security or non-threatening behaviour, friendliness and helpfulness;

v. Communications or easy to use;

vi. Assurance or reliability and consistence, and

vii. Affordability, tangibility or within price range.

The attainment of quality, therefore, is an ongoing process where the client is a key determinant of all the above mentioned. If libraries cannot provide what clients want, then they cannot hope to survive in a competitive world where the customer picks and chooses what is best of the service. Quality assurance is a continuous process of examination and re-examination of the needs of the client, providing the means by which expectation can be met or satisfied. It stands to reason therefore that customer service is not about training staff to be nice to the customer, looking them in the eyes and SMILE, where "S" stands for smart, "M" for manners, "I" for interest, "L" for listen and "E" for enthusiasm. We have all learnt about this acronym in service management. No, no, quality service is about helping a customer to define his/her needs, clarifying customer benefits, building confidence and monitoring and assessing the organization, and the impact of its products and services. The main idea is to identify opportunities for service excellence and improvement and taking corrective action where there are diversions. Actually, real service quality is attained when customer expectations are exceeded.

1.9.4 Perception

Zeithaml *et al.* (1990) identify some factors which can influence the consumer's perception of service performance. These include tangibles, such as the physical surroundings in which the service transaction takes place, the equipment involved,

and so on; the perceived competence and credibility of service providers, and their responsiveness, reliability and courtesy.

1.9.5 Expectation

According to Zeithaml (1991), four elements must be addressed in order to exceed customer expectations:

i. Assurance;

ii. Responsiveness;

iii. Empathy; and

iv. Communication.

Real customer satisfaction, therefore, represents the difference between what customers actually expect to get and the actual service performance exceeding such expectations. Zeithaml *et al.* (1990) have identified precisely four gaps in this regard.

i. Actual customer expectations and management's perception of customer expectations;

ii. Service quality specifications and management's perception of customer expectations;

iii. Service delivery and service quality specifications, and

iv. Service delivery and external communications relating to it.

In order to achieve real quality service these gaps need to be closed by concentrating on the expectations and needs of the customer, and not of the administration or organization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Service quality for university is one of the most important issues need to focus. Before exploring the nature of service quality in more detail, a brief clarification of the notion of quality in higher education and its relation to standards is necessary.

The literature review gives a base for developing theoretical framework for this study. In this part, the literature review covers the several important concepts of service quality includes Service Quality, Expectations on Service Quality, Perceptions on Service Quality, Service Quality Model and Service Quality in Higher Educational Institution.

2.2 Service Quality

Service quality is one of the key factors in determining the success or failure of electronic commerce (Yang, 2001). Two main conceptualizations of service quality exist in the literature, one based on the disconfirmation approach, and the other based on a performance, only approach.

Gummesson (1979) was one of the first to suggest that the concept of service quality was strongly related to perceptions and trust. Gronroos (1982) then introduced the notion of "total service quality" as being the perception by a customer of the difference between the expected service and the perceived service. Early

conceptualisations of service quality are usually based on the Oliver's (1980) disconfirmation model. Service quality was thus usually understood to be a measure of how well the service level delivered matched customer expectations. For example, Gronroos (1984, p. 37) defined the concept of perceived service quality, as "the outcome of an evaluation process, where the consumer compares his expectations with the service he perceives he has received". Parasuraman *et al.* (1985, p. 42) agreed with this notion, and defined service quality as "the comparison between customer expectations and perceptions of service". Parasuraman *et al.* (1988, p. 15) developed a definition of service quality as being "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform". Using this definition, they developed their multi-dimensional service quality assessment tool known as SERVQUAL. There are two main streams of research into the dimensions of service quality. The first is the Nordic perspective (Gronroos, 1982, 1984), which uses global terms to define service quality in terms of functional quality and technical quality. The second is the US perspective (Parasuraman *et al.*, 1988), which uses service encounter characteristics to describe service quality in five to ten dimensions (e.g. reliability, responsiveness, empathy, assurances, tangibles).

More recently, there has been criticism in the literature of the disconfirmation approach. It has been argued that a performance-only measure (or direct-effect model) (Page and Spreng, 2002) is superior because it is more reliable and defensible. Moreover, it is argued that such a model explains more variance and is more effective than the disconfirmation model (Cronin and Taylor, 1992, 1994; Babakus and Boller, 1992; Brown *et al.* 1993; Parasuraman *et al.*, 1994; Dabholkar

et al., 2000; Tse and Wilton, 1988; Teas, 1993, 1994; Peter *et al.*, 1993). A study by Cronin and Taylor (1992) revealed higher R^2 in a performance-only measure, which led to their designing the SERVPERF instrument for measuring service quality (Cronin and Taylor, 1994). More recently, according to the research of Dabholkar *et al.* (2000), perception measures have higher predictive and explanatory power and are better indicators of customer evaluation and intention. In addition, Dabholkar *et al.* (2000) noted that perception could allow an understanding of service quality evaluations at the factor level, and asserted that all dimensions are antecedents rather than components. Page and Spreng (2002) have further argued that performance is a much stronger indicator of service quality than expectations. The common theme of these aforementioned studies is that the disconfirmation approach is unnecessary, on the contrary, a perception-only measure is sufficient. For practitioners, a perception-only measure means that detailed service quality studies can be made through simpler, more efficient, cross-sectional designs (Dabholkar *et al.*, 2000). According to these arguments, service quality is defined as the overall evaluation of service performance. This is similar to Zeithaml *et al.*'s (1985) definition of service quality – that quality is judged in terms of excellence and superiority. In the present research, the notion of a performance-only measure is accepted, and service quality is therefore taken to an overall evaluation of excellence and superiority of service performance.

Despite the conceptual arguments regarding service quality, it is generally agreed in the literature that service quality is a multi-level and multi-dimensional concept that might mean different things to different people (Mersha and Adlakha, 1992; Dabholkar *et al.*, 1996; Brady and Cronin, 2001).

Whereas service quality is known to be based on multiple dimensions (Gronroos, 1982, 1990; Parasuraman *et al.*, 1985), there is no general agreement as to the nature or content of the dimensions (Brady and Cronin, 2001). However, a review of the service quality studies to date explicitly shows that European scholars have exerted a great influence on the study of service quality dimensions. That is, the contemporary discussions on the dimensions of service quality have been initiated by European scholars. Lehtinen and Lehtinen (1982) defined service quality in terms of physical quality, interactive quality and corporate (image) quality. Physical quality relates to the tangible aspects of the service. Interactive quality involves the interactive nature of services and refers to the two-way flow that occurs between the customer and the service provider, or his/her representative, including both automated and animated interactions. Corporate quality refers to the image attributed to a service provider by its current and potential customers, as well as other publics. They also suggest that when compared with the other two quality dimensions, corporate quality tended to be more stable over time.

With the suggestion that the "perceived service quality model" replace the product features of a physical product in the consumption of services, Gronroos (1982) identified two service quality dimensions, the technical aspect ("what" service is provided) and the functional aspect ("how" the service is provided). The customers perceive *what* s/he receives as the outcome of the process in which the resources are used, i.e. the *technical* or outcome quality of the process. But s/he also and often more importantly, perceives *how* the process itself functions, i.e. the *functional* or process quality dimension. For some services the "what" (or technical quality) might be difficult to evaluate. For example, in health care the service providers' technical

competence, as well as the immediate results from treatments, may be difficult for a patient (a customer) to evaluate. Lacking an ability to assess technical quality, consumers rely on other measures of quality attributes associated with the process (the "how") of health care delivery. For health care service, consumers would likely rely on attributes such as reliability and empathy to assess quality.

(Gronroos, 2001) also emphasized the importance of corporate image in the experience of service quality, similar to the idea proposed by Lehtinen and Lehtinen (1982). Customers bring their earlier experiences and overall perceptions of a service firm to each encounter because customers often have continuous contacts with the same service firm (Gronroos, 2001). Therefore, the *image* concept was introduced as yet another important component in the perceived service quality model, so that the dynamic aspect of the service perception process was considered as well. A favorable and well-known image is an asset for any firm because image has an impact on customer perceptions of the communication and operations of the firm in many respects. If a service provider has a positive image in the minds of customers, minor mistakes will be forgiven. If mistakes often occur, however, the image will be damaged. If a provider's image is negative, the impact of any mistake will often be magnified in the consumer's mind. In a word, image can be viewed as a filter in terms of a consumer's perception of quality.

Being explicitly influenced by the European perspective, Parasuraman *et al.* (1985) suggested that quality evaluations are not made solely on the outcome of service; they also involve evaluations of the service delivery process. While the dimensions are intercorrelated, the primary basis for the dichotomy rests with when the

evaluation occurs. For process quality, the evaluation occurs while the service is being performed. For outcome quality, evaluation happens after service performance and focuses on "what" service is delivered. However, their measurement of service quality (i.e. SERVQUAL) does not explicitly reflect both dimensions, but a functional dimension only. The focus on a functional dimension is one criticism of SERVQUAL (Baker and Lamb, 1993; Mangold and Babakus, 1991; Richard and Allaway, 1993).

Swartz and Brown (1989) attempted to synthesize the dimensions of service quality by illustrating the works of the service quality dimensions studied by Gronroos (1982), Lehtinen and Lehtinen (1982) and Parasuraman *et al.* (1985). Their main contribution was identifying dimensions of service quality based on the literature review and categorizing them into "what" (i.e. service evaluated after performance) and "how" (i.e. service evaluated during performance) categories. The work by Swartz and Brown, however, does not reflect Gronroos (1990) later conceptualization of service quality perception that emphasizes the role of image as a filter in the perception of service quality in addition to the technical and functional quality dimensions.

A more recent conceptualization of the service quality dimensions was proposed by Rust and Oliver (1994). They proposed a three-component model in which the overall perception of service quality is based on a customer's evaluation of three dimensions of the service encounter:

i. The customer-employee interaction (i.e. functional or process quality);

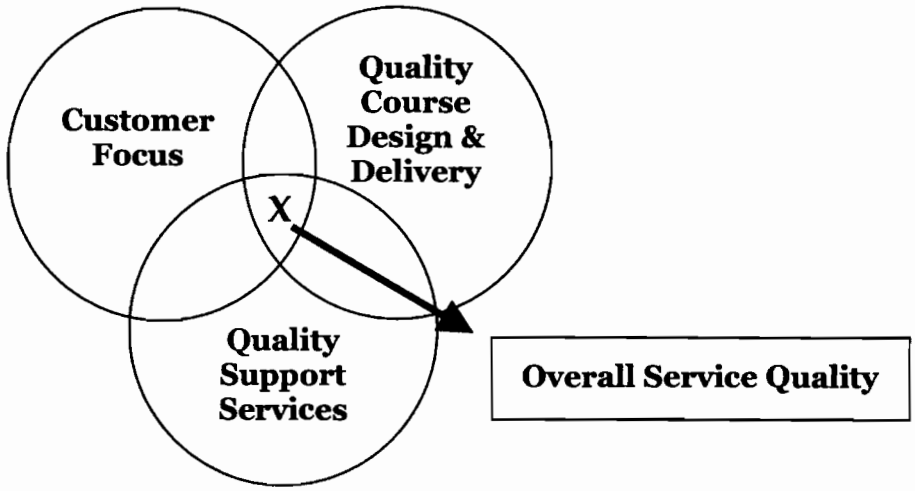
ii. The service environment; and

iii. The outcome (i.e. technical quality).

While research supports the contention that the service environment affects service quality perceptions (Bitner, 1992; Spangenberg *et al.*, 1996), it is conceptually difficult to distinguish the notion of service environment from the concept of functional quality that has been suggested in the literature. For example, Brady and Cronin (2001) proposed three factors comprising the service environment, ambient conditions, facility design, and social factors. The definition offered by Brady and Cronin (2001) suggests, however, that the service environments are elements of the service delivery process. In short, in the interest of parsimony it seems best to include elements of the service environment as components of the functional dimension.

According to Garvin (1988), service quality is a complex and volatile issue, largely driven by contextual unpredictability and complexity. Improving service quality does not happen overnight; it requires a persistent endurance to withstand the test of time through collective mindsets and efforts. Success depends on the dynamic exchange of mental models of both academic and non-academic staff in achieving service quality. Although such individual attributes as attitude and motivation may be difficult to modify over a short period, given the right stimulus through, for instance, an appropriate reward and compensation system, mental models can be changed for the benefit of the institution. One possibility would be to institutionalize appropriate systems within educational settings to facilitate a community of practice across all levels. That is the way to go for higher education in a changing world

Figure 2.1 A Strategic Service Quality Framework



2.3 Expectations on Service Quality

Because customer expectations are critical for customer satisfaction judgment (Oliver, 1997), empirical interest centers on how customer expectations that are constantly changing especially in a service setting (Solomon *et al.*, 1985), impact overall (cumulative) customer satisfaction. Specifically, in a service setting characterized by heterogeneity of service encounters (Peters *et al.*, 1995), negatively disconfirmed expectations should negatively impact customer satisfaction judgment. This view is in line with the adaptation theory (Helson, 1964) which offers a conceptual anchor (Oliver, 1981) for this reasoning.

Understandably, the importance of customer expectations cannot be ignored by managers. This statement is consistent with Oliver (1997, p. 68) who argues that "the expectation, not the need, is what consumers bring to the purchase." Claycomb and Martin (2002, p. 617) agree with Oliver (1997) that "customers do not generally purchase services, per se, but promise of services". Thus, to the extent that promises

lead to expectation, expectations should be related to customer satisfaction. This analysis is consistent with the observation that in three out of five places, expectation is linked to satisfaction (Oliver, 1997). In the particular case of restaurant customers, the ex ante belief by restaurant customers that the forthcoming services from the restaurant operator would be good or bad, is the expectation (working hypothesis) which they hold. Then, the moment of truth is the actual consumption experience, and that is the anchor customers use to revise their expectations about future services.

Similarly, work by Brickman (1972) showed that customers revise their expectations based on prior disconfirmed expectation information. That is, if expectations are positively disconfirmed, customers are satisfied and they revise their next purchase expectations upwards. On the other hand, if expectations are negatively disconfirmed it may result in customers' dissatisfaction and downward adjustment of their expectations for the next purchase (Anderson and Sullivan, 1993). Following this reasoning, this study hypothesizes that the relationship between the customer satisfaction and customer expectation may be negative for some reasons. First, even when expectations are met, customers may still experience negative effect as would be the case when customers believe that if they had chosen alternative service providers they would have gotten a better deal than they presently have (Taylor, 1997; Inman *et al.*, 1997), and thus their satisfaction and expectation will be negatively related in the long term. Second, the theory of "Forward-looking expectation" (Fornell *et al.*, 1996, p. 9) positing a long term perspective, argues that customers' expectations are subjective forecasts whereby customers' consumption experiences in time t are used by them to make subjective forecasts about the

capability of the service provider to satisfy them in time $t+1$, $t+2$,□…□, $t+n$ to the long term. In the framework of this long term perspective, a firm with a market history of negatively disconfirmed expectations will have the trajectory of its expectations being negatively related to customer satisfaction over the long term.

Similar analysis by Clow and Vorhies (1993) argued that long term success of service firms is directly related to the extent that managers strategically manage customers' expectation. On the other hand, from the standpoint of "the forecast component of expectation" theory (Anderson *et al.*, 1994, p. 56), one can conjecture that, if and only if, consumers' subjective forecasts of future quality of services turn out to be actually poor quality, then expected quality (expectation) and customer satisfaction will be negatively (inversely) related so that it reflects the market's accumulated information about the service provider's poor quality (Anderson *et al.*, 1994). Does this analysis apply to this paper? If it does, it remains to be seen because the data will speak to itself.

Ideally, however, it is well known that satisfaction is dependent on positive disconfirmation of quality as opposed to negative disconfirmation. On the other hand, if the data generation process (DGP) in a particular study reveals that consumers did not experience improvements in quality but rather experienced deterioration in quality over time, the expectations of quality and customer satisfaction will be inversely (negatively) related.

According to the SERVQUAL model developed by Zeithaml *et al.* (1990), customer expectations and perceptions in educational contexts are, to a large extent, influenced

by tangibles, reliability, responsiveness, assurance, and empathy. This model aims to close the gap between the learned disparity between "expectation" and "perception", yet circumstances may present themselves in ways that work against the narrowing of the divide. Here are several possibilities:

i. *Not knowing what customers expect.* Institutions fail to be prepared for the shifting needs of their customers (students) in providing courses and programs that are relevant in subject matter and teaching approaches. Often, learning processes are compromised and academic rigor is questioned;

ii. *Inadequate service quality standards.* Institutions fail to grapple with the shortage of teaching staff when they constantly have to face the pressure of meeting increased enrolments to remain competitive. As such, class sizes are enlarged, stretching the instructor-student ratio. All this has a negative effect on the level of individual attention given to each student inside and outside class;

iii. *Service performance inconsistencies.* Institutions fail to identify appropriate specifications that would meet customers' expectations in terms of content, delivery and application. Learning experience and orientation at large cannot entirely be evaluated by grades alone; service performance should go beyond tangible forms;

iv. *When promises do not match delivery.* Institutions tend to oversell their services, leading to exaggerated promises that misrepresent their actual potential and academic readiness. One of the most common problematic strategies is the excessive promotion of facilities and support services, ranging from "hardware" (technology) to "software" (people) platforms – yet failing to meet all of them completely; and

v. *Level of tolerance ignored.* Institutions fail to diversify the expectation levels of customers in a way that the shortcomings of one service can be offset by the strengths of another, such that, the more important the area, the smaller the boundary of tolerance. The lack of choices in terms of learning diversification frequently deters customers from modifying the expectation of service standards (Parasuraman *et al.*, 1988).

2.4 Perceptions on Service Quality

The perception of tertiary students as customers or products is not necessarily straightforward. For instance, the view of "customers" would be appropriate if a marketing perspective was adopted. It is believed that satisfied students would help to increase the profile and popularity of the institution. In contrast, the view of "products" could be adopted if students were considered as outcomes of the educational system to be prepared for the industry and society. Hence, the dichotomy between "customer" and "product" is largely context-driven and each perspective will have a different influence on the way service quality might be developed in the institution (Ramsden, 1991; Rinehart, 1993). As an interviewee reflected, education is a reflexive process where a clear demarcation of what or how students should be treated cannot be ideally realized:

... in education, it is hard to customize a product for the industry and the knowledge we impart normally goes beyond the curriculum in some respect ... if we see students as customers (humans) rather than products then we are here as educators to cater to their needs ... and this (educational role) may extend beyond the needs of the industry (instructor).

How students are perceived determines the affective relationship between instructors and learners. Those who adopt a customer-orientation tend to demonstrate a human dimension to their interaction with students, while others who adopt a product-orientation tend to be more mechanistic in their approach to human relations. The underlying issue concerning this dichotomy of perceptions, therefore, raises the question of intent on the part of the instructors whether to view their network of association as an organism where satisfaction is derived from the learners' continued growth and renewal (Argyris, 1982), or a machine where the primary preoccupation is to repair any part that might hinder routine operations (Taylor, 1911). Evidence of both orientation types is highlighted in the following examples where the onus for providing that human touch lies entirely on the instructor:

I've read from the reflections of our students (submitted as part of a character development course) that they sought help from their lecturers repeatedly ... up to three times ... but no help was given (department head).

... the bonding between students and staff is always the sole responsibility of the staff (both academic and non-academic). They must take the initiative and build trust in their relationship with students. This is quite lacking from what I know (management staff).

In narrowing the disparity between viewing tertiary students as customers and products, a three-way expectation involving the management, instructors and students should be considered; otherwise, unnecessary conflicts may arise as highlighted by an instructor:

... we [lecturers] are generally meeting our students' expectations to fulfill management's KPIs [Key Performance Indicators] ... we are too overwhelmed with

trying to meet these KPIs that sometimes we lose focus on the one thing that is of true value – educate.

Because of the socially-constructed nature of education, clarification of expectations to meeting management's and students' needs is fundamental to the understanding of service quality in higher education. As all interviewees would agree, communication of judiciously defined expectation outcomes is vital to the facilitation of conditions for the achievement of desired service standards. Hence, views of students as customers or products need to be context-driven, as the interplay between the two will influence the way in which service quality in higher education will be perceived, evaluated and upheld. Extending from SERVQUAL, findings further reveal that intent and empathy of instructors cannot be overemphasized as these are attributes that can transform mental models of students and recreate the classroom into an extended learning space where the interaction dynamics will engage the whole person rather than a portion, the mind. This perspective is firmly rooted in the voices of the management, as represented by:

Generally they [instructors] do have a heart for students ... when they choose teaching as a profession, they must have thought of the well-being of students. Well-being does not mean just accommodating students' needs but enforcing a certain sternness and strictness ... all for the good of the students' discipline and progress.

Correspondingly, the focus on educational excellence should be based on the quality of learners assessed by specific skills, knowledge and mental models that can contribute usefully and productively to the knowledge society. Educational experience should, therefore, center on the whole person involving intellectual,

psychological, emotional and social development. In addition, enhancement of this experience can be realized from the dynamics of communication between instructors and students as influencing the way students view and solve problems through appropriate feedback systems. From a more specific context, experience within the primary learning space (classroom) needs to embody the needs and expectations of the constituents and be appraised accordingly – whether these expectations have been promptly anticipated and met both in and outside that space, as emphasized by an instructor:

Within the classroom, we can see and act ... we can take action (motivate and encourage students to learn). Outside the classroom, it is sometimes beyond our control but we hope they [students] will put what they have learnt into practice.

In such a competitive context as worldwide higher education tends to be, quality issues are increasingly relevant for its institutions and universities. Harvey and Green (1993) have explained that quality means different things to different people. Widely differing conceptualizations of quality were grouped by the authors into five discrete but interrelated categories: quality can be viewed as exception, as perfection, as fitness for purpose, as value for money and as transformative. Quality was also viewed as relative to "processes" or "outcomes". Regarding outcomes, McCoy *et al.* (1994) state that in the US from the 1990s onwards, the Department of Education, the nation's governors, state legislatures and accrediting agencies all endorsed outcomes assessment as the appropriate tool for evaluating institutional effectiveness. This is part of a trend shared by education in general, that all the critical components of the education system produce outcomes (Odden, 1990). For McCoy *et al.* (1994) the traditional methods of assessing educational quality,

namely, measuring levels of inputs such as expenditure per student, number of library volumes, number of faculty and so forth, are inadequate. To maintain quality and increase accountability, higher education institutions have been forced to develop alternative evaluation procedures. Outcomes assessment requires defining the desired results or outcomes of a particular instructional/educational effort. This is a general trend that is seen – with some reservations – as a worldwide movement (Mollis and Marginson, 2002).

One of the most interesting outcomes is student perception of institutional quality. This is an "outcome quality" (Clewes, 2003) based on a service-marketing definition of quality (Grönroos, 1984): Quality must be judged on the assessment of the user or consumer of the service. This outcome is very important for institutions. Wright and O'Neil (2002) for example found that service delivery has a high value as a means of ensuring competitive advantage. Generally, educational quality literature tends to emphasize quality as a "stakeholder-relative" concept (Harvey and Green, 1993, p. 28). Among the "stakeholders" in higher education are its students, who are also an essential part of university processes, because all these student perceptions of quality are relevant as "outcome quality".

Other quality outcomes that attract long term research efforts include student assessment of quality in teaching and learning (Ramsden, 1991). Sometimes these opinions or perceptions are important in faculty promotion and in quality rankings of teaching universities. Another interesting approach is assessing the quality of the total student experience (Gaell, 2000; Wiers-Jenssen *et al.*, 2002). Both approaches are based on subjective student expectations and perceptions. Student satisfaction approaches may be a tool for building a bridge between more traditional and

academic views on how to improve higher education and more market-oriented perspectives (Wiers-Jenssen *et al.*, 2002, p. 193). Marketing-related issues are not irrelevant for today's higher education institutions in a context where there is competition for the best students and a more widespread understanding of higher education as a long-term investment, part of whose return can be measured quantitatively (salary after graduation and insertion in the job market for example), and so on. All of this is related to quality understood as outcome. Student perception of quality is an important variable to be studied in this context, and may be related to almost any definition of quality we may share.

2.5 Service Quality Model

One service quality model is SERVQUAL. Parasuraman *et al.*'s (1991) SERVQUAL model analyzes what conditions the formation of expectations. After this analysis, the model concludes that word-of-mouth between customers, satisfaction of customer needs, past experience of this or similar services, and communication by the company in publicity or promotional campaigns, are all important variables in expectation formation (Zeithaml *et al.*, 1993). Parasuraman *et al.* (1991) proposed five dimensions of service quality:

i. Tangibles. Physical facilities, equipment, appearance of personnel. Tangibles explain 11 per cent of the perceived service quality;
ii. Reliability. Ability to perform the promised service dependably and accurately (32 per cent of service quality);
iii. Responsiveness. Willingness to help and provide prompt service (22 per cent of service quality);

iv. Assurance. Knowledge of service and courtesy of employees and their ability to convey trust and confidence (19 per cent of service quality); and

v. Empathy. Caring, individualized attention that the firm provides its customers (16 per cent of service quality).

The SERVQUAL model is used widely to measure service quality. Its original service dimensions were determined by Parasuraman *et al.* (1985), with subsequent refinements and industry-specific adaptations. Zeithaml *et al.* (1983) augmented SERVQUAL to further differentiate between service quality and customer satisfaction. This was in response to the public use of these two terms as interchangeable. The fact is, customers access service quality by comparing the service level that they receive, against both the service level that they would have preferred (or desired), and the service level that they are willing to accept (adequate). Customer satisfaction, on the other hand, is assessed from a comparison of what services were expected (predicted) versus what customers perceive that they have actually received. Bolton and Drew (1991) further reasoned that, in a dynamic framework, customer satisfaction with a specific service encounter depends on pre-existing or contemporaneous attitudes about service quality. They also showed how customer post-attitudes depend on customer satisfaction.

The above conciseness in defining customer service and the user-friendly format of SERVQUAL have helped made it into an industry standard (Llosa *et al.*, 1998). However, for service excellence development, three areas for further improving SERVQUAL can be identified. First, SERVQUAL assumes a linear relationship between customer satisfaction and service attribute performance. The implication is that low customer satisfaction results from low attribute performance, and that this

should be the focus for improvement. This deduction was gathered from publications of SERVQUAL applications. The norm has been for organizations to focus on low customer satisfaction and low attribute performance. This assumption is not necessarily correct, however. Paying more attention to a particular service attribute (e.g. customer assurance) may not always lead to higher customer satisfaction if there is satiation or if that attribute is taken for granted. Complimentarily, customer satisfaction can sometimes be greatly improved with only a small improvement of a service attribute that is unexpected or delightful. For example, customers may take courteous sales personnel as a given service attribute when shopping at departmental stores. But high empathy in this context may not lead to high customer satisfaction. On the other hand, an extra 15 ml of perfume, as a bonus in the purchase of cosmetics, may lead to high customer satisfaction. SERVQUAL's use of a linear scale in its assignment of prioritization for improving service attributes may, therefore, not be appropriate in certain cases.

A second area for improvement concerns SERVQUAL as a continuous improvement and innovation tool. SERVQUAL as defined by Parasuraman *et al.* (1988), is a concise multiple-item scale with good reliability and validity that can be used to better understand the service expectations and perceptions of consumers. Its use in service development is, essentially, as a continuous improvement tool. However, with increasing market pressure, continuous improvement may not be sufficient in maintaining a competitive edge. Many organizations are strategically moving towards innovation in order to achieve increase competitiveness (McAdam *et al.*, 2000). Shen *et al.* (2000) affirmed this new paradigm in stating that customer needs

and expectations have to be met and exceeded through product innovation. SERVQUAL was not designed to address the element of innovation.

Third, SERVQUAL provides important information on the gaps between predicted service and perceived service. However, it is not able to address how the gaps can be closed. It would be good if SERVQUAL can be integrated with other service quality tools that are more focused on reducing the service gaps.

SERVQUAL is used as a diagnostic technique for uncovering broad areas of an organization's service quality strengths and weaknesses. The model by Parasuraman *et al.* (1988) consists of the following five dimensions:

i. (1) Tangibles – physical facilities, equipment, and the appearance of personnel;
ii. (2) Reliability – ability to perform the promised service accurately and dependably;
iii. (3) Responsiveness – willingness to help customers and to provide prompt service;
iv. (4) Assurance – knowledge and courtesy of employees and their ability to convey trust and confidence; and
v. (5) Empathy – caring and individualized attention to customers.

SERVQUAL defines customers' evaluation of quality as a function of the gap (difference) between expected service and perceived service. Parasuraman *et al.* (1988) identified the following five gaps that can result in unsuccessful service delivery:

i. (1) Gap between customer expectation and management perception. This may result from a lack of understanding of what customers expect from a particular service;
ii. (2) Gap between management's perception and service quality specifications. This gap results when there is a discrepancy between what management perceives to be the customers' expectations and the actual established service quality specifications;
iii. (3) Gap between service quality specifications and service delivery. Even when guidelines or specifications exist for performing excellent service, its delivery may not be up to standard due to poor employee performance, resulting in this gap;
iv. (4) Gap between service delivery and external communication. Customer expectations are established by promises made by a service provider's promotional messages. This gap measures the consistency between the quality image portrayed in promotional activities and the actual quality services offered; and
v. (5) Gap between perceived service and delivered service. This gap results when one or more of the previous gaps occur.

In 1993, Zeithaml *et al.* addressed what they viewed as a lack of consensus among researchers on the enlarged definition base of customer service. They expanded SERVQUAL to include the relationships among customer service expectation, service level antecedents, perceived service, service quality, customer satisfaction, and other intervening factors. Their research made a major contribution to the study of service marketing (Dion *et al.*, 1998).

Zeithaml *et al.* defined two additional gaps in service quality. One is the perceived service superiority gap which arises from a difference between desired service and perceived service. Desired service is that which customers want or desire before encountering a service. Perceived service is the customers' perception of the service level received. The other gap is the perceived service adequacy gap which arises from a difference between perceived service and adequate service. Perceived service was previously defined. Adequate service refers to the minimum level of service that customers are willing to accept. The most important part of Zeithaml *et al.*'s (1993) model is that they further differentiated service quality from customer satisfaction. While service quality is a function of the perceived service gaps, customer satisfaction results from comparing predicted service to perceived service. Predicted service is the level of service that customers believe they are likely to get, while perceived service is how they feel after receiving the service. The present research differentiated service quality from customer satisfaction. From the widespread applications published, the benefits of SERVQUAL can be summarized as follows:

i. It is good at eliciting the views of customers regarding service encounters, e.g. customer relative importance, expectations, and satisfaction;
ii. It is able to alert management to consider the perception of both management and customers;
iii. Addressing the service gaps can serve as a basis for formulating strategies and tactics in order to ensure the fulfillment of expectations;
iv. SERVQUAL is able to identify specific areas of excellence and weaknesses;
v. It is able to prioritize areas of service weaknesses;
vi. It provides benchmarking analysis for organizations in the same industry; and

vii. SERVQUAL can trace the trend of customer relative importance, expectation, and perception, if applied periodically.

Despite SERVQUAL's wide use by academics and practitioners in various industries and in different countries, a number of studies had questioned its conceptual and operational bases. In particular, one criticism concerned the operationalization of the perceived quality concept. Babakus and Mangold (1989), Carman (1990), Finn and Lamb (1991), and Cronin and Taylor (1992) argued that the estimation of customer perception may already include perception minus the expectation mental process. In other words, respondents may already have mentally compared their perceptions to their expectations when they are asked to rate their perception of an organization. The second criticism pertains to SERVQUAL's dimensions. SERVQUAL applications in different industries reveal that the five dimensions may not cover aspects of customer service present in all service encounters. For example, Finn and Lamb (1991) discussed that the service emphases are different when evaluating "product" services (e.g. department store) than when evaluating "pure" services (e.g. bank).

2.6 Service Quality In Higher Educational Institution

One approach used in higher education for studying student perceptions of quality is the service quality approach. This comes from service marketing, a sub-discipline within the overall marketing domain (Clewes, 2003). Quality from this point of view can be defined as being a measure of how well the service level delivered matches customer expectations (Grönroos, 1984; Parasuraman *et al.*, 1985). There is currently agreement in the field that the trait that contributes most to determining the sustainable long-term position of a company is the opinion of its customers on the

product or service they receive. For customers, having a good opinion of the company is necessary to satisfy all their needs and expectations. Service quality can be a strategic differentiating element for companies that are trying to achieve it (Ruiz-Olalla, 2001).

Of course universities are different from other service companies and they have their particular characteristics. Shostack (1977) emphasized the importance of intangible attributes in the make-up of the service product. For the author, teaching is one of the most intangible services of all. Soutar and McNeil (1996) explained how there has been little attempt to approach the topic of quality assurance, particularly important in the service industries, from the student's viewpoint. The marketing principle, which suggests that corporate strategy should flow from consumer needs, has not been given much credence in discussions on accountability in higher education. Harvey *et al.* (1992) suggested that there is little evidence that literature on service quality has had much impact on higher education. This has been changing since then and education service quality has become a major issue in higher education worldwide (Zafiropoulos and Vrana, 2008). However it may still be true what Hittman (1993) proposed that academic focus is overemphasized in quality discussions in higher education at the expense of non-academic aspects of quality. He believed that quality in the higher education context is much more than education. All this made Soutar and McNeil (1996) suggest that measurements of student satisfaction need to be more holistic. Clewes (2003) argued the importance of the relationship between service quality and quality literatures. On the other hand, trends in new economy marketing emphasize networks of interactive relationships and representational processes between suppliers, customers, competitors, authorities

and others, rather than a structure with clear boundaries and also that it requires new mindsets.

For Seymour (1992) the strategic management of quality is a viable option for academic administrators, merging the philosophy and tools of strategic quality from industry with the thinking of campus administrators. Customer satisfaction is one of the dimensions discussed. Hill (1995) argued the need for higher education institutions to gather information on student expectation, and not only during their time at university. For Athiyaman (1997) consumer satisfaction and service quality continue to attract the attention of researchers and practitioners in a wide variety of disciplines. All these studies point to the interest of paying attention to consumer satisfaction and perceived quality in higher education, and to the connection between consumer satisfaction and quality perceptions. Students are the best targets for these studies in the higher education context.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Methodology is a methods used to collect the data and analyzed it by following the research framework, research design, measurement of variables/instrumentation, data collection and technique of data analysis.

3.2 Research Framework

From the literature review, it was found that SERVQUAL, one of the service quality measurement models has been extensively applied to measure consumers' perceptions and expectations of service quality.

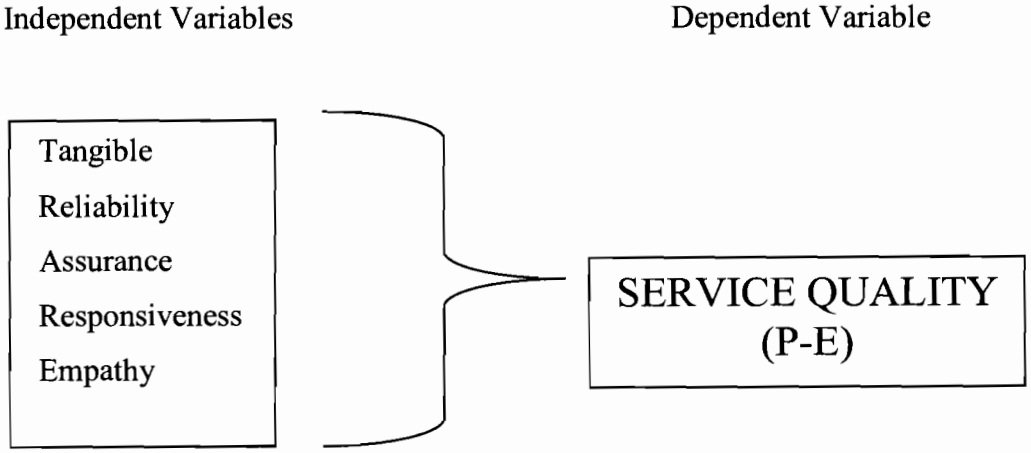
From the research objectives, SERVQUAL model had been used to determine the perceptions and expectations of the students about the service quality provided by UKM. Primary support for the importance of service reliability in the services quality literature comes from studies using the SERVQUAL survey methodology (Parasuraman, 1988). The SERVQUAL method measures five dimensions of service quality (as shown in Table 3.1) which include tangibles, reliability, responsiveness, assurance and empathy.

Table 3.1 Dimensions of Service Quality

Tangibles	Physical objects that are needed for carrying out the service such as facilities, equipment, etc
Reliability	The service is carried out in the way it is promised.
Responsiveness	Willingness to help customers and provide prompt service.
Assurance	Knowledge and courtesy of employees and their ability to inspire trust and confidence (including competence, courtesy, credibility and security).
Empathy	Caring and individualized attention that the firm provides to its customers (including access, communication, understanding the customer).

The theoretical framework on this study is shown below:

Figure 3.1 Conceptual Framework



3.3 Research Design

A research design is used as a basic plan of the research projects that guiding researcher to collect their data and analysis for their research. The most common research design that the researcher always uses are exploratory, descriptive and causal. In this study, exploratory and descriptive study is used as a purpose of the study to obtaining data and analysis of the research.

Exploratory study is important for obtaining a good grasp of the phenomena of interest and for advancing knowledge through good theory building and hypothesis testing. In this study, the exploratory research included literature reviews in order to gain more details information about the research problems and issues related with the student's perceptions and expectations of service quality in higher education. In this study, descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of the student's perceptions and expectations about the service quality provided by UKM.

3.4 Measurement of Variable/Instrumentation

In order to assess the perceptions of service quality, the model most often utilized has been SERVQUAL developed by Parasuraman *et al.* (1985) and refined in 1988. The SERVQUAL questionnaire presents the respondent with a series of service attributes which they rate using a Likert-type scale response format, from 1 (strongly disagree) to 6 (strongly agree). The 22 attributes which are included are grouped into five underlying dimensions which are respondent tangibles, respondent reliability,

respondent responsiveness, respondent assurance, and respondent empathy.

The respondent is asked first to provide their ratings for an excellent service firm of the type in question, which is followed by their ratings for the actual service which they received. The difference between these perceptual ratings on the 22 service attributes then identifies the potential "gaps" where the respondent experiences disconfirmed expectations (Parasuraman *et al.,* 1988). An alternative method of assessing service quality is employed in this study which is based on the importance performance paradigm. It is reasonable to assume that when students evaluate the quality of their educational experience, they are likely to place different importance weights on different criteria.

For this study, a structured questionnaire was used as the instrument. The questionnaire consisted of four (4) major sections. Section A was deal about background information on the participants. Section B was concerned with student expectations of an excellent university. Section C was concerned on the student perceptions of their own university and Section D was some recommendation by respondent for future research. The seven (7) factors that was study are as follows:-

i. Factor 1: Program Issues;
ii. Factor 2: Academic Reputation;
iii. Factor 3: Physical Aspects/Cost;
iv. Factor 4: Career Opportunities;
v. Factor 5: Location;
vi. Factor 6: Time; and
vii. Factor 7: Other

3.5 Data Collection

A total of 200 students had chosen as a sample to adopt a simple random sampling in this study. The questionnaires were distributed to UKM students. The samples are randomly taken from their list of matrix numbers. The numbers of questionnaires distributed was 200 copies. Out of 200 copies, there were only 170 were received back after the questionnaires have been completed and that gave a respond rate 85.0 percent.

A structured questionnaire was developed that consisted with four (4) major sections. Section A consisted of eight (8) questions related to student's background information. Section B contained the student's expectations of an excellent university with 23 questions. Section C comprised of 23 questions related to the student's perception of their own university. Section D included the student's respondents about their recommendation for future research.

3.6 Technique of Data Analysis

All the data collected from respondents were analyzed based on descriptive analysis by using the Statistical Package for Social Science (SPSS) software version 16.0. In this study, the SERVQUAL scale was used.

The study used the five service quality determinants identified by Parasuraman *et al.* (1985) and refined in 1988. However, to find out the perceptions and the expectations of UKM student, the seven (7) factors in higher education identified by

Joseph and Joseph (1997) were used with some modifications to accommodate with the study.

The evaluation of reliability of a measurement procedure consists of estimating how much of the variation in scores of different variables is due to chance or random error. Measures are necessary in order to ensure that the same results will be consistently reproduced in subsequent administrations of the instrument.

Coefficient alpha is used to estimate the degree of reliability with estimating ranging from 0 to 1.0. The higher coefficient (closer to 1.0), the stronger linear relationship of the items being correlated and the higher the internal consistency.

CHAPTER FOUR

FINDINGS

4.1 Introduction

The chapter was structured to provide a detailed discussion of the results of empirical testing for seven (7) factors of expected and perception of UKM respondents. The result of the final comparison or variables, measures the reliability of the measurements and the testing of the categorical of expectation and perception based on seven (7) factors such as programme, academic perception, career opportunity, physical aspect, time, location and others. The objective of this study is to identify the factors that influence the students in UKM about their perceptions and expectations of services provided by their university.

SERVQUAL model had been used to determine the perceptions and expectations of the students in public and private university in Malaysia. SERVQUAL model is a model that had been developed by Parasuraman *et al.* (1985) and refined in 1988. The SERVQUAL questionnaire presents the respondent with a series of service attributes which they rate using a Likert-type scale response format. The respondent is asked first to provide their ratings for an excellent service quality of the type in question, which is followed by their ratings for the actual service which they received. The difference between these perceptual rating on the 22 service attributes then identifies the potential "gaps" where the respondent experiences disconfirmed expectations (Parasuranam *et al.*, 1988).

Discussion of test results was done based on the instrument of the expectation and perceptions. According to Cohen (1988), studies may either in nature or descriptive, or may be conducted to test hypotheses. The quantitative study with survey research is undertaken when not much is known about the situation at hand, or no information is available on how similar problems or issues have been solved in the past. A descriptive study is undertaken in order to ascertain and to describe the characteristics of the variables of interest in a situation (Hair *et. al.*, 2006).

However, for this study, the 22 service attributes in the original SERVQUAL have been modified to 23 service attributes to suit with the higher institution environment in Malaysia. The questionnaires also have been developed based on the study of service quality in higher education by Joseph and Joseph (1997). The data that had been collected from 170 respondents in UKM and was analyzed using the SPSS version 16 to determine the student's expectations and perceptions about their service quality in their university for each of the factors. Appropriate Statistic used and the data presented as in percentage form. The descriptive analysis, reliability test, means analysis, categorical analysis used to examine the expectation and perception based on seven (7) factors.

4.2 Results of Pilot Test

Pilot test purpose was to confirm the properties of measurement scales and the items to make up them whether it has relationships between the individual items in the scales of the questionnaires in order get the overall index of internal consistency of the scale as a whole through the excluding of the problem items (Hair, *et. al.*, 1998). Most of researchers use Cronbach's Alpha reliability test to test the internal consistency (Babbie, 2003). If the value of Alpha from ±.41 to ±.70 denoted with the moderate correlation, and if the Alpha is greater than ±.71 can be denoted with the high correlation (Sekaran, 2003).

Table 4.1 Reliability Results Of Expectation (N=30)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.664	.689	30

Table 4.2 Reliability Results of Expectation Every Items (N=30)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Programme Issues 1	86.17	58.213	-.025	.	.675
Programme Issues 2	85.70	56.286	.252	.	.656
Programme Issues 3	86.07	50.616	.562	.	.623
Programme Issues 4	86.00	56.138	.141	.	.662
Programme Issues 5	86.23	54.599	.324	.	.648
Programme Issues 6	86.00	55.517	.229	.	.655
Academic Performance 1	85.43	56.047	.122	.	.664
Academic Performance 2	85.53	55.706	.155	.	.661
Academic Performance 3	86.17	52.695	.285	.	.648
Academic Performance 4	86.10	52.507	.259	.	.651
Phisical Aspect 1	86.63	51.482	.405	.	.635
Phisical Aspect 2	87.27	51.306	.443	.	.632
Phisical Aspect 3	85.80	52.234	.516	.	.632
Phisicap Aspect 4	85.80	53.338	.536	.	.636
Career Opportunity 1	86.67	52.161	.337	.	.642
Career Opportunity 2	86.63	52.240	.351	.	.641
Location 1	87.60	53.076	.187	.	.662
Location 2	86.40	56.041	.204	.	.657
Time 1	87.23	55.426	.189	.	.658
Time 2	87.80	53.407	.196	.	.660
Time 3	87.80	48.924	.352	.	.639
Other 1	87.37	59.689	-.144	.	.685
Other 2	87.13	62.809	-.336	.	.708

Resources: Questionnaire Section B

Table 4.3 Reliability Results Of Perception (N=30)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.681	.674	30

Table 4.4 Reliability results Of Perception Every Items (N=30)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Programme Issues 1	90.70	63.114	.286	.	.669
Programme Issues 2	90.60	63.972	.165	.	.677
Programme Issues 3	90.70	67.183	-.061	.	.691
Programme Issues 4	90.27	65.720	.033	.	.688
Programme Issues 5	90.33	63.402	.147	.	.680
Programme Issues 6	90.27	64.616	.111	.	.682
Academic Performance 1	90.00	61.103	.455	.	.657
Academic Performance 2	90.37	58.309	.614	.	.641
Academic Performance 3	90.03	55.964	.504	.	.640
Academic Performance 4	90.37	55.344	.562	.	.634
Phisical Aspect 1	91.27	62.961	.230	.	.672
Phisical Aspect 2	92.03	61.895	.212	.	.674
Phisical Aspect 3	91.03	63.206	.145	.	.681
Phisicap Aspect 4	90.53	63.154	.266	.	.670
Career Opportunity 1	91.37	60.033	.270	.	.668
Career Opportunity 2	91.23	62.806	.166	.	.679
Location 1	91.93	61.375	.170	.	.682
Location 2	91.10	67.955	-.126	.	.696
Time 1	91.67	63.540	.196	.	.675
Time 2	92.07	61.030	.304	.	.665
Time 3	91.93	62.202	.162	.	.681
Other 1	92.07	59.995	.371	.	.659
Other 2	91.80	60.855	.328	.	.663

Resources: Questionnaire Section C

Based on the data of 30 respondents in the pilot test, the multi-items measures were subjected to a series of reliability checks. For the multi-item scale, the set of items that correspond to each theoretical construct was initially subjected to an examination of Cronbach's Alpha. Thus the results of the pilot test shows all measures appeared to be unidimensional, internally consistent, moderate correlation, reliable and valid for further analysis.

4.3 Statistical Data Analysis of UKM Students

4.3.1 Demographic Profiles of UKM Students

Descriptive frequency carried out to draw accurate conclusion about demographic profile of UKM respondents. In this study, the data analyzed using descriptive statistics and inferential statistics. Descriptive statistics such as frequency and percentage used to measure the percentage of returned questionnaire and also be used to describe the respondents' profile.

Table 4.5 Profiles of Respondents (N=170)

		Gender	Age	Race	Marital Status	Previous Academic Institution	Previous Level of Education	Financial Aid	Financial Support	University
N	Valid	170	170	170	170	170	170	170	170	170
	Missing	0	0	0	0	0	0	0	0	0

Table 4.6 Gender of Respondents (N=170)

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	144	84.7	84.7	84.7
	Female	26	15.3	15.3	100.0
	Total	170	100.0	100.0	

Table 4.7 Age of Respondents (N=170)

	Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 18 years old	1	.6	.6	.6
	18-21 years old	53	31.2	31.2	31.8
	22-25 years old	98	57.6	57.6	89.4
	26-30 years old	14	8.2	8.2	97.6
	Above 30 years old	4	2.4	2.4	100.0
	Total	170	100.0	100.0	

Table 4.8 Race of Respondents (N=170)

	Race	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	92	54.1	54.1	54.1
	Chinese	46	27.1	27.1	81.2
	Indian	31	18.2	18.2	99.4
	Others	1	.6	.6	100.0
	Total	170	100.0	100.0	

Table 4.9 Marital Status of Respondents (N=170)

	Marital Status	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Unmarried	144	84.7	84.7	84.7
	Married	25	14.7	14.7	99.4
	Others	1	.6	.6	100.0
	Total	170	100.0	100.0	

Table 4.10 Previous Academic Institution of Respondents (N=170)

	Previous Academic Institution	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	28	16.5	16.5	16.5
	College	59	34.7	34.7	51.2
	University	28	16.5	16.5	67.6
	Others	55	32.4	32.4	100.0
	Total	170	100.0	100.0	

Table 4.11 Previous Level of Education of Respondents (N=170)

	Previous Level of Education	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor	9	5.3	5.3	5.3
	Diploma	82	48.2	48.2	53.5
	STPM	25	14.7	14.7	68.2
	SPM	1	.6	.6	68.8
	Others	53	31.2	31.2	100.0
	Total	170	100.0	100.0	

Table 4.12 Financial Aid of Respondents (N=170)

	Financial Aid	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	140	82.4	82.4	82.4
	No	30	17.6	17.6	100.0
	Total	170	100.0	100.0	

Table 4.13 Financial Support of Respondents (N=170)

	Financial Support	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PTPTN	104	61.2	61.2	61.2
	State Loan	3	1.8	1.8	62.9
	Company	12	7.1	7.1	70.0
	JPA	15	8.8	8.8	78.8
	MARA	13	7.6	7.6	86.5
	Others	23	13.5	13.5	100.0
	Total	170	100.0	100.0	

Resources: Questionnaire Section A

The categories in demography variables of respondent were represented in the study were restricted to medium-contact and high-contact person. In conclusion, the survey achieved a good distribution in terms of gender, age, race, marital status, previous academic institution, financial aid and support. In this section, frequency distributions were calculated for all of the individuals for this study. The results of respondents' profile for UKM respondents are shown in Table 4.5 until Table 4.13.

Total of 170 samples have been collected UKM students. Out of 170 respondent 144 respondents are male and 26 respondents are female. Most of the respondents age were between 22-25 years old (57.6%) followed by the age groups of 18-21 years old (31.2%), 26-30 years old (8.2%). 54.1% of respondents were Malay, 27.1% were Chinese and Indian (0.6%).

84.7% of respondent were unmarried. 16.5% of the respondents were from university, 34.7% from college and 16.5% were from high school. 32.4% respondents got their previous level of education from others, 48.2% were from Diploma, 14.7% of them were from STPM, SPM were 0.6%, Bachelor (5.3%) and others (31.2%) In terms of finance aid, 82.4% of the respondents got the financial aid

and most of them got from PTPTN (61.2%), State Loan (1.8%), Company (7.1%), JPA (8.8%), 7.6% from MARA and Others (13.5%).

4.3.2 Reliability Test of Measurements

Reliability is a matter of whether a particular technique, applied repeatedly to the same object, would yield the same result each time. The reliability of a measure is established by testing for both consistency and stability (Cavana, Delahaye, & Sekaran, 2000).

4.3.2.1 Reliability Analysis of Expected Items (N=23)

In this study, using Cronbach's Alpha conducted with a sample of respondents with a view to review and to measure reliability of the questionnaire. Cronbach's Apha is an adequate test of reliability (Cavana, Delahaye, & Sekaran, 2000). Generally, an alpha coefficient of 0.6 or higher is accepted, some suggest 0.6 and above is acceptable (Cavana, Delahaye, & Sekaran, 2000).

Table 4.14 Reliability Analysis of Expected Items

Code	Cronbach's Alpha
Programme Issues 1	0.909
Programme Issues 2	0.908
Programme Issues 3	0.907
Programme Issues 4	0.906
Programme Issues 5	0.910
Programme Issues 6	0.906
Academic Perception 1	0.908
Academic Perception 2	0.909
Academic Perception 3	0.907
Academic Perception 4	0.907
Physical Aspect 1	0.904
Physical Aspect 2	0.904
Physical Aspect 3	0.907
Physical Aspect 4	0.906
Career Opportunity 1	0.910
Career Opportunity 2	0.911
Location 1	0.909
Location 2	0.904
Time 1	0.908
Time 2	0.909
Time 3	0.908
Other 1	0.903
Other 2	0.907

(N = 23; Cronbach's Alpha of Expected = 0.911)
Resources: Questionnaire Section B

For this study, to determine the internal consistency of the measures of seven (7) factors, Cronbach's coefficient alpha was computed foe each factors for the measures of SERVQUAL. The results of Cronbach's coefficient alpha for each expectation of UKM respondents are shown in Table 4.14.

4.3.2.2 Reliability Analysis of Perception Items

All measures exhibited high reliabilities with coefficient alphas ranging from 0.70 to 0.90, exceeding or approaching the acceptable level of 0.70 (Hair *et. al,* 1988) in all cases. All measures survived a factor analysis with high loadings and possessed

unidimensionality. Overall, the measures performed well and in conclusion, according to the findings from the pre-test study, all measures were considered reliable and unidimensional for further analysis in the main study. The results of Cronbach's coefficient alpha for each perception of UKM respondents are shown in Table 4.15.

Table 4.15 Reliability Analysis of Perception Items

Code	Cronbach's Alpha
Programme Issues 1	0.820
Programme Issues 2	0.829
Programme Issues 3	0.831
Programme Issues 4	0.837
Programme Issues 5	0.832
Programme Issues 6	0.836
Academic Perception 1	0.831
Academic Perception 2	0.831
Academic Perception 3	0.839
Academic Perception 4	0.833
Physical Aspect 1	0.829
Physical Aspect 2	0.825
Physical Aspect 3	0.822
Physical Aspect 4	0.827
Career Opportunity 1	0.832
Career Opportunity 2	0.835
Location 1	0.831
Location 2	0.834
Time 1	0.827
Time 2	0.830
Time 3	0.823
Other 1	0.834
Other 2	0.833

(N = 23; Cronbach's Alpha of Perception = 0.839)
Resources: Questionnaire Section C

4.3.3 UKM Means of Expected and Perception Based on Seven (7) Factors

Table 4.16 Means of Expected Based on Programme Every Items (N=170)

		Programme Issues 1	Programme Issues 2	Programme Issues 3	Programme Issues 4	Programme Issues 5	Programme Issues 6
N	Valid	170	170	170	170	170	170
	Missing	0	0	0	0	0	0
Mean		5.58	5.39	5.43	5.37	5.46	5.41
Std. Deviation		.720	.691	.728	.752	.698	.640

Table 4.17 Means of Expected Based on Programme (N=170)

N	Valid	170
	Missing	0
Mean		5.4412
Std. Deviation		.49766

Table 4.18 Means of Expected Based on Academic Reputation Every Items (N=170)

		Academic Reputation 1	Academic Reputation 2	Academic Reputation 3	Academic Reputation 4
N	Valid	170	170	170	170
	Missing	0	0	0	0
Mean		5.53	5.58	5.46	5.46
Std. Deviation		.588	.632	.607	.616

Table 4.19 Means of Expected Based on Academic Reputation (N=170)

N	Valid	170
	Missing	0
Mean		5.5059
Std. Deviation		.41061

Table 4.20 Means of Expected Based on Physical Aspects/Cost Every Items (N=170)

		Physical Aspects/Cost 1	Physical Aspects/Cost 2	Physical Aspects/Cost 3	Physical Aspects/Cost 4
N	Valid	30	30	30	30
	Missing	0	0	0	0
Mean		5.73	5.60	5.43	5.53
Std. Deviation		.450	.498	.504	.507

Table 4.21 Means of Expected Based on Physical Aspects/Cost (N=170)

N	Valid	170
	Missing	0
Mean		5.4691
Std. Deviation		.56736

Table 4.22 Means of Expected Based on Career Opportunities Every Items (N=170)

		Career Opportunities 1	Career Opportunities 2
N	Valid	30	30
	Missing	0	0
Mean		5.40	5.37
Std. Deviation		.498	.490

Table 4.23 Means of Expected Based on Career Opportunities (N=170)

N	Valid	170
	Missing	0
Mean		5.4500
Std. Deviation		.58494

Table 4.24 Means of Expected Based on Location Every Items (N=170)

		Location 1	Location 2
N	Valid	170	170
	Missing	0	0
Mean		5.59	5.65
Std. Deviation		.874	.733

Table 4.25 Means of Expected Based on Location (N=170)

N	Valid	170
	Missing	0
Mean		5.6206
Std. Deviation		.70197

Table 4.26 Means of Expected Based on Time Every Items (N=170)

		Time 1	Time 2	Time 3
N	Valid	170	170	170
	Missing	0	0	0
Mean		5.40	5.54	5.52
Std. Deviation		.665	.808	.690

Table 4.27 Means of Expected Based on Time (N=170)

N	Valid	170
	Missing	0
Mean		5.6206
Std. Deviation		.70197

Table 4.28 Means of Expected Based on Other Every Items (N=170)

		Other 1	Other 2
N	Valid	170	170
	Missing	0	0
Mean		5.54	5.46
Std. Deviation		.786	.755

Table 4.29 Means of Expected Based on Other (N=170)

N	Valid	170
	Missing	0
Mean		5.5000
Std. Deviation		.66395

Resources: Questionnaire Section B

Table 4.16 until Table 4.29 displays descriptive statistics for 170 UKM respondents based on their expectation. N indicates the size of each group. The highest mean of location (M=5.6206; SD=0.70197) and time (M=5.6206; SD=0.70197) shows the high average values of expectation factors on UKM students.

Table 4.30 Means of Perception Based on Programme Every Items (N=170)

		Programme Issues 1	Programme Issues 2	Programme Issues 3	Programme Issues 4	Programme Issues 5	Programme Issues 6
N	Valid	170	170	170	170	170	170
	Missing	0	0	0	0	0	0
Mean		4.41	4.56	4.63	4.64	4.44	4.61
Std. Deviation		.888	.828	.798	.811	.856	.793

Table 4.31 Means of Perception Based on Programme (N=170)

N	Valid	170
	Missing	0
Mean		4.5490
Std. Deviation		.61875

Table 4.32 Means of Perception Based on Academic Reputation Every Items (N=170)

		Academic Reputation 1	Academic Reputation 2	Academic Reputation 3	Academic Reputation 4
N	Valid	170	170	170	170
	Missing	0	0	0	0
Mean		4.78	4.79	4.50	4.33
Std. Deviation		.965	.916	1.158	1.160

Table 4.33 Means of Perception Based on Academic Reputation (N=170)

N	Valid	170
	Missing	0
Mean		4.6000
Std. Deviation		.93121

Table 4.34 Means of Perception Based on Physical Aspects/Cost Every Items (N=170)

		Physical Aspects/Cost 1	Physical Aspects/Cost 2	Physical Aspects/Cost 3	Physical Aspects/Cost 4
N	Valid	170	170	170	170
	Missing	0	0	0	0
Mean		4.06	3.56	4.55	4.69
Std. Deviation		.915	1.109	.911	.851

Table 4.35 Means of Perception Based on Physical Aspects/Cost (N=170)

N	Valid	170
	Missing	0
Mean		5.4691
Std. Deviation		.56736

Table 4.36 Means of Perception Based on Career Opportunities Every Items (N=170)

		Career Opportunities 1	Career Opportunities 2
N	Valid	170	170
	Missing	0	0
Mean		3.81	3.78
Std. Deviation		1.146	1.133

Table 4.37 Means of Perception Based on Career Opportunities (N=170)

N	Valid	170
	Missing	0
Mean		3.7971
Std. Deviation		1.08717

Table 4.38 Means of Perception Based on Location Every Items (N=170)

		Location 1	Location 2
N	Valid	170	170
	Missing	0	0
Mean		2.88	4.09
Std. Deviation		1.338	.737

Table 4.39 Means of Perception Based on Location (N=170)

N	Valid	170
	Missing	0
Mean		3.4824
Std. Deviation		.95287

Table 4.40 Means of Perception Based on Time Every Items (N=170)

		Time 1	Time 2	Time 3
N	Valid	170	170	170
	Missing	0	0	0
Mean		3.36	3.20	3.35
Std. Deviation		.953	1.408	1.448

Table 4.41 Means of Perception Based on Time (N=170)

N	Valid	170
	Missing	0
Mean		3.3039
Std. Deviation		1.12578

Table 4.42 Means of Perception Based on Other Every Items (N=170)

		Other 1	Other 2
N	Valid	170	170
	Missing	0	0
Mean		3.18	3.42
Std. Deviation		1.079	1.108

Table 4.43 Means of Perception Based on Other (N=170)

N	Valid	170
	Missing	0
Mean		3.3000
Std. Deviation		1.05106

Resources: Questionnaire Section C

Table 4.30 until Table 4.43 shows the physical factor (M=5.4691; SD=0.56736) as one of the perception factor shows the higher mean within seven (7) factors of measurement.

4.3.4 UKM Students Expected Categories Based on Seven (7) Factors

Table 4.44 Categories of Expected Based on Seven (7) Factors (N=170)

Factors	Category						Conclusions
	Low		Moderate		High		
	F	%	F	%	F	%	
1. Programme	-	-	4	2.50	159	96.5	High
2. Academic	-	-	4	2.50	159	95.5	High
3. Physical	3	1.80	6	3.70	154	94.5	High
4. Career	-	-	2	1.20	161	98.8	High
5. Location	-	-	4	2.50	159	98.5	High
6. Time	-	-	4	2.50	159	97.5	High
7. Others	-	-	4	2.50	159	96.5	High

Resources: Questionnaire Section B

Descriptive frequency of each factor was used to determine the level of expectation among 170 UKM respondents. Transformation to three categories such as high, medium and low level was used to rank the level of expectation. Table 4.44 shows that all factors have a high level of expectation above than 94.5%.

4.3.5 UKM Students Perception Categories Based on Seven (7) Factors

Table 4.45 Categories of Perception Based on seven (7) Factors (N=170)

Factors	Category						Conclusions
	Low		Moderate		High		
	F	%	F	%	F	%	
1. Programme	-	-	3	1.80	160	98.2	High
2. Academic	1	0.60	66	40.5	96	58.9	High
3. Physical	3	1.80	6	3.70	154	94.5	High
4. Career	13	8.00	120	73.6	30	18.4	Moderate
5. Location	10	6.10	123	75.5	30	18.4	Moderate
6. Time	53	32.5	90	55.2	20	12.3	Moderate
7. Others	13	8.0	88	54.0	62	38.0	Moderate

Resources: Questionnaire Section C

Descriptive frequency also used to determine the level of perception among 170 UKM respondents. Transformation to three categories such as high, medium and low level was used to rank the level of perception. Table 4.45 shows that programme, academic and physical factors have a high level of expectation (58.9% and above). The career, location, time and others shows the moderate level of perception.

Overall, based on 170 of UKM respondents, the level of expectation of UKM student is very high where the higher is career factor. Besides, the perception category show there were three (3) factors (programme, academic and physical) indicate as high level and there were four (4) factors (career, location, time and others) categorize as moderate level of perception.

4.3.6 T-Test Analysis

The standard deviation indicates the amount of variability of the scores in each group. These values should be similar to each other for independent sample T-test to be appropriate. The 95% confidence interval for the mean indicates the upper and lower bounds which contain the true value of the population mean 95% of the time. Inferential statistical analysis always involves the process of sampling and the selection of a small group assumed to be related to the population from which it is drawn (Sekaran, 2003).

According to Sekaran (2003), inferential statistics are used to draw conclusions about the reliability and generalizability of one's findings. Inferential statistics such as the T-test was used in this analysis, and described to determine if there were statistically significant differences in expected and perception when respondents were grouped by seven (7) factors such as programme, academic, physical, career, location, time and others.

Table 4.46 Independent Sample T-Test of Expected and Perception among UKM Students (N=170)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
E_Programme_Cat	Equal variances assumed	6.790	.010	-1.283	168	.201	-.03964	.03091	-.10066	.02137
	Equal variances not assumed			-1.217	97.910	.227	-.03964	.03258	-.10430	.02502
E_Academic_Cat	Equal variances assumed	14.742	.000	-1.851	168	.066	-.05230	.02826	-.10809	.00348
	Equal variances not assumed			-1.762	102.511	.081	-.05230	.02968	-.11117	.00656
E_Physical_Cat	Equal variances assumed	14.982	.000	-1.874	168	.063	-.06496	.03466	-.13338	.00346
	Equal variances not assumed			-1.771	93.358	.080	-.06496	.03668	-.13779	.00787
E_Career_Cat	Equal variances assumed	12.216	.001	-1.747	168	.082	-.06663	.03814	-.14193	.00867
	Equal variances not assumed			-1.710	141.135	.089	-.06663	.03897	-.14366	.01040
E_Location_Cat	Equal variances assumed	17.695	.000	-2.076	168	.039	-.09195	.04428	-.17937	-.00453
	Equal variances not assumed			-2.006	122.075	.047	-.09195	.04585	-.18270	-.00119
E_Time_Cat	Equal variances assumed	17.695	.000	-2.076	168	.039	-.09195	.04428	-.17937	-.00453
	Equal variances not assumed			-2.006	122.075	.047	-.09195	.04585	-.18270	-.00119
E_Others_Cat	Equal variances assumed	0.0065	.000	-2.300	168	.023	-.10460	.04547	-.19438	-.01483
	Equal variances not assumed			-2.218	119.304	.028	-.10460	.04717	-.19800	-.01120
P_Programme_Cat	Equal variances assumed	3.450	.065	1.095	168	.275	.07817	.07137	-.06272	.21907
	Equal variances not assumed			1.097	165.547	.274	.07817	.07127	-.06253	.21888
P_Academic_Cat	Equal variances assumed	4.713	.031	-.627	168	.532	-.06009	.09591	-.24944	.12925
	Equal variances not assumed			-.617	148.906	.538	-.06009	.09742	-.25259	.13241
P_Physical_Cat	Equal variances assumed	14.982	.000	-1.874	168	.063	-.06496	.03466	-.13338	.00346
	Equal variances not assumed			-1.771	93.358	.080	-.06496	.03668	-.13779	.00787
P_Career_Cat	Equal variances assumed	4.630	.033	.392	168	.695	.04103	.10459	-.16545	.24752
	Equal variances not assumed			.388	155.031	.698	.04103	.10571	-.16777	.24984

P_Location_Cat	Equal variances assumed	.851	.358	1.250	168	.213	.13590	.10869	-.07868	.35048
	Equal variances not assumed			1.248	163.476	.214	.13590	.10888	-.07909	.35089
P_Time_Cat	Equal variances assumed	4.145	.043	-.373	168	.710	-.04799	.12865	-.30196	.20598
	Equal variances not assumed			-.376	167.871	.707	-.04799	.12761	-.29992	.20394
P_Others_Cat	Equal variances assumed	.0064	.989	1.074	168	.284	.10057	.09363	-.08428	.28542
	Equal variances not assumed			1.069	161.008	.287	.10057	.09408	-.08521	.28635

Resources: Questionnaire Section B and Section C

The T-test showed that the all the mean of seven (7) factors are measured into three category. Independent sample T-test confirmed the significant difference of expectations. The perception and expectation was found insignificantly only for other factors, the rest six (6) factors such as programme, academic performance, physical, career, location and time of UKM respondents were statistically significant different.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The SERVQUAL method measures five dimensions of service quality which include tangibles, reliability, responsiveness, assurance and empathy. However, for this study, the questionnaires have been developed based on the study of service quality in higher education by Joseph and Joseph (1997). From the research objectives, SERVQUAL model had been used to determine the perceptions and expectations of the students about the service quality provided by UKM. Primary support for the importance of service reliability in the services quality literature comes from studies using the SERVQUAL survey methodology (Parasuraman, 1988).

The evaluation of reliability of a measurement procedure consists of estimating how much of the variation in scores of different variables is due to chance or random error.

Measures are necessary in order to ensure that the same results will be consistently reproduced in subsequent administrations of the instrument. Coefficient alpha is used to estimate the degree of reliability with estimating ranging from 0 to 1.0. The higher coefficient (closer to 1.0), the stronger linear relationship of the items being correlated and the higher the internal consistency.

The coefficient alphas for the measures of overall service quality indicates that the overall factors (expectations) at UKM was higher compared with overall factors of perceptions. From reliability statistics (Cronbach's Alpha) also shown that overall expectations higher than perceptions.

The overall result from this study shows that most of the students of UKM have not satisfied with their service quality provided by their institution. Student's expectations at every factor were higher than their perceptions.

The T-test showed that the all the mean of seven (7) factors are measured into three category. The results confirmed the high level of expectation among UKM and the variations results of perception such as moderate and low. Independent sample also t-test confirmed the significant difference of expectations. The perception was found insignificantly only for other factors, the rest six (6) factors such as programme, academic performance, physical, career, location and time UKM respondents were statistically significant different.

In conclusion, the survey achieved a good distribution in terms of gender, age, race, marital status, previous academic institution, financial aid and support. In this section, frequency distributions were calculated for all of the individuals for this study.

5.2 Recommendation

To become a World Class University, UKM need to alert about perception and expectation of their students. From time to time, UKM need to improve their quality service. Furthermore, in Malaysia, there are a lot of public universities and private universities that always improve their quality service, and this is the competitors for UKM to rank their position in Malaysia level and international level.

The study recommends that UKM need to do a comprehensive study about the perception and expectation of students about quality service of UKM. The study can be a guideline for UKM to improve their quality service. Besides that, to improve UKM quality service, UKM could compare their quality service at UKM and other universities, whether public universities of private universities. Any university that offer excellent quality service should be a UKM benchmark to improve their service quality.

Based on the result, shown that physical factor should be stress by UKM compare that other six factor, programme, academic, career, location, time and others. This is because physical factor show the lowest level of expectation.

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APPENDIX 1

UNIVERSITI UTARA MALAYSIA
06010 SINTOK
KEDAH DARUL AMAN, MALAYSIA

SERVICE QUALITY IN

UNIVERSITI KEBANGSAAN MALAYSIA (UKM)

This survey is designed to gather information about student expectations and perceptions of service quality in UKM. All the information is private and will not reveal to others. All the information is using for research only.

Thank you for your help.

Sincerely,

Azanee Binti Othman
MSc Candidate
College of Business
Universiti Utara Malaysia

Please (/) the appropriate number only in the box that best represents your response for each of the statements that follow in all section.

SECTION A: Personal Information

1. Gender
   1. Male
   2. Female

2. Age group
   1. Below 18 years old
   2. 18-21 years od\ld
   3. 22-25 years old
   4. 26-30 years old
   5. Above 30 years old

3. Race
   1. Malay
   2. Chinese
   3. Indian
   4. Others (please state)

4. Marital Status
   1. Unmarried
   2. Married
   3. Others (please state)

5. Type of previous academic institution before you entering the current university?
   1. SPM
   2. STPM
   3. Matriculation
   4. Diploma
   5. Others (please state)

6. Previous level of education
   1. SPM
   2. STPM
   3. Matriculation
   4. Diploma
   5. Degree
   6. Others (please state)

7. Do you receive any student financial aid from federal, state or college/university?
   1. Yes
   2. No

8. If yes, what are the financial support that currently you getting?
   1. PTPTN
   2. State loan
   3. Private Sector
   4. JPA
   5. MARA
   6. Others (please state)

SECTION B: The Expectations of Service Quality in UKM

Read of each statement below.

The questions on this section are about your concepts (expectations) as an individual's thought or believe of future performance of a service quality in your university. (Please (√) the appropriate number)

		Strongly Disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly Agree
	Program issues						
1	An excellent university has a range of degree options available	1	2	3	4	5	6
2	An excellent university has flexibility in allowing switching of majors	1	2	3	4	5	6
3	An excellent university has a degree program with flexible structure and content	1	2	3	4	5	6
4	An excellent university has a number of specialized programs of study available	1	2	3	4	5	6
5	An excellent university has flexible entry requirement	1	2	3	4	5	6
6	An excellent university has a practical component in the degree program	1	2	3	4	5	6
	Academic Reputation						
1	An excellent university offers a reputable degree	1	2	3	4	5	6
2	An excellent university offers excellent academic facilities and physical facilities	1	2	3	4	5	6
3	Professors and lecturers of an excellent university give an efficient service to student	1	2	3	4	5	6
4	An excellent university has excellent instructors	1	2	3	4	5	6
	Physical aspects/cost						
1	An excellent university offers housing at a reasonable expense	1	2	3	4	5	6
2	An excellent university has excellent housing facilities	1	2	3	4	5	6
3	An excellent university offers excellent sports and recreational programs	1	2	3	4	5	6
4	An excellent university offers an education at a reasonable expense	1	2	3	4	5	6

Career opportunities

1	An excellent university graduates are easily employable	1	2	3	4	5	6
2	An excellent university provides excellent information on career opportunities	1	2	3	4	5	6

Location

1	An excellent university has an ideal location	1	2	3	4	5	6
2	An excellent university has an excellent campus layout and appearance	1	2	3	4	5	6

Time

1	An excellent university allows an acceptable amount of time to complete the degree	1	2	3	4	5	6
2	An excellent university offers a less amount of time in administrative processes	1	2	3	4	5	6
3	An excellent university able to provide a good facilities and accommodations as it scheduled	1	2	3	4	5	6

Other

1	The choice of an excellent university is influenced by family members and peers	1	2	3	4	5	6
2	The choice of an excellent university is influenced by word-of-mount	1	2	3	4	5	6

SECTION C: The Perceptions of Service Quality in UKM

This section concerns certain aspects about your feeling (perceptions) for the service quality that you receive from the university. Please (√) the appropriate number. Please indicate the response that best describe your agreement or disagreement

		Strongly Disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly Agree
	Program issues						
1	The university has a range of degree options available	1	2	3	4	5	6
2	The university has flexibility in allowing switching of majors	1	2	3	4	5	6
3	The university has a degree program with flexible structure and content	1	2	3	4	5	6
4	The university has a number of specialized programs of study available	1	2	3	4	5	6
5	The university has flexible entry requirement	1	2	3	4	5	6
6	The university has a practical component in the degree program	1	2	3	4	5	6
	Academic Reputation						
1	The university offers a reputable degree	1	2	3	4	5	6
2	The university offers excellent academic facilities and physical facilities	1	2	3	4	5	6
3	Professors and lecturers of this university give an efficient service to student	1	2	3	4	5	6
4	The university has excellent instructors	1	2	3	4	5	6
	Physical aspects/cost						
1	The university offers housing at a reasonable expense	1	2	3	4	5	6
2	The university has excellent housing facilities	1	2	3	4	5	6
3	The university offers excellent sports and recreational programs	1	2	3	4	5	6
4	The university offers an education at a reasonable expense	1	2	3	4	5	6

Career opportunities

1	The university's graduates are easily employable	1	2	3	4	5	6
2	The university provides excellent information on career opportunities	1	2	3	4	5	6

Location

1	The university has an ideal location	1	2	3	4	5	6
2	The university has an excellent campus layout and appearance	1	2	3	4	5	6

Time

1	The university allows an acceptable amount of time to complete the degree	1	2	3	4	5	6
2	The university offers a less amount of time in administrative processes	1	2	3	4	5	6
3	The university able to provide a good facilities and accommodations as it scheduled	1	2	3	4	5	6

Other

1	The choice of a university is influenced by family members and peers	1	2	3	4	5	6
2	The choice of a university is influenced by word-of-mount	1	2	3	4	5	6

SECTION D

Please give your opinions on future Service Quality in your university context that is relevant for this study

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Thank you for you