

QATAR UNIVERSITY

COLLEGE OF ENGINEERING

STAKEHOLDER PERCEPTION OF SERVICE QUALITY IN QATAR HIGHER EDUCATION

INSTITUTIONS: AN APPLICATION TO QATAR UNIVERSITY

BY

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ABSTRACT

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Title: Stakeholder Perception Of Service Quality In Qatar Higher Education Institutions: An Application To Qatar University

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Managing quality of services offered by institutions of higher education is important in any country due to the inherent aim of producing quality graduates from programs offered in the university. Qatar has made substantial investments in higher education. Qatar University, being the national university of the country, the perception of stakeholders on the service quality in education becomes an important factor for developing a quality education system. Therefore, the main goal of this thesis is studying the perceptual context of quality of services provided by higher education institutions among the students in Qatar University.

A research framework is developed for quality assessment with seven hypotheses that are commonly used in the literature. A survey with 65 instruments was used for gathering the required data for the analysis.

The results presented here are based on survey response of 397 students. Seven dimensions (determinants) of services quality were identified in this study: the original dimensions of the SERVQUAL namely, reliability, responsiveness, assurance, empathy, and tangibles, and; two additional dimensions image and culture/value. The results proved significant positive

association between the provided services quality and students' loyalty. Finally, the findings indicated that there are no statistically significant differences in the perception of services quality based on the students' demographic variables (gender, age, nationality, and education level). In terms of perceptions, the analysis showed that the provided services of the university falls short of meeting the students' expectations.

The finding indicates that, in order to provide quality education in Qatar University, expectation of student's needs should be carefully understood and addressed. Management also needs to consider factors such as corporate image and culture/value when measuring service quality.

Although there is a limitation in the responses as the outcome of this study is based on the survey of students, this nevertheless provides an attempt to study services quality in Qatar education sector.

The findings of this thesis is expected to help filling the literature gaps by providing empirical knowledge on quality of services assessment and customer's satisfaction in higher education.

DEDICATION

I dedicate this thesis to my parents, who have always showed unconditional love and who taught me to work hard so that I achieve the things I aspire.

I also dedicate it to my sisters, who have given me a constant encouragement and support during the challenging journey of graduate school and life in general. In addition, I dedicate this thesis to all of my relatives and friends who were for me through this long journey.

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Chapter 1 : INTRODUCTION

The services sector has evolved significantly and is playing a progressively more significant role in many nations' economy (Abdullah, 2006a). As a result of this phenomenon, service quality became a relevant topic within the current literature in service (Baron et al., 2009).

Many service businesses recognize the linkage between satisfaction of the customers, loyalty, profitability and high services quality (Abdullah, 2006a, Nadiri et al., 2009). In consideration of these important relationships, a great interest was shown in the assessment of services quality (Abdullah, 2006a). Even though the importance of offering quality services is well realized by service businesses, including higher education, a lot of researchers found difficulties in evaluating and assessing quality of services in higher education settings for many reasons including: the complicated nature of the educational product (Becket and Brookes, 2006), different conceptualization of quality and no agreement on a universal definition of what is considered as quality service (Awan, 2008), and different meanings of quality for different stakeholders (Becket and Brookes, 2006).

Realizing the importance of service quality and the associated benefits with its assessment, this thesis purpose is investigating perceived quality level of provided services at Qatar University from student's point of view.

This thesis will argue that perception of service quality and the dimensions differ from one country to another based on the differences in cultures and values. Since different models

are used to measure or assess services quality, this thesis will also assess the effects and managerial insight of using the different models.

1.1 Service Concepts

In this section, various concepts important to understand the quality and service are discussed.

Service Quality

The need for a good service quality management is considered by the business sector since the early Nineties. The aggressive competition in the sector led to placing greater emphasis on providing high quality services to the customers. Since then, attaining high quality and satisfaction of customers became one of the important management goal for institutions and organizations and quality is considered as the strategic weapon for enhancing business performance and achieving operational efficiency (Garvin, 1983, Anderson and Zeithaml, 1984).

Higher Education and Service Quality

Management of service quality is an important phenomenon in many universities and colleges. Due to increased competition, globalization and the reduction of funds allocated by the government, higher education institutes needs to put more focus on quality (Temizer and Turkyilmaz, 2012). They need to develop strategic and operational planning in order to differentiate their service either nationally, or regionally or globally by addressing the needs of various stakeholders. Many researchers have also emphasized that education should be

considered as service (Seymour, 1993; Angell et al, 2008;DeShields et al., 2005; Thorsten et al., 2010).

These days, the higher education sector is faced with a competitive environment as in other service industries and has begun to take the business like steps toward service quality. In such area of aggressive competition, quality of services is of the major concerns(Russell, 2005; Sakthivel and Raju, 2006; Fred, 2006). Zeithaml et al.(1993), Sureshchandar et al. (2002), and DeShields et al.(2005) added delivering quality services is a key element for achieving sustainable competitive advantage that leads to satisfied customers. Institutions of higher education can distinguish their service offering from the competitors by providing excellent service quality.

Measurement of Service Quality in Higher Education

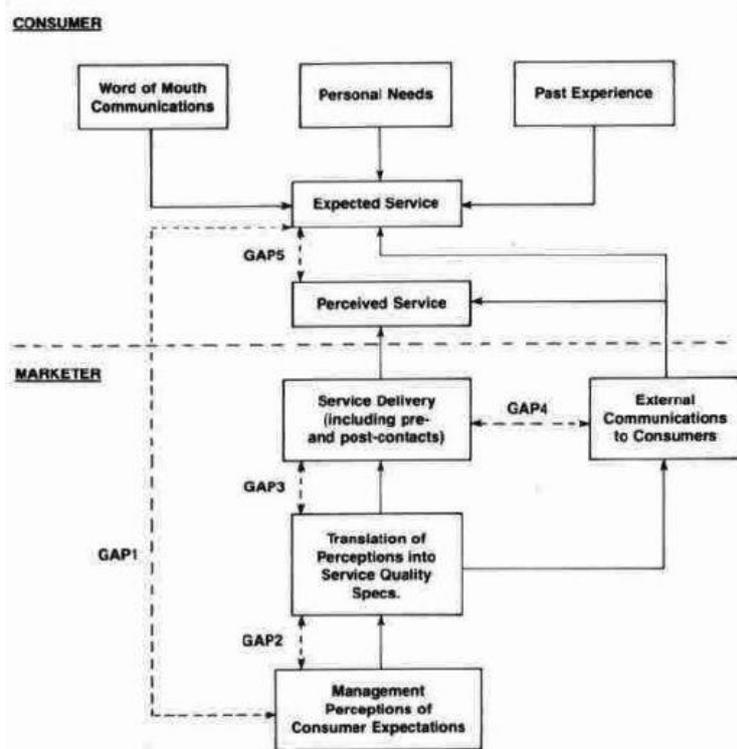
Different evaluation systems and models were developed for assessing services quality in different sectors including higher education. In the next section, the three most used scales (measures) in the higher education sector are described.

Service Quality Model (SERVQUAL)

The SERVQUAL model was conceptualized in mid-Eighties by Parasuraman et al. (1988)using the quality gaps concept. The SERVQUAL defines services quality as the difference between the expectations of the customers and the actual perceptions. In this context, customers' expectation is defined as customers' belief concerning delivery of services which serve as a reference for judging the performance. Customer perception is a "subjective assessment of services experienced through actual interaction with the service provider". This model was

empirically tested on many industries. The SERVQUAL model given in Figure 1-1 shows five quality gaps and 22 items under each of the two sections (expectations and perception), classified under the quality dimensions. The quality gaps are defined below:

- The difference between customers' expectations and the perceptions of these expectations by the management of the services provider.
- The difference between the managements' perception of the customers' expectations and the specifications of services quality.
- The difference between the specifications and the delivered services.
- The difference between the delivered services and communications about the delivery of the services to the customers.
- The customers' expectations and the actually experienced services.



1-1:SERVQUAL model (Source: Parasuraman et al., 1988).

Parasuraman et al.(1988) originally configured ten dimensions that affect services quality which are responsiveness, reliability, competence, communication, courtesy, credibility, security, and knowing the customers, tangible and access. However, these dimensions were narrowed down to five dimensions based on a survey of five industries (retail banking, security brokerage and credit, appliance maintenance and repair and long distance. telephone) conducted by Parasuraman et al. (1994). The SERVQUAL was then revised by using "would" instead of "should" word but the five dimensions remained the same. The SERVQUAL five dimensions (determinants) of service quality are explained below:

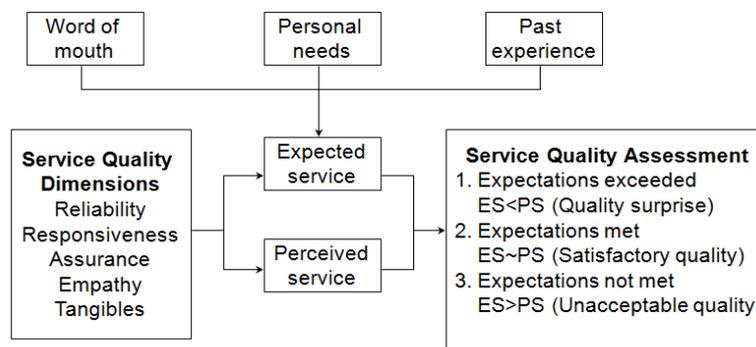


Figure 1-2: Determinants of perceived service quality (Source: Parasuraman et al., 1991).

1. Reliability: refers to the ability of the service provider in performing the services accurately and independently.
2. Responsiveness: refers to the willingness of providing prompt services and helping the customers.

3. Assurance: refers employee's courtesy, knowledge ability of conveying confidence and trust to customers.
4. Empathy: refers to the individual attention and caring an organization provides to the customers.
5. Tangibles: refers to facilities, materials, and personal appearance.

Parasuraman et al.(1985)also identified external factors that influence the consumer expectations such as the word of the mouth, and personal needs.

The model has been widely utilized in many industrial sectors, because of its advantages mentioned by Buttle(1994):

- It is viewed as a standard for assessing services quality.
- It showed its validity for measuring the quality of services in different situations.
- The different readers interpret the scale items similarly.
- It has a standardized procedure for analysis, which helps with interpreting the results.

Performance Model (SERVPERF)

The SERVPERF model was developed in 1992 by Cronin and Taylor (1992)as an outcome of questioning the conceptualization of the SERVQUAL model as they argued that quality of services is derived from service perceptions only and the expectations are irrelevant and, this leads to misleading information. They conducted an empirical study in banks, pest control, fast food, and dry cleaning industries to prove the superiority of the SERVPERF over the SERVQUAL. In an effort to show the superiority of the perceptions, they made a comparison between the perceptions only score and the gap (perceptions-expectations)

score and reached to a conclusion that the perceptions only scores provided a better prediction of service quality. This is consistent with Boulding et al.(1993)who argued that only perceptions had a direct influence on the services quality.

This argument led Cronin and Taylor (1992)to develop SERVPERF model where they omitted the expectation component of the SERVQUAL and used only the performance (perception). They used the same dimensions (determinants) as mentioned in the SERVQUAL model namely tangibles, responsiveness, reliability, empathy and assurance.

Higher Education Performance (HEdPERF)

This model was developed by Abdullah(2006b) for the measurement of quality offered by higher education. The researcher empirically developed the model and it was used in the literature by a few researchers. The model has five service quality dimensions as follows:

- Academic aspects: has instruments on the responsibilities and duties of academics.
- Non-academic aspects: has vital instruments that enable students accomplishing the requirements of the study, and it have also instruments related to the duties of the non-academic staff.
- Reputation: has instruments on the importance of projecting a professional image.
- Access: has instruments related to issues like the availability, convenience, and ease of contact.
- Program Issues: have instruments related to the importance of providing reputable and ranging academic programs.

1.2 Qatar Higher Education Sector

The higher education sector in Qatar is not that old. Higher education in Qatar took a leap since the establishment of Qatar University in 1977. However, due to globalization and accessibility, the education sector worldwide is open to Qatari prospective students as well. Realizing the need to develop a comprehensive sector, education is mentioned as an important pillar in Qatar's National Vision 2030 (QNV 2030) and the National Development Strategy 2011-16 for the country's long-term social and economic goals. "Qatar aims to build a modern world-class educational system that provides students with a first-rate education, comparable to that offered anywhere in the world". The government is continuing to invest in the development of new education initiatives for almost a decade now.

As a part of the changes in the education sector, several colleges and universities from foreign countries have opened branch campuses in Qatar thus creating an aggressive competition among higher education providers for attracting and retaining students. This has given students some choices to decide on education quality that can support their future career development.

1.3 Problem Statement

In light of the changing conditions and increased competition in the service sector, greater weight was placed on providing high-quality customer services. Attaining high quality and customer satisfaction has become an important management goal for organizations and quality has become the strategic weapon for achieving operational efficiency and improving

performance. In addition, higher education system and universities all around the world have realized the importance of providing quality educational services to their main stakeholders, the students. One way higher education institutions can distinguish their service offering from the competitors is by providing excellent service quality. As such, managing service quality and meeting higher education customer expectations are vital to the survival of the academic institutes. The cost of not managing services quality and ignoring customer expectations usually lead to negative consequences such as losing customers or even losing in the market place. If the expectations and need of students are not met, they might decide to leave their educational institution for another one with higher perceived quality.

There are many evaluation systems that have been developed for measuring services quality; however, the decision of choosing the appropriate evaluation system is not an easy task. Since the concerns of service quality are different in different cultures and the expectations and perception of service quality are also different. It is, therefore, vital to develop customized measurements systems relevant to the culture where the services are being offered.

Qatar higher education sector is not different from worldwide education sector as it has also set education as a top priority. The sector is seriously committed to providing high quality educational services to fulfill the requirement of the Qatari government.

In this regard, the question is not just whether the evaluation of higher education services quality is needed, but also what quality evaluation system is the most appropriate to use.

For the abovementioned reasons, the evaluation of educational services and choosing the appropriate evaluation system are considered as essential.

As the measurement of quality has become an implicit phenomenon among the stakeholders, this thesis proposes to develop an explicit evaluation of service quality as perceived by the main stakeholder of higher education institutions (students). Due to the accessibility to a large pool of student population, Qatar University was chosen for the case study in this thesis. Qatar University is the national university of Qatar with more than 16000 students, unmatched by any other university in Qatar in terms of the number of programs and the number of the university community.

1.4 Purpose and Objectives of the Thesis

This thesis investigates the perceptual context of services quality at Qatar higher education sector from the perspective of Qatar University students. Therefore, the objectives are to:

- Investigate perceived quality level based on demographic factors of the students.
- Investigate the relationship between various quality factors in Qatar's higher education sector.

The thesis attempts to answer the below questions:

1. What are the service quality determinants (dimensions) in Qatar higher education settings?
2. How students perceive the different determinants (dimensions) of service quality at Qatar higher education sector?

3. Do discrepancies exist in the perception of services quality based on student's demographic factors (gender, age, nationality, and education level)?
4. What is the nature of the relationship between the student's loyalty intentions and the quality of provided services in Qatar higher education sector?

Answers to the above listed questions enable answering the final question:

5. What measures the management at Qatar University can take for improving the quality of services it provide to students?

1.5 Significance of the Thesis

This thesis is considered significant for the below listed:

- It contribute providing understanding of service quality determinants/dimensions and service quality assessment in higher education settings with specific reference to Qatar.
- It proposes a framework for assessing the effect of students demographic variables on quality of services, the relationship between loyalty intentions and perceived service quality level as well as it investigates if culture/value and image could be considered as service quality dimensions.
- The immediate beneficiaries of the thesis results are the higher education institutions. The benefits incorporate an empirical knowledge of how the quality of services are perceived in different cultures where the services are provided.
- The outcomes of the improvement plans and efforts would ultimately be at the benefit of the different stakeholders.

1.6 Scope of the Study

This study is focused on quality of services in higher education. More specifically, the study is focused on determining student's perceived quality level at Qatar's higher education sector. The study also investigates determinants of services quality in higher education. It examines the relationship between students' loyalty and the quality of the provided services. However, this research is not focused on the institution's context as a whole as it would require a broader and comprehensive assessment. The study is focused on the outcomes of the survey of students at Qatar University during 2015-2016 academic year. All the respondents used for analysis in this thesis are from Qatar University. Therefore, it should be noted that the results discussed here only represents the views of a certain population.

1.7 Organization of the Thesis

This report is organized into seven chapters. Chapter 1 introduces the study area, importance of the study, the problem statement, followed by the purpose, objectives, and significance and finally the scope of the study is provided. Chapter 2 reviews the current literature on management of services quality in general in general. Chapter 3 provides a description of Qatar higher education sector and Qatar University. Chapter 4 provides research questions and the theoretical framework. Chapter 5 provides the detailed on the research design, sampling methods and procedures, the developed questionnaire design, intended statistical analysis and ethical consideration. Subsequently, Chapter 6 provides both the findings and discussion of the case study conducted at Qatar University. Finally,

Chapter 7 provides managerial and theoretical implications, study limitations, and future studies recommendations.

Chapter 2 : LITERATURE REVIEW

In this chapter, the adopted strategies, and the employed research methods are discussed. The available literature on services quality is also discussed. It covers the stakeholders, the measurement methods (tools /approaches), factors that impact the evaluation and the perception of services quality and finally the outputs of quality management.

2.1 Review Methodology

The content analysis method was adopted for reviewing the current literature. Content analysis is an observational method for research which helps to identify and analyze contents at many levels (words, images, roles etc.) to create a variety of opportunities for future research (Kolbe and Burnett, 1991). Content analysis process has three stages: preparation, organization, and reporting(Eto and Kyngäs, 2008).

For the preparation stage, this literature focused on available materials including books, conference proceedings, and materials obtained from electronic sources such as Google Scholar, PQ Central (Proquest), Emerald Insight, LexisNexis Academic and Business Source Complete databases. The keywords 'service quality', 'improving quality', 'higher education service quality', 'assessment of service quality', 'SERVQUAL', 'SERVPEF', 'HEdPERF', were used to find related literature. The published materials were found in several areas such as service quality, quality improvement, higher education quality assessment, total quality management (TQM). The content was organized into different groups as mentioned below and then details for each group were extracted for reporting as shown in different sections.

2.2 Framework for the Review

The published papers are sorted out based on the research focus. A cross-sectional analysis was carried out on the selected papers as per the framework displayed in Figure 2-1. Each subsection provides a detailed classification of various issues and discusses their effect on services quality.

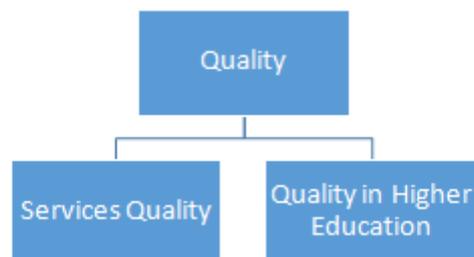


Figure 2-1: Framework for the review.

2.2.1 Service Quality

The concept of services quality has taken extensive debate and concentration in the current literature due to the difficulties associated with its conceptualization and measurement. Different authors attempt to define service quality, however, the attempt has been found to be complex and there was no agreement on common definition of quality (Awan, 2008).

The literature provides different ways of conceptualizing service quality, for example, Crosby Philip(1984) defined quality as "conformance to requirements", Juran(1998) defined it as "fitness of use" and Eiglier (1987) defined quality service as the service that satisfies the

consumers. Parasuramanin (1985) provided another definition "the difference between the expectations and perceptions of the service delivered from the customers' perspective". This conceptualization aligns with Zeithaml et al.(1988) defined quality as "a global judgment related to the superiority of the provided services". It is also defined as "a multidimensional construct composed of differences between perceptions and expectations", producing the famous equation $Quality = perceptions - expectations$ (Zeithaml et al., 1988). Edvardsson(1998)defined quality in term of needs and meeting expectations of the stockholders. Although service quality has been defined differently by the authors, the primary focus is whether services perceptions is meeting, exceeding or falling short of customer expectations (Boulding et al., 1993; Zeithaml et al., 1988; Cronin and Taylor, 1992; Cronin and Taylor, 1994; Edvardsson, 1998).

2.2.2 Quality in Higher education

During the past two decades, the higher education sector has changed significantly due to technological, regulatory and structural factors changes. Since then the enhancement of quality in higher education became one of the main concerns and vital steps for designing programs for improving quality to cope up with the rapid growth in the sector.

To survive the new challenges, healthy changes are required to fulfill the expectations of the stakeholders of the higher education institutions (Rana, 2009). The author added that standards and quality of education are of high importance and they have a vital role in the higher education status in the industry.

Anderson et al.(1994) and Boulding et al.(1993) also highlighted the significance of service quality to institutions and established its association with customers' satisfaction, future intentions and profits. Many studies concluded that firms with higher quality services outperform those with lower quality services. The implication from this is that if a higher education institution seeks success, it has to provide its customers with things they desire to have, at an acceptable quality perceived by them (Brown and Mazzarol, 2009).

In the next section, factors to be considered in higher education quality management are discussed (refer to Figure 2-2):



Figure 2-2: Factors considered for quality in higher education.

a) Competition

In today's competitive educational environment, several educational opportunities are available for students, therefore, it is challenging to equip the institution with competitive advantages that help retaining current students and to attract new students. According to Abdullah (2006b) the globalization of the educational market and reduction in governments funding has led to aggressive competition, therefore, institutions strive to gain competitive advantage by providing higher quality service to the customers. Temizer and Turkyilmaz

(2012) mention high service quality as the main goal to attain competitive advantage in highly competitive environment.

Service quality has been considered to be the ultimate competitive edge and many researchers pointed out to this important issue as follows:

- In a competitive environment, students become more selective when deciding on higher education institution to pursue education (Mathew et al., 2005).
- Students become analytical and critical when deciding on the education institution to study at and they look for quality evidence (Binsardi and Ekwulugo, 2003; Donaldson and McNicholas, 2004).
- Students are aware of the significance of money and they want full return with respect to the outcome (Smith et al., 2007; Frances, 1995).
- Satisfaction of students is an extremely vital issue for higher education management (Douglas et al., 2008).
- Higher education institutions should seriously monitor the offered services quality and be committed to continuing improvement and to measure it, a reliable instrument should be used (Brochado, 2009).
- Ignoring the competitiveness of higher education environment, the need to attract student and assess the quality of services will eventually result in disadvantages to the institution (Angell et al., 2008).
- Institutions' ability to meet the students' expectations and needs is likely to affect their decision to continue enrollment at their current higher education institutions or defecting to the competitive institution (Plank and Chiagouris, 1997).

- Poor retention rates result in unfavorable funding consequences, therefore, most universities' agendas have placed retention and recruitment of students at the top due to their desire for increasing students population in line with the targets of the governments(Rowley, 2003).

For the above-mentioned reasons, it is vital for institutions of higher education to better understand their stakeholders especially the students, measure service quality and constantly improve the quality of services they provide.

b) Country Policy

Many countries set high priorities to education and education quality. This means that higher education institutions should seek quality and this cannot be achieved without good assessment of the provided services. Cardona and Bravo (2012) mentioned that the service quality measurement is vital to provide information on educational plans effectiveness and improvement programs.

Moreover, the quality of education can be linked to the country effectiveness; a study conducted by Borahan and Ziarati(2002) proved an association between quality of education provided in the country and the country's effectiveness.

For the abovementioned reasons, education quality should be placed at the top of higher education institutions' agendas to attract and retain students and to achieve high quality education in line with the government targets. Thus, assessing service quality is an extremely vital issue for higher education institution and its management. Management of

the service quality is essential not just for higher education institutions but also for the country as a whole.

Although there are numerous researches on services quality management in higher education settings and continued effort placed by institutions to enhance the services they provide, defining and measuring services quality in higher education is still considered challenging for many reasons:

- The ambiguous nature of service quality and lack of universal conceptualizations of what is considered as the quality in higher education (Sahney et al., 2004).
- Many measurement tools (scales) and the decision of which to use to measure service quality is a challenging task as the literature has conflicting results with regard to the superiority of different models.
- Higher education has diverse groups of stakeholders and each has its own view of what is considered as quality(Becket and Brookes, 2006).
- The complicated nature of the educational product: educational institutions are composed of financial inputs, physical and human resources and entail certain processes such as research, learning, teaching, community services, knowledge transformation and service delivery and administration (Becket and Brookes, 2006).

c) Conceptualization

Literature shows that different definitions of higher education quality are adopted by different researchers. For example, it is defined as "value addition in education"(Feigenbaum, 1951), avoidance of defects in the process of education (Crosby,

1979), and "excellence in education"(Peters and Waterman, 1982). A popular definition is "meeting or exceeding customers' expectations"(Parasuraman et al., 1985). In the late nineties, Karapetrovic and Willborn(1997)provided a definition of quality as the "ability of student's knowledge to meet the requirements of employers, accrediting bodies, and professional societies". Sahney et al.(2004)introduced a wider definition where it is argued that quality of education includes inputs (academic staff, admin staff, students and the infrastructure); processes (teaching and learning activities); and outputs (educated students).A more recent definition was provided by Rajani et al.(2011)where quality is viewed as a hierarchical and multidimensional construct.

d) Stakeholders of Higher Education Institutions

As services sector, institutions of higher education seek to address the wants and needs of the customers(Chua, 2004).This requires capturing and taking into consideration all views and requirements of the different customers of higher education when managing the service quality.

Many stakeholders of higher education institution need to be considered to understand service quality. Quinn et al. (2009) listed higher education stakeholders along with the areas of operations where they function as customers as presented in Table 2-1 below:

Table 2-1:
Stakeholders of Higher Education Institutions (Source :Quinn et al., 2009)

Group	Customer Attributes
Students	Pay for service, receive educational instruction (service), utilize administrative functions, purchase auxiliary services (lodging, food, etc.).
Parents	Select (or assist in selection of) service provider, pay for service, can be primary points of contact during some service interactions.
Research Sponsors	Provide funds in exchange for information, service, or activities. Often have contractual arrangement.
State and Federal/ Governments Society	Provide funds for university to engage in service. Exercise some influence over service/product design Benefit from the services provided, pay (through taxes) for portions of the service.
Future Employers of Students Disciplinary Academic Communities	'Purchase' the end product of the service process, sometimes provide funding and advise in service design. Benefit from scholarly activity of faculty members.
Accreditation Bodies Staff/Faculty Members	Exercise control over product/service design. Control some of product/service design, consume some services

Higher education stakeholders (customers) can be classified into internal and external stakeholders as shown below in Figure 2-3:

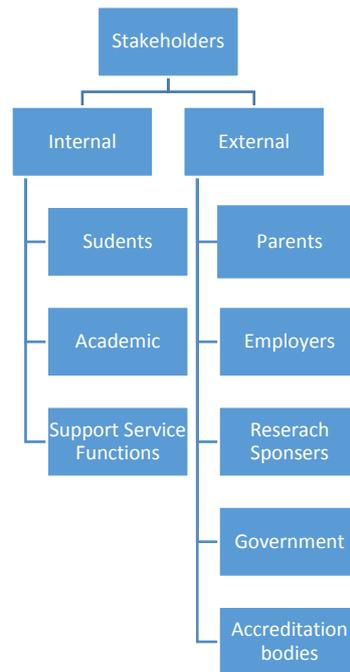


Figure 2-3: Classification of higher education customers.

Each of these stakeholders (customers) views quality differently and is influenced by its own interests in higher education according to their needs and requirements. As early as in the Eighties, Hughes (1988) made an observation that external stakeholders are mainly concerned with quality audit procedures and the degree to which the result meets an appropriate standard. He added that external customers are more concerned with controlling quality, whereas the emphasis of internal customers is on enhancing quality, which seeks to achieve overall improvement in learning, and teaching actual quality and the service delivery.

Many researchers have considered students as the main stakeholder to higher education institutions(Owlia and Aspinwall, 1997; Sakthivel et al., 2005; Quinn et al., 2009).For example, a study of 124 participants conducted by Owlia and Aspinwall(1997)in the quality

of higher education in USA, Australia, Europe, and India indicated that students are the main customers and then comes the employers, faculty, and parents in decreasing order of importance. Quinn et al.(2009) also stated that students are the most obvious customer.

e) Tools/Approaches to Evaluate Service Quality

There is an agreement on how important it is for a higher education institute to assess services quality. Nevertheless, choosing and implementing the appropriate measurement tool is a challenge and there is no agreement of the most appropriate tool to use for assessing quality. Brochado(2009) argued that using a suitable measurement tool helps the management to better evaluate the quality of its services and thus better design service delivery by using the results. Therefore, the use of proper service quality measurement model is necessary. Various tools that are considered for review here are based on concepts, dimensions, number of instruments and model fit, as shown in Figure 2-4.

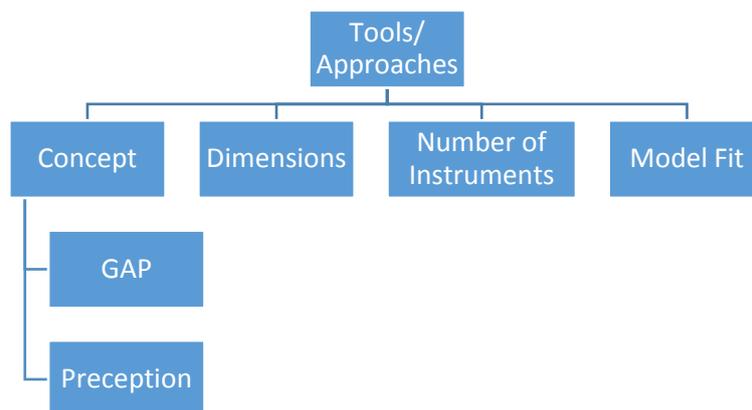


Figure 2-4:Tools approaches classification.

Research dealing with quality management and assessment in higher education is considered new when comparing it to the commercial industry. However, the majority of the evaluation (measurements) models used in commercial sector were used in education settings to manage and assess services quality.

i. Concept

There are two major schools for measuring services quality; one uses the gap concept, which defines quality as the gap between customer's expectations and actual perceptions of services. The second school considers only the actual perceptions of services. Figure 7 shows the measures used in both schools.

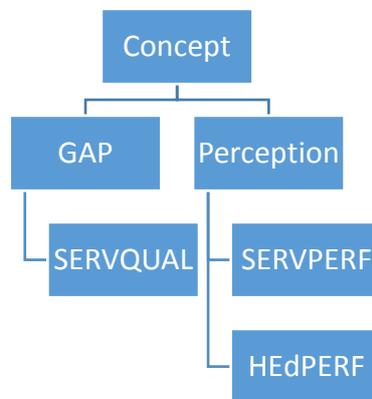


Figure 2-5: Concept classification.

SERVPERF and HEdPERF measure service quality using only the perception of services quality whereas SERVQUAL measures services quality using both the expectations and actual perceptions of the customers by calculating the gap between them.

Many researchers questioned the conceptualization and the appropriateness of using the expectation measures in SERVQUAL (Babakus and Boller, 1992; Carman, 1990; Cronin and Taylor, 1992; Teas, 1994). They argued for using perception only to assess service quality. The reasons behind this are as follows:

Many researchers (Dabholkar et al., 2000; Brown and Swartz, 1989; Teas, 1994) argued that expectation can be interpreted and operationalized differently. This is true as Parasuraman et al. (1988), the proponent of SERVQUAL, also changed their definition of expectation. Originally, they defined expectation as desires or wants of consumers; however, later in 1991, they changed it to be *what the consumers would be expecting from excellent service* (Parasuraman et al., 1991).

However, this cannot be taken as a weakness for using expectation as a measure. According to many studies, perception is also subject to change with time and culture. A study conducted in higher education settings by Frances (1995) has empirically proved that the actual service quality perceptions of the students are less stable over time than their expectations.

Cronin and Taylor (1994) also criticized using the expectations measures and argued that it provides misleading information. However, this turned out later to be a strength point for the SERVQUAL model as it provided managerial insight to management. It provides information about how much the provided services meet the customer expectation and the

performance gaps. Other studies(Devlin et al., 2002a) stated that the expectations of the customers are probably forming an anchor for evaluating quality.

ii. **Dimensions of Service Quality in Higher Education**

The three models considered in this study used the dimensional approach to service quality, which still dominates the current literature for its ability providing superior understanding of features and dimensions of services quality. Sultan and Yin(2010) stated that the dimensional approach is a service-specific approach where measurement models are designed to address the features of the services and the services delivery. Another strength point of this approach is the customization of the resulting dimensions of services quality based on service types(Babakus and Boller, 1992), provider or firm (Abdullah, 2006a), industry(Lee et al., 2000), or even based the culture where the service is provided (Furrer et al., 2000).Figure 2-6 below shows the commonly used service quality dimensions and a few new dimensions are also suggested for consideration.

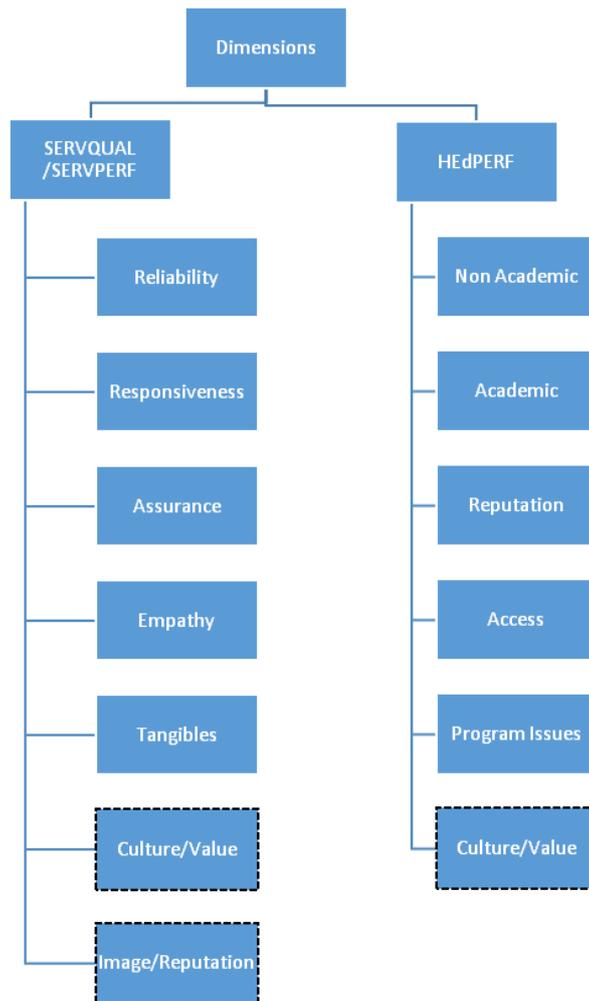


Figure 2-6: Dimensions classification.

The three models used five dimensions to service quality, however, the SERVQUAL and SERVPERF are more generic and applicable to different industries whereas the HEdPERF is only applicable to higher education. The HEdPERF considered reputation /image as a dimension to the service quality and it is not considered in both SERVQUAL and SERVPERF.

Corporate Image / Reputation

Parves and Yin(2013) stated that branding of higher education is a marketing tool for gaining competitive advantage. The literature is full of studies that developed brand performance measures. However, the link between image and service quality is still not clearly established in higher education settings. Sultan and Wong(2014)mention that the reason behind the difficulty of establishing the link between image and service quality is the nature of the sector. They added that higher education institutions are perceived as assets for social wellbeing and human development.

Many studies in the current literature also provide a relation between service quality and image or reputation, for example, Sarstedt et al.(2013) stresses the importance of image in the evaluation of institutions because of its power in the customers' mind and perception when they hear an institution name. Oliver(1980) added that image and reputation plays a role in setting the customer expectations.

Sultan and Yin(2012), Sultan and Wong (2014), and Sultan and Yin(2013)investigated the linkage between university image and students satisfaction and the linkage between image and students' trust in higher education settings using three different models as shown below in Figures 2-7, 2-8, and 2-9.Thesestudies revealed that students' trust and satisfaction are positively related with university image and in the study conducted by Sultan and Wong(2014)the study findings indicated that higher education branding or image can be considered as a consequence of the students' satisfaction.

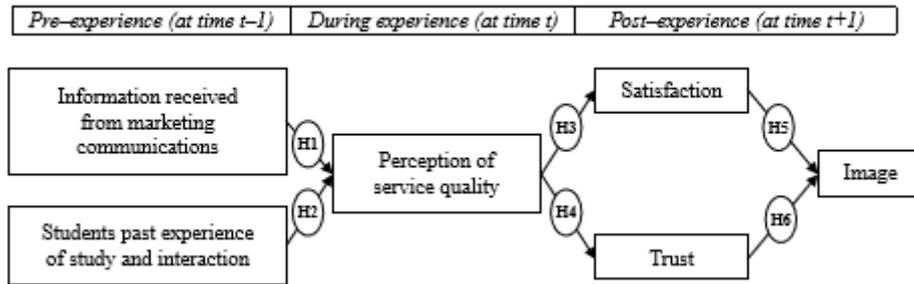


Figure 2-7: Theoretical model (Source: Sultan and Ho Yin, 2012).



Figure 2-8: Theoretical model (Source: Sultan and Yin, 2013).

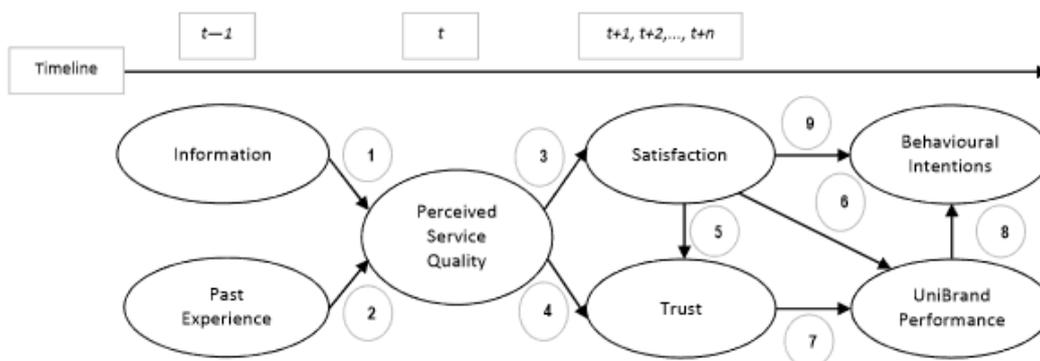


Figure 2-9: Theoretical model (Source: Sultan and Wong, 2014).

The current literature is inadequate, as it does not demonstrate the exact relationship service quality and image in higher education settings. Only a few new studies considered it an outcome or consequence of service quality or sometimes satisfaction and not as determinate or dimension except for the case of HEdPERF scale.

Culture /Value

The importance of the link between value and service quality comes from the means end models of customer's value. Products and services are considered the means, while customer's personal values are considered as the ends(Peter and Olson, 1990). The models assume that customers use and acquire services or products to achieve their desired ends (Peter and Olson, 1990). According to Flint et al. (2002), Gutman(1982), and Payne and Holt(2001), the models seek to explain how the customers' choices of services or products enable them achieving the desired ends.

According to Gutman (1982) and Leslie de et al. (2000)values are defined in terms of the customer's mental image, personal values or cognitive representations underlying customer's goals, and needs. Therefore customers evolution of service quality partially depend on whether these services enable her/him to achieve her/his desired values. Frank et al. (2001) and Gutman (1991) argued that means end theory postulates that linkages between the attributes of products or services, the consequences resulting from consumption and customers' values behind their decision making process.

Culture also plays a role in perceiving service, for example, Malhotra et al.(2005)stated that expectations are related to actual service perceptions, which vary significantly in different cultures. Shih(2006)pointed out that culture is among the factors that affect customer behavior. He added human life and customers' behavior are influenced by culture via shaping values, beliefs and attitude. The study findings proved that the service quality is influenced by national culture. Gita et al. (2011)argued that culture has an effect on the customers' behaviors and purchasing habits. A study conducted by Masoud et al.(2016)proved that customers' culture and values have important effect on the perceptions and expectations of services quality.

Given the fact that differences in culture and values, leads to different expectations and perceptions of servicers, culture and value should be considered when assessing service quality.

iii. Number of Instruments

Both SERVQUAL and HEdPERF are considered lengthy questionnaires consisting of 44 and 41 service quality measurement items respectfully. The SERVPERF scale is the most efficient among the three discussed scales since it reduced the used instruments number by 50 percent to only 21 items for perception.

iv. Model Fit

Literature is rich with research papers trying to figure out which model has a better model fit and is superior in the domain of service quality. There are a good number of studies that

compare SERVQUAL and SERVPERF (Bayraktaroglu and Atrek, 2010; Brochado, 2009; Cronin and Taylor, 1994; Moisescu and Gica, 2013; Carrillat et al., 2007; Oh, 1997; Lewlyn et al., 2011) however, there is only one study that compared SERVPERF to HEdPERF (Abdullah, 2006a) and only one study that compared the three measures (Brochado, 2009). The studies showed conflicting results when it came to the superiority of the models. For example, Brochado(2009) compared the three scales (SERVQUAL, SERVPERF, and HEdPERF) against dimensionality, validity, explained variance, and reliability. The results indicated that the HEdPERF and SERVPERF provide better measurement capability, but the results do not specify which one among them is the best. This agrees with the studies done by Babakus and Boller(1992) and Carman(1990) in which the results indicated poor fit between service quality when measured using SERVQUAL and when measured using the perceptions only.

Li and Kaye(1998) argued that the expectation measures add unnecessary data and it does not add value to the understanding to student's satisfaction formation. Sultan and Yin(2010) also supported the superiority of the performance only scales; they argued that the perceptions better explained the variations in the satisfaction of the customers when compared to the gap between the expectations and perceptions.

Abdullah(2006a) compared SERVPERF and HEdPERF against the same terms (dimensionality, reliability, validity and explained variance) and concluded that the HEdPERF is the most appropriate measurement tool for evaluating services in education sector. Bayraktaroglu and Atrek (2010) compared SERVQUAL and SERVPPERF against dimensionality, validity, explained variance and reliability. The study results indicated that the SERVPERF had a good model fit and the SERVQUAL had excellent model fit. The author explained the conflicting

results is obtained due to the method of analysis and the number of items used in each study was different. In addition, some of the studies used EFA while few studies used CFA. These differences were believed to cause conflicting results.

SERVQUAL has been highly recognized in the literature since the Eighties and it has been utilized by various researchers in different industries. Several studies used SERVQUAL for evaluating and assessing services quality in higher education (Cuthbert, 1996; Vaz and Mansori, 2013; Enayati et al., 2013; Shaari, 2014; Calvo-Porrall et al., 2013). Thus SERVQUAL can be considered a reliable tool for assessing service quality and it is applicable for various industries including higher education. A general comparison of the methods given in Table 2.2. However, it should be noted that such a comparison might not be valid in all circumstances.

Table 2-2:
Service Quality Scales Comparison Summary

Scale	Developer(s)	Concept	Dimensions	# Items	Usage	Criticism
SERVQUAL	(A. Parasuraman et al., 1988)	Measuring service quality by finding the Gap between consumers' perception and expectations of the offered services.	Reliability Responsiveness Tangibles Assurance Empathy	44	Measure service quality in cross industries Find service quality gaps that needs improvements	The concept of measuring the service quality as the gaps between expectations and perceptions was criticized by many authors. Lengthy questionnaire Poor model fit or at least compared to the other models or scales
	(Cronin & Taylor, 1992)	Performance only scale that measures the perceived quality with respect to customer actual perception of the offered services	Reliability Responsiveness Tangibles Assurance Empathy	22	Measure service quality in cross industries	Doesn't provide enough managerial insight regarding areas that needs improvement
HEdPERF	(Abdullah, 2006b)	Performance based scale that is designed to measure perceived service quality specifically in higher education settings	Academic Aspects Non academic aspects Reputation Access Programme issues	41	Evaluate and measure service quality in higher education settings	Used only in higher education sector Lengthy questionnaire Doesn't provide enough managerial insight regarding areas that needs improvement

f) Factors that Influence Service Quality Perception

One answer to the important question of how service quality is formed is provided by the gap model (Parasuraman et al., 1985). According to the model, the service gaps are directly formed by the five factors given below and as shown in Figure 2-10:

1. Word of the mouth
2. Past experience
3. Personal needs
4. External communications with the customers
5. Service product content

The first four factors influence the expectations of the customer and the fifth factor forms the customer's perceptions. All of the five factors form the perceived service quality. The evaluation of services quality is influenced by the expectations of the customers and hence information concerning factors that form customers expectations and ultimately the perceptions of the service quality should be of great interest to institutions. Such information can provide better opportunities that influence assessing service quality (Devlin et al., 2002b).

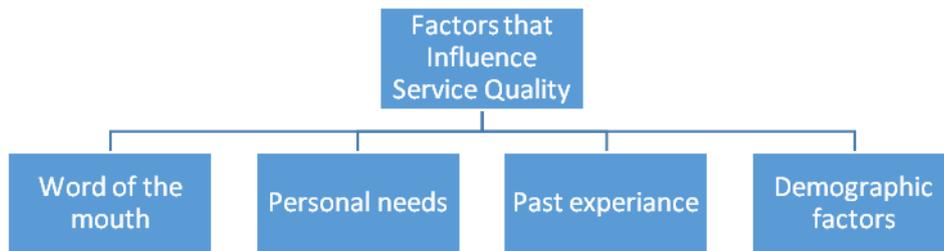


Figure 2-10: Factors that influence service quality classification.

Word of the Mouth

Word of the mouth was highlighted as an important factor in forming customers' expectations (Parasuraman et al., 1985), whether it was personal from relatives and friends or from experts such as journalists in the form of an informed opinion. Word of the mouth is usually considered as a result of the quality of services (Yavas et al., 2004) and according to Sweeney et al. (2008), it leads to repurchase behavior intention.

i. Personal Needs

Customer personal needs in terms of physical, social and psychological desires influence the expectations. According to the literature, different customers have different needs from services and their relation to the service provider and those needs are often dictated by personality, past experience and relations with others. Zeithaml et al. (1993) added the expectations are affected by the customer personal service philosophy.

ii. Past Experience

Past experience has been investigated in the industrial sector especially on customer behavior towards repurchasing or intentions of reusing a service, however, the literature on higher education sector lacks investigation on the effect of past experience on services quality perception.

iii. Demographic Factors

There is good number of research in the literature that investigates the impacts of demographic variables on services quality perception in a variety of service fields. Studies have reported a crucial role of some demographics on the perception of service quality or mixed results where some demographic factors had an effect of the perception of services quality while the other factors did not show this effect. There are also studies that did not find any role for the demographics on the perception of service quality.

For example, a study by Palli and Mamilla(2012) in higher education institution found mixed results where some of the demographic factors such as the occupation of the parents, household income and age was not statistically significant difference in the participants' satisfaction, however, the gender factor indicated a significant difference. Min and Khoon(2013) also found mixed results; the nationality, gender, and present level factors indicated no statistically significant difference while the age factor indicated a significant difference in service quality perception. Another study was done by Ilias et al.(2009) in which the effect of gender, semester of studies, ethnicity is studied and but

results didn't indicate any significant difference with service quality. Another example was provided by the study conducted by Twaissi and Al-Kilani(2015)where the results indicated no significant differences existed the students' perception of services quality based on the gender demographic factor.

The available literature investigating the relationships between customer's demographic factors and service quality showed diversity in results. Therefore, it is impossible to generalize the relationship and the linkage between service quality perception and the demographic factors of the customers. Even in the same service sector the results vary based on the type institution whether it is private or public, research methodology can also affect the results.

In higher education settings, there is limited literature on the area of the impact of student demographic variables on the perception of services quality and thus warrants further study.

g) Outputs of Service Quality Management

The more recent focus of service quality management is on the outputs and the benefits associated with quality assessment and management. Figure 2-11 shows two categories of possible outputs of quality management.

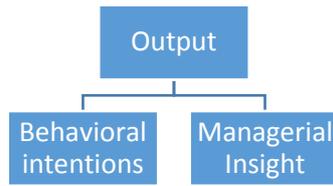


Figure 2-11:Output service quality management classification.

i. Behavioral intentions

The relationship between customer's behavioral intentions and the perception of service quality was proofed in by many researchers, for example, the research don by Boulding et al.(1993) Gracia et al. (2011) Ha and SooCheong, (2012).

The intention of recommending and choosing the service providing institution repeatedly was disguised as the construct of loyalty in many studies for example (Caruana, 2002, Hassan et al., 2013).

○ ***The Relationship Between Service Quality and Loyalty***

Rojas-Méndez et al.(2009)stated that despite the special nature of education, students can be considered as consumers of educational services just like any other service consumers and students behavior can be investigated and studied from the perspective of customers' behavior. According to Festus et al.(2006), loyal customers have positive impacts on the success and profitability of institutions that help to reduce the operating costs of the institution as follows :

- ***Continuous relationship with the education institution***

Institutions of higher education have realized the advantages of having loyal students to their educational institutions. According to Dado et al. (2011), loyalty should not be only considered for the period students spend at the institution but it should also consider periods after the graduation of the students. Subrahmanyam and Shekhar(2016)stated that loyalty of students helps the higher education management in establishing and maintaining long term relation with alumni and current students.

Higher education institutions benefit from graduates when pursuing higher level education (Hennig-Thurau et al., 2001).Festus et al.(2006) also pointed that the profit per student would increase by lowering the cost of marketing and advertising.

- ***Positive recommendation intentions***

According to Ramzi and Mohamed(2010),loyal customers are likely to give more positive recommendations. In higher education settings, loyal students help to reduce the cost by spreading positive comments and referrals about the institution to others (Hennig-Thurau et al., 2001). This is of great importance for higher education institutions since recruiting new students is costly. Vaz and Mansori(2013) added the higher education industry became global and this makes difficult to apply conventional marketing approaches. For the above-mentioned reasons, higher education institutions need to consider the issues related to customer (students) loyalty.

There are studies in the literature that attempted to figure out the linkage between loyalty and services quality, for example, Øyvind and Erik(2007)found a support relationship in Norwegian higher education in the following order: provided quality services leads to satisfied customers which in turn leads to loyal customers. Other studies also empirically supported this sequence of the relationship (Dabholkar et al., 2000; Deng et al., 2010).

A study by Ali et al.(2016) investigated the relation the original dimensions of the SERVQUAL scale with student satisfaction and loyalty intentions. The findings showed that tangibles dimension has the highest impact on student's intentions for spreading positive word of mouth about their higher education institution and/or pursuing higher education at the institution.

As opposed to the above-mentioned factors, some scholars modeled quality of services as an antecedent to customer's behavioral intention and empirically supported it. For example, Boulding et al.(1993)did a research on a grope of MBA students, the findings indicated positive impact of quality of services on loyalty intention of the students. Bitner (1990) also proposed a service evaluation model, which examine the effect of services quality on customers' satisfaction. The findings indicated direct association between the quality of the provided services and customer's behavioral intentions.

Studies reported opposite relative ordering of the linkage between services quality, customers' satisfaction, and loyalty. Thus, there is a need for additional investigation of

the nature of the relation between loyalty intentions and services quality in higher education settings.

ii. Managerial Insight

El Hassan(2013) mentioned that the outputs of service management in higher education could be managerial insights, program design, or/and managerial decisions that assist the institution to meet its customers' requirements and improve service quality levels. Different quality management (assessment) tools provide a different type of outputs. The gap (SERQUAL) model provides richer information than the perception only model (SERVPERF and HEdPERF). The SERVQUAL scale is useful in directing management attention to service areas that require immediate attention from the customer's perspective depending on the gap size between the customers' expectations and actual perceptions. SERVPERF and HEdPERF suggest intervention even if the institution performance level is already up to consumer's expectations because both are based on comparison with the maximum possible score. In the case of SERQUAL, if the perception score exceeds the expectation score, this means that the provided service delights the customer and there is no need for the management to place an effort to improve this area.

In general, studies indicated that all of three measures have good measurement capabilities. The measurement model should be chosen according to the objective of service quality assessment or research objective(Jain and Gupta, 2004):

- If the objective is evaluating the overall services quality of the institution or if the objective is to make comparisons of quality across different service industries then SERVPERF and HEDPERF can be considered as valid options.
- If the objective is identifying service performance gaps for managerial interventions then the SERVQUAL scale is considered as a good option because of its superior diagnostic power.

2.3 Summary of the Literature Review

The focus on services quality assessment and management arose with the increased competition and the desire to provide better services within the capability of an organization. The models developed so far for measuring and assessing services quality in the higher education sector are adopted from other industries except for the HEDPERF by Abdullah(2006b) which was developed specially for the higher education industry.

The review discussed the available models used for assessment and measurement of quality of services. The three most popular and used models, SERVQUAL, SERVPERF, and HEDPERF were explored here. The main purpose of these models was measuring the perception of services quality by students and providing managerial insights for quality improvements. These service quality measurement models were developed depending on the gap between expectations and perceptions of the customer.

The usage of SERVQUAL for measuring services quality dominates the literature. The reason behind this could be the lack of literature using the rest of the models in higher education settings. This requires more empirical research in higher education using SERVPERF and HEdPERF scales.

Below are the identified research gaps in higher education service quality management:

a) GAP 1: Customized measures of service quality that are specially designed for higher education institutions.

Higher education industry adopted measures of services quality that was originally developed for other industries. It true that higher education shares many characteristics of other service industries; however, it has some unique features and characteristics. Service quality share some dimensions across the different quality assessment and measurement scales, however, the items used in each dimension and their operationalization vary across different industries. Therefore, using customized measure that is pertinent to the higher education industry is more appropriate than using the generic available models, which were developed for other industries.

b) Gap 2: The relationship service quality and culture/value.

The concerns and perception of quality services differ from one culture to another, customers with different cultures and values tend to perceive the same services in different ways and have different ways of evaluating the quality of services. As a result of this, issues such as customer's behavior (loyalty) are also affected.

Since the concerns and perception of quality services differ based on cultures, the development of customized measure related to the culture where the service is being offered is vital for better assessment and improvement of service quality. It would help in making the right decisions that would contribute to an improved organizational efficiency, effectiveness and competitiveness.

c) Gap 3: The influence of customers demographic variables on service quality perception

Limited literature is available on the impact of demographic variables on service quality perception in higher education. The demographic factors of higher education stakeholders should be investigated when evaluating services quality.

d) Gap 4: The relationship between service quality and institutional image

Image or reputation of institutions is presented in the HEdPERF model as a determinate of service quality, however, it is not considered in the SERVPERF and SERFQUAL.

e) Gap 5: Different higher education stakeholder's perception and expectation of quality of provided services

Higher education has many stakeholders that act as customers of higher education institutions in certain areas. Each type of these stakeholders has its own perception of

what is considered as quality service and their own way of assessing and evaluating the quality of services.

Many researchers considered students as the main stakeholders of higher education institution. Srikanthan and Dalrymple(2003)highlighted the importance of understanding what students considered as quality to attract and retain students. Tang and Hussin(2011)added that students nowadays have diverse profiles and higher education providers need to address what their students consider as quality services. They also emphasized the importance of taking into consideration the other stakeholder's views of the quality of provided services for the management of higher education for improving quality.

The literature lacks research that addresses the gap between the internal stakeholders other than students (academic and non-academic) and the expected service. There is also very limited literature on perceptions of services quality by external stakeholders of higher education institutions.

Therefore, it is important to take into consideration the different stakeholders point of view of the quality of provided services in higher education settings for better assessment and management of quality of provided services and improving the quality of the provided services.

Chapter 3 : QATAR EDUCATION SECTOR

This chapter investigates service quality initiatives in Qatar education system. It also considers the status of Qatar education institutions regarding the strategic support to achieve the quality education. Most of the previous studies dealing with service quality management were conducted in the USA and Europe. Therefore, it was not easy to find sufficient and current research articles that discuss management of services quality in Qatar's education sector or the gulf region in general.

3.1 The State of Qatar

The State of Qatar is located in the Middle East and surrounded by the Arabian Gulf. Its total area is 11,521square kilometers. Qatar's southern land borders with Saudi Arabia and it shares sea borders with Iran, United Arab of Emirates and Bahrain. As per the current statistics (2016), it has a population of more than 2.6million.

3.2 Background of Education Sector in Qatar

Qatar's education program was started in 1952 when the first elementary school was opened. The school was for boys only and it had at that time six teachers and around 240 students. In 1957, the Ministry of Education was established to put more focus in the education sector. In 1973, The College of Education was established as the first institution of higher education in Qatar. At that time, the College of Education enrolled150 students (57 male and 93 female). In 1977, College of Education was

expanded and it became Qatar University with four colleges namely: College of Humanities and Social Sciences, College of Education, College of Sharia and Islamic Studies, and; College of Science, then Qatar University experienced rapid growth and today it has nine colleges: Education, Pharmacy, Business and Economics, Engineering, Law, Sharia and Islamic Studies, Health Sciences, Arts and Sciences and Medicine and it has a population of about 17,000.

In an effort to expand Qatar's higher education offerings and to invest more in research and development (R&D), the Emir of Qatar established Qatar Foundation (QF) in 1995 to bring world-class universities to Qatar's Education City. It helped in drawing international presence with eight universities:

1. Weill Cornell Medical College in Qatar,
2. Virginia Commonwealth University in Qatar,
3. University College London Qatar.
4. Georgetown University School of Foreign Service in Qatar,
5. Texas A&M University at Qatar,
6. HEC Paris in Qatar,
7. Carnegie Mellon University in Qatar, and
8. Northwestern University in Qatar,

Education City now includes its first homegrown Qatari university, Hamad Bin Khalifa University that works closely in partnership with campuses in Education City to bring more focus on R&D with a variety of masters and doctoral programs. It has colleges

of Science, Engineering and Technology; Humanities and Social Sciences; Law and Public Policy; Public Health; Business; and the Qatar Faculty of Islamic Studies(Stasz et al., 2008).

3.3 Structure and Organization of the Education System

The educational system in Qatar is divided into five stages as follows:

- **Pre-school education**

Pre-school education covers nurseries and kindergarten and it is mainly run by the private sector. The age range for this stage is three to five years.

- **Primary education**

The primary education starts from Grade 1 to Grade 6 is mandatory and the admission age for Grade 1 is usually six.

- **Preparatory Education**

The preparatory education starts from Grade 7 to Grade 9. Students can proceed to a commercial, technical secondary, religious or general preparatory education upon completion of this stage.

- **Secondary education**

This stage starts from Grade 10 to Grade 12. Upon completing this stage, students are eligible for higher education.

- **Higher education**

Several opportunities are available for students in Qatar who wishes to pursue higher education. Community College of Qatar, Qatar University, and universities in education city provides educational opportunities for the high school graduates. Graduation program is for four years, master's program is for two years and Ph.D. program is for four years. In Qatar University, students can enroll for Ph.D. at the College of Business and Economics and at the College of Engineering.

3.4 Management and Administration of Qatar Education System

Ministry of Education and Higher Education is in charge of Qatar's education management and administration. Earlier, schools in Qatar were divided into four zones based on the geographical location: each zone had some administrative staff and a director responsible for all administrative, technical, financial and cultural issues related to the zone.

In November 2002, the framework of the education reform initiatives "Education for a New Era" was started which resulted in major changes in the education system administration. The Supreme Education Council (SEC) was established for education development in Qatar. The SEC aimed at meeting the needs of the human resources by upgrading the education standards, which aligned with the country national education policy reflecting the Qatar National Vision (QNV) 2030 of the government. The SEC has three major Institutes under it: the Education Institute, the Evaluation Institute, and the Higher Education Institute.

- 1. The Education Institute** supports and oversees the schools. Its responsibilities include the establishment of standards for school curriculum and making sure that the schools follow the standards. The education Institute is also in charge of issuing the licenses and monitoring private schools. It also provides professional development programs for teachers and school administrators. It has four offices: the Independent Schools Office, the Private School Office, the Curriculum Standards Office and the Professional Development Office (<http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).
- 2. The Evaluation Institute** is responsible for the developing and conducting tests. Its responsibilities include monitoring student learning and evaluating schools performance. It has five offices each for school evaluation, student's assessment, senior schooling certificate, accreditation and licensing, and student assessment and registration (<http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).
- 3. The Higher Education Institute** is in charge of providing career advice and educational opportunities in Qatar and abroad. It has five offices: scholarship, advising and career development, finance and administration, institutional standards and the scholarship programs office (<http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).

3.5 Reforms Initiatives in Education Sector of Qatar

Qatar has made great progress toward improving the education system after establishing the Supreme Education Council in 2002. The education sector of Qatar is aligned to accomplish the goals of QNV 2030 that aim to transform the State of Qatar to *“an advanced society capable of sustaining its development and providing a high standard of living for all of its people”*. According to the education and training sector strategy 2011-2016, the reforms are in four major programs as mentioned below.

3.5.1 Improving the K-12 Education Program

Qatar government went through a major development process in 2002 to identify weaknesses and to redesign the K-12 system. The outcomes of the schools' evaluation revealed that the K-12 system was not adequately preparing the students for post-secondary education or for the job market. The assessment also identified major issues such as rigid and outdated curriculums, inadequate teachers training and a poor institutional structure.

The Improvement efforts resulted in converting all government schools into independent self-directed schools. The reforms also applied process standards for teaching and curriculum. The standards helped to identify the skills and knowledge to be acquired at each level starting from KG to Grade 12(<http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).

3.5.2 Higher Education Improvement Program

The program was designed to improve higher education institutions in Qatar in an effort to produce qualified students who are ready for participating in the knowledge economy and meeting the workforce needs (Education and Training Sector Strategy, <http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).

The higher education sector of Qatar went through major reforms and significant improvements and development in the past decade. In 2003, the national University (Qatar University) launched a reform program to enhance its institutional autonomy, raise academic standards, get accreditations, and increase student engagement. On the other hand, QF has continued to expand by opening more branch campuses from the United States and Europe. New institutions were also developed to provide students with additional access to education opportunities such as College of the North Atlantic Qatar in 2002 and Community College of Qatar in 2010 (Education and Training Sector Strategy, <http://www.edu.gov.qa/En/Pages/Home.aspx>, Dec 2015).

3.5.3 Strengthening Technical and Vocational Education and Training (TVET) Program

This program aimed to achieve three outcomes pertaining vocational education as follows:

- Development of plan and framework for (TVET) offerings,
- Align the outputs of the (TVET) programs with Qatari labor market and society needs.

- Improve the perception of (TVET) programs in an effort for increasing enrollments and better preparing the Qataris for the labor force.

The program provides students with difficulties entering universities opportunities for education and it helps meeting the labor market needs.

3.5.4 Enhancing Scientific Research Program

Qatar invested substantial resources in development and research. The Program was developed to effectively use these resources for the development of a national strategy that identifies the key areas for research.

3.6 Status of Education Sector in Qatar

Understanding the dynamics of Qatari student's enrollment is very important for interpreting changes in the education system and planning for its future. As can be seen from Figure 3-1, Qatari Students represents the majority of students at all stages of education. Public schools have the highest percentage of Qatari students during the two selected period 2003-2004 and 2008-2009. In 2008-2009, the percentage of Qatari students had increased in the International schools (General Secretariat for Development Planning, Dec 2015, <http://www.gsdp.gov.qa/>).

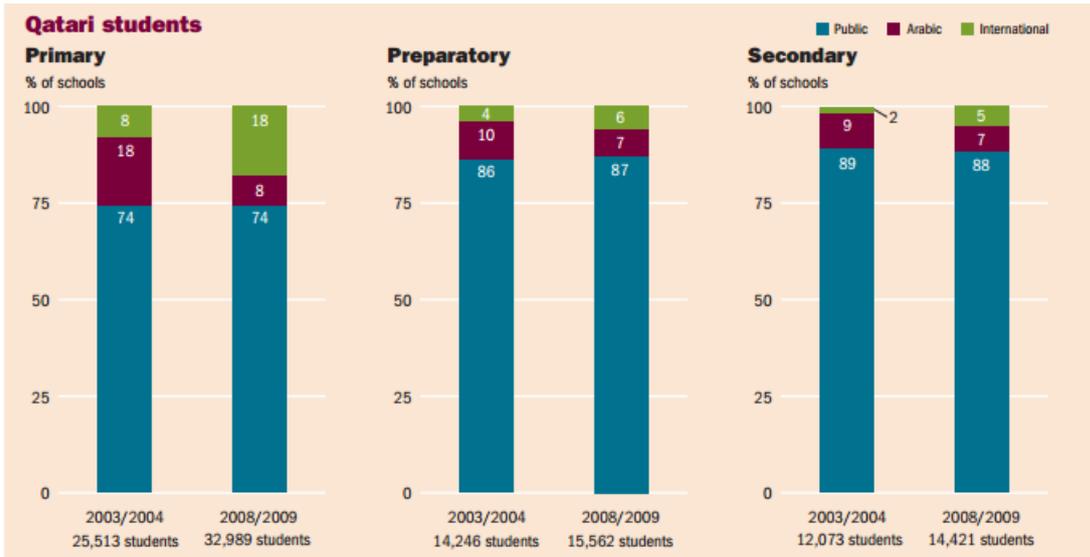


Figure 3-1: Statistics of Qatari students in schools at Qatar (Source Qatar National Development Strategy)

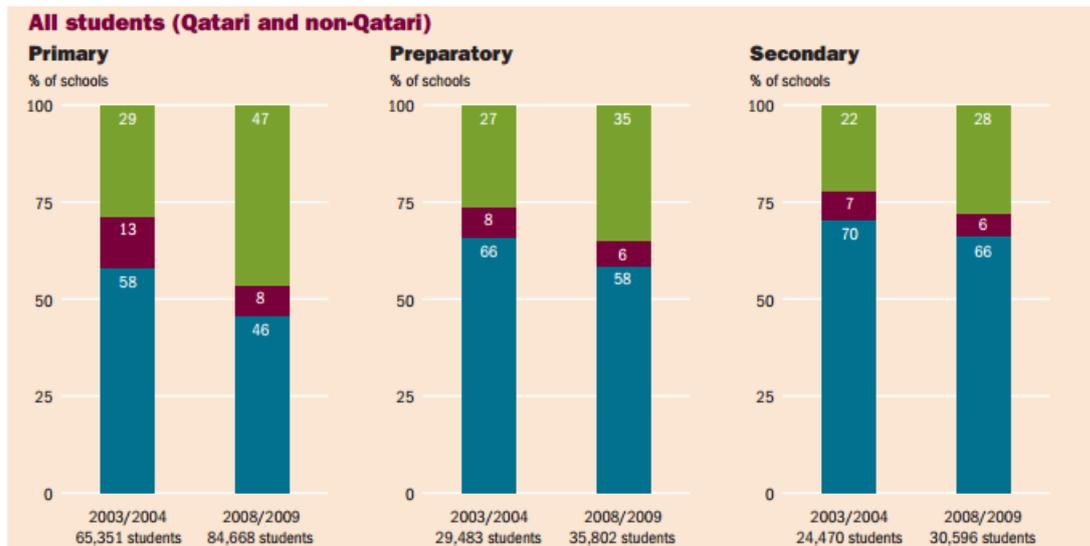


Figure 3-2: Statistics of Students in Schools at Qatar (Source Qatar National Development Strategy)

The enrollment ratios of Qataris at tertiary education are relatively low, especially for male students. The reason behind this can be explained by QNDS as the stringent entry and admission requirements at QU after 2003. The report added that this was not due to

the lack of capacity but because of the K-12 system did not prepare students well for meeting the admissions requirements for national universities and international universities as well.

3.7 Government expenditure on education

Qatar has invested heavily in the education sector. The Qatari government spending on education has grown noticeably in the period from 2000 to 2008. As can be seen in Figure 3-3, Qatar exceeded the average spending on education among all GCC countries except for KSA (General Secretariat for Development Planning, Dec 2015, <http://www.gsdp.gov.qa/>).

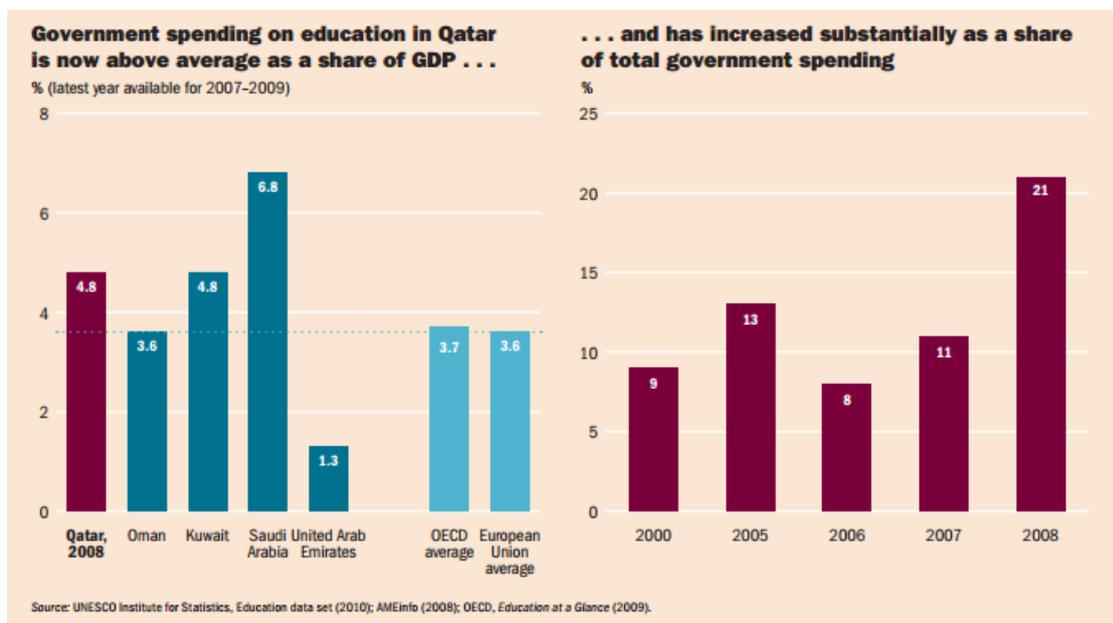


Figure 3-3: Qatar government spending on education (Source: QNDS)

Figure 3-4 below shows that the average annual expenditure per student is higher than the average of the organization for economic co-operation and development.

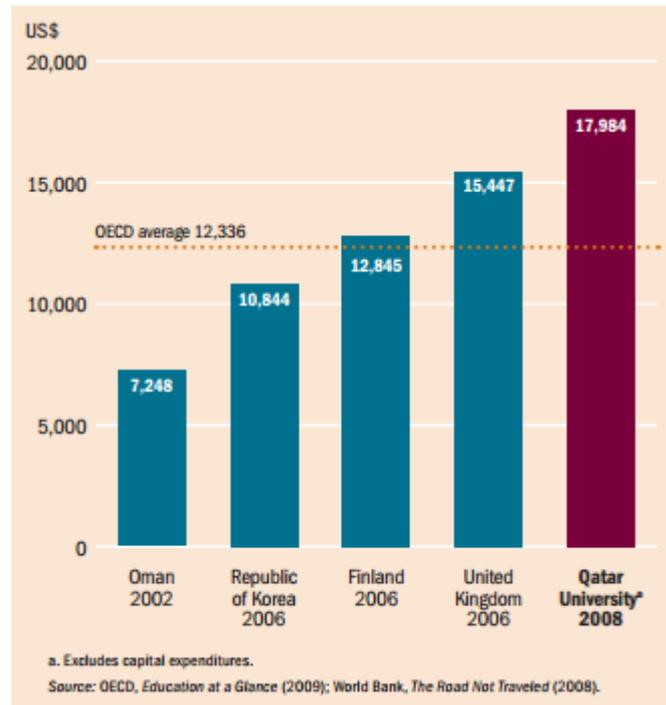


Figure 3-4: Average annual expenditure on higher education per student (Source: Qatar National Development Strategy)

As per the RAND report Qatar government has increased the education sector budget from 7% of national its budget to 7.35%, that is, QR24.4bn (\$6.7bn) in 2013/2014 to QR26.3bn (\$7.2bn) in 2014/2015.

3.8 Importance of measuring education quality in Qatar

3.8.1 Country Policy

The Qatari government has outlined a clear vision for diversifying the economy away from gas and oil revenue. The QNV 2030 and the QNDS 2011-16 have outlined the country's long-term economic and social goals and identified education as a critical vehicle for meeting these goals and targets.

Qatar's policy agenda has set high priorities to education and education quality. One of the pillars of Qatar National Vision 2030 is human development in the education sector. As per the vision, the nation requires *"building an educational system at par with the highest international standards, world-class education system and equal opportunities and high quality educational and training opportunities"* (Qatar National Vision 2030). This means that higher education institutions should seek high quality and this cannot be achieved without good assessment of the provided service. Cardona and Bravo(2012) mentioned that the assessment of the quality of provided services is vital for providing information on education plans and improvement programs effectiveness.

3.8.2 Competition

Having several foreign universities opened branch campuses in Qatar puts the universities in a challenge for attracting and retaining students. This agrees with the finding by Angell et al.(2008)which indicated that ignoring the competitive environment in higher education, the need for attracting students, and the necessity of assessing quality of services, will ultimately lead to disadvantages to the institution. Studies have

found that students become more demanding when deciding which education institution to pursue the education at and they look for quality evidence (Donaldson and McNicholas, 2004; Binsardi and Ekwulugo, 2003). Therefore, obtaining the competitive advantage in a challenging environment is necessary.

3.9 Study Site: Qatar University

The University has made several attempts over the past forty years to provide a unique education experience and meet the labor market through providing different programs. At present time, University boasts around 17,000 students and over 30,000 alumni.

Qatar University also started in 2003 a reform plan to raise the efficiency of both academic and administrative process. Qatar University has a vision which focuses on developing itself as *"to be regionally recognized for distinctive excellence in education and research, an institution of choice for students and scholars and a catalyst for the sustainable socio-economic development of Qatar"*. Qatar University has implemented strategic plans 2010-2013 and 2013-2016. They are launched to enhance the performance areas that have a direct relation with education quality as well as research. The key performance areas focused in the plans are in teaching, research, and community services. The teaching and research areas focus on standardization and accreditations. This shows the university's steps towards achieving quality in overall aspects of university's business.

Qatar University is classified among the leading universities in the region that applied a strategy to ensure quality and excellence. As result, its colleges, mainly business and engineering has obtained respective accreditation for its programs.

Qatar University went through major reforms in the past years and it is important to better understand how these reforms helped the university to enhance its quality and meet the stakeholders' expectations.

Chapter 4 : RESEARCH MODEL

Research questions, theoretical framework, research hypotheses and the intended statistical tests are presented in this chapter.

4.1 Research Questions

The following are the research questions that this thesis is going to address.

1. What are the service quality determinants (dimensions) in Qatar higher education settings?
 - a. Can the image be considered as a dimension of service quality?
 - b. Can Culture/Value be considered as a dimension of service quality?
2. How do students perceive the different determinants (dimensions) of service quality at Qatar higher education sector?
3. Do discrepancies exist in the perception of service quality based on student's demographic factors (gender, age, nationality, and education level)?
4. What is the nature of the relationship between student's loyalty intentions and the quality of provided services in Qatar higher education sector?

4.2 Theoretical Framework

The research model in Figure 4-1 below shows the hypothesized relationships tested in this study.

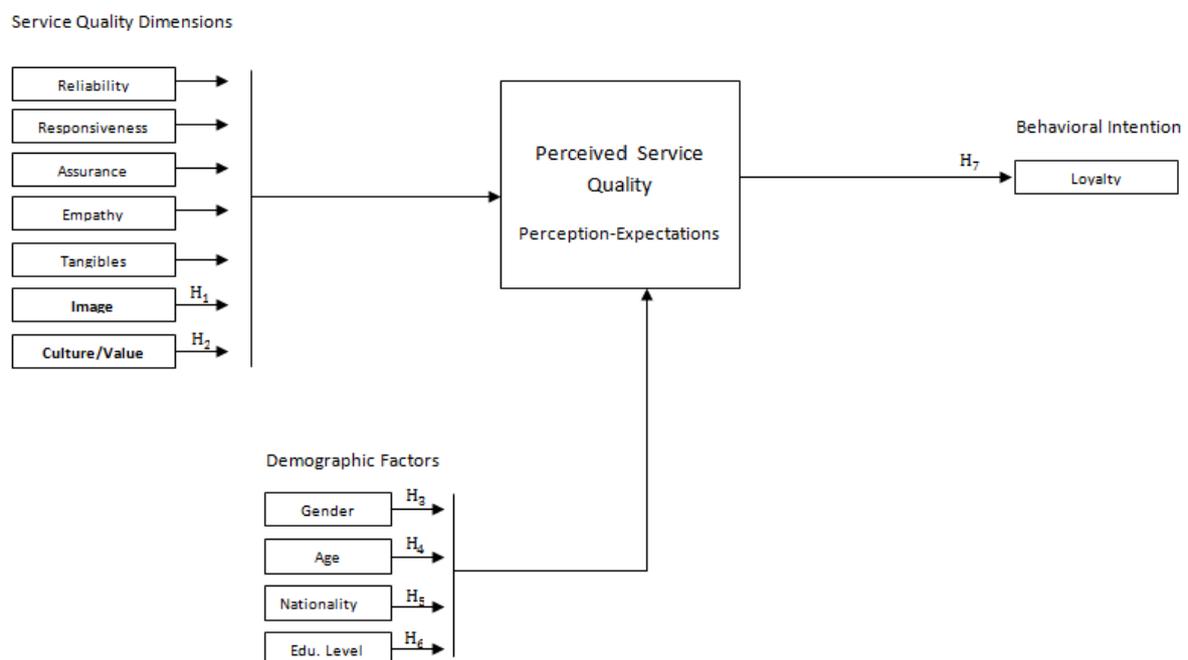


Figure 4-1: Theoretical framework.

In an effort to address the relation between image and service quality and culture/value influence in service quality, two extra dimensions are added to the original five SERVQUAL model dimensions.

The link with the value part is important considering the QNV 2030, which "*aims to build a modern world-class educational system that provides students with the first-rate education which promote social cohesion and respect for the Qatari society's heritage and values*"(General Secretariat for Development Planning, Dec 2015, <http://www.gsdp.gov.qa/>).

The literature provided different results when it came to investigating the effects of demographics on perceiving service quality (please refer to chapter two section 2.4.3.4). Therefore, the hypotheses three to six are offered to investigate whether selected demographic variables could predict services quality perception.

Based on the discussion provided in Chapter 2 on the link and association between quality of services and customers' behavioral intention highlights the importance of maintaining loyal customers at higher education settings. Hypothesis seven is offered which focus on the influence of services quality on students behavioral intentions (positive loyalty) in higher educational settings.

4.2.1 Research Hypothesis

The following are the research hypothesis developed from the research question mentioned earlier.

- a) Resulting from the first research question relating image and value with the service quality, the research hypothesis would be:
 - i. H_{01} : There is no significant correlation between image and service quality in higher education sector.

ii. H_{o2} : There is no significant correlation between culture/value and service quality in higher education sector.

b) Resulting from the research question on discrepancies in students' perceived services quality based on their demographic factors (age, nationality and education level), the research hypothesis would be:

i. H_{o3} : There is no significant difference in perception of service quality based on student's gender (Female/Male) in higher education sector.

ii. H_{o4} : There is no significant difference in perception of service quality based on student's age (less than 25 /25 and above) in higher education sector.

iii. H_{o5} : There is no significant difference in perception of service quality based on student's nationality (Qatari / Non-Qatari) in higher education sector.

iv. H_{o6} : There is no significant difference in perception of service quality based on student's education level (undergraduate/ graduate) in higher education sector.

d) Resulting from the research question on the nature of the relationship between student's loyalty and the quality of provided services in Qatar higher education sector.

H_{o7} : There is no significant correlation between student's loyalty behavior and service quality in higher education sector.

4.2.2 Modeling Variables and Tests

Table 3 below presents the statistical test required for each hypothesis.

Table 4-1:
Modeling Variables and Tests

Hypothesis	Variable 1	Variable 2	Statistical Test
H_{01}	Service Quality	Image	Correlation Regression
H_{02}	Service Quality	Value	Correlation Regression
H_{03}	Perceived Quality	Gender	T-Test
H_{04}	Perceived Quality	Age	T-Test
H_{05}	Perceived Quality	Nationality	T-Test
H_{06}	Perceived Quality	Education Level	T-Test
H_{07}	Perceived Quality	Loyalty	Correlation

Chapter 5 : RESEARCH METHODOLOGY

In this chapter, the research process, details on research design, sample frame and sampling method, data collection procedures including the questionnaire design, the statistical analysis and ethical consideration are presented.

5.1 Overview of the Research Process

This research follows the scientific research process as shown below in Figure 5-1.

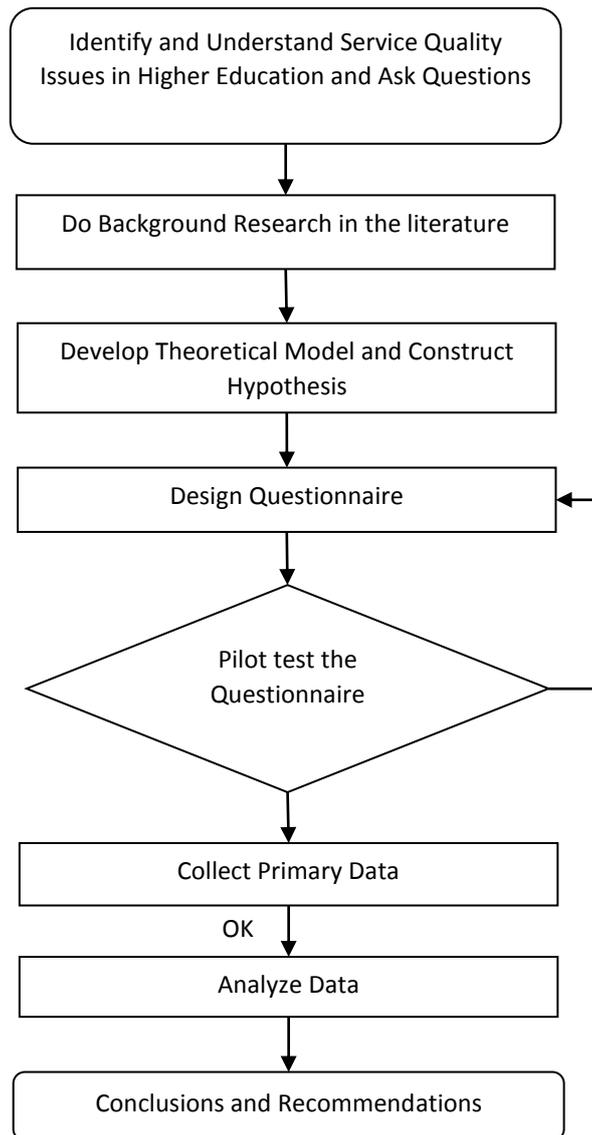


Figure 5-1: Research process

5.2 Research Design

This study is a descriptive research that utilizes a cross-sectional survey method ,which intends to analyze student's perception of services quality in Qatar higher education settings. The descriptive research design is used to describe characteristics of specific

groups, estimating consumer behavior, making predictions and determining attitude and perception and it is also used to investigate the degree of association between variables (Malhotra, 2010). According to Bolo (2011), this type of research design allows for identifying linkages amongst and between variables. Sultan and Wong (2010) added that this type of research design could provide a quantitative explanation of the antecedents of services quality in higher education settings. Descriptive research design was used by Aldridge and Rowley(1998)to address the satisfaction level with the provided services at Edge Hill University College from students' perspective. They also stated that it produces consistent results on a longitudinal basis. A cross-sectional survey method was used in this research.

5.3 Sampling Frame and Method

The population of interest is comprised of Qatar university students. The students are preferred because they are considered as the main stakeholders and many scholars considered them as the best population to assess and evaluate the institution provided services quality.

5.4 Sample and Sampling Procedure

Sampling is the process of taking smaller portions from a population for observation and analysis (Johnson and Onwuegbuzie, 2004).According to Marshall(2016),the main objective of the sampling process is selecting a representative sample to generalize the findings to the study population. Lodico et al. (2006)also addressed the significance of suitable sampling

saying that the quality of research study depends mostly on the appropriateness of the sampling techniques that have been employed.

a) *Sampling Method*

Random sampling was used in this study. According to Johnson and Christensen (2004) Lodico et al.(2006) random sampling provides a heterogeneous sample where each character in the population is represented in the sample.

b) *Sample Size*

Determining the appropriate sample size for a study is an important step for adequate statistical significance (Suresh and Chandrashekhara, 2012). A rule of thumb for determining the size of the sample is provided by Roscoe (1975) where he argued a sample of more than thirty and less than five hundred is considered appropriate.

In this study, a mass emailing was used to solicit responses from the students. Therefore, this supported randomness and eliminated bias. Although there are about 17000 students in the university, the population of undergraduate students is about 15000. However, questionnaires were sent only to 4000 students. The response required students to understand the questions and value it. At the end, the 397 responses were returned for use in this study. Although this response rate is small, it seems consistent with responses received by other researchers. For example, Abdullah(2006a)used 381 usable responses and Sultan and Wong(2010) considered 365 as an adequate sample size. Palli and Mamilla (2012)used a sample of 120 students. Enayati et al. (2013) used a sample of 373 for measuring service quality at Islamic Azad University. Ali et al. (2016) used 241 responses.

5.5 Time Scale

According to Gray(2014), a single cross-sectional study is used when the data are collected at one specific period of time. Thus, the aims of the research is to determine Qatar university students perceived quality level during the academic year 2015-2016. The questionnaire was conducted during the period of March-April 2016.

5.6 Data Collection Techniques

The study made use of two data types: primary and secondary. The primary data were collected using a questionnaire (Appendix C). The secondary data were obtained from many sources including electronic databases. Information was also obtained from government reports, Qatar National Vision 2030, Ministry of education and higher education in Qatar, and Qatar university reports.

a) Questionnaire Design

A descriptive cross-sectional questionnaire was employed for this study. A modified version of SERVQUAL scale was used to gather information about service quality provided by Qatar University and address the service quality gaps that need improvement. SERVQUAL was used for its superior diagnostic power as it helps in identifying service performance gaps to provide managerial insight.

In this study, participants were requested to rate the questionnaire items on a seven points Likert type scales that ranges from 1 indicating strong disagreement to 7 indicating strong agreement. Some researchers used five points Likert type scales while others used seven point Likert type scales. Parasuraman et al.(1991) recommended using the seven-point Likert-type scale to meet the following criterion: minimize the response bias, high discriminating power, simplicity of administration and answering the questionnaire.

The questionnaire sent for the survey has three parts: The first part considers the profile of the respondent, consisting of four questions to generate background information. The second part has 29 questions, to collect data on university service quality dimensions which measure the respondents' expectation and perception of service quality (1-5 culture/value; 6-10 image; 11-14 Tangibles; 15-17reliability; 18-21 responsiveness; 22-25assurance, and; 26-29 empathy). The third part consisted of three questions that are designed to capture the respondent's loyalty. An introduction page was given on the background of research and on instructions to answer the questions (Appendix B).

b) Piloting the Questionnaires

Pilot testing refers to testing the data collection instruments in a small number of respondents for the purpose of identifying and eliminating potential problems. Shukla(2008)advised that a questionnaire should not be used in the field without adequate piloting. Cohen(1985) Malhotra(2010)also highlighted the importance of piloting the questionnaire instrument for the following reasons:

- Checking the clarity of instructions and layout of the questionnaire of questions (items).
- Eliminating ambiguities or difficulties in wording.
- Estimating the time needed to answer the questionnaire.
- Testing the data coding for statistical analysis

Accordingly, before the collecting the actual data the questionnaire was pilot tested on five students from the university. The received feedback was used to change the wording of unclear questionnaire items. The Arabic version of the questionnaire was created based on the feedback from students.

c) Data Collection Procedures

Prior to data collection using the questionnaire, an approval (Appendix A) for collection data was obtained from Qatar University. The questionnaires for the respondents were sent online to their university email accounts. Following this, the collected data were analyzed with different types of software.

d) Data Preparation

The data preparation went through three steps: data editing, coding, and tabulation. Data editing was performed to make sure that the collected data is complete and accurate, coding was performed to categorize the responses. The items of the questionnaire coded as in Table 5-1 below:

Table 5-1:
Data Coding Information

Type of Data	Section	Question Number	Value Assigned to Responses
Demographic data	Section 1	A01	Female (1) , Male (2)
		A02	<25 (1), 25+ (2)
		A03	Qatari (1) , Non Qatari (2)
		A04	Undergraduate (1), Post-graduate (2)
Quality attributes	Section 2	Expectations E01-E29	Strongly disagree (1)
		Perception P01-P29	Disagree (2)
			Disagree somewhat (3)
			Undecided (4)
			Agree (5)
			Agree somewhat (6)
			Strongly agree (7)
Loyalty of respondents	Section 3	L01-L03	Strongly disagree (1)
			Disagree (2)
			Disagree somewhat (3)
			Undecided (4)
			Agree (5)
			Agree somewhat (6)
			Strongly agree (7)

The final step of data preparation is tabulation.

e) Data Quality Assurance

Data quality was ensured at different stages of data collection process. During data collection, mass emails were sent by the university to students to collect their responses.

After data collection, quality of the collected data was assured by data editing in terms of removing incomplete responses and descriptive statistics were used to investigate how representative the sample is to the population of the study.

5.7 Data Analysis and Interpretation

The collected data is analyzed to reduce, organize and accord meaning to the data. The analysis is mainly determined and informed by the research objectives and questions. In this study, data analysis was performed using Microsoft Excel and Statistical Software Packages SPSS version 24.0.0.0.

Data analysis was performed in three phases: first, preparation of the data; second, statistical analysis and third, reporting of the findings. The applied statistical tests on the data are outlined below:

a) Descriptive Statistical Analysis

Descriptive statistical analysis (or descriptive statistics) helps in describing data characteristics and achieving objectives of research questions (Malhotra, 2010; Shukla, 2008). Descriptive statistics was used to provide information on the respondents and to summarize the collected data. The background information of the participants collected via part one of the questionnaire was used to provide information on the profile of the respondents.

b) Correlation Analysis

The correlation was used to examine the association and relationship between the study variables. In this thesis, Pearson's correlation was performed to investigate the relationship and association between image and culture/value and service quality. It was also used to examine the association between loyalty and quality of services. According to Pallant(2007), Pearson's correlation coefficient values in the range of 0.10-0.29 indicate small association; values in the range of 0.30-0.49 represent medium association and values in the range of 0.50- 1.0 represent a strong association between the variables.

c) Regression Analysis

While the correlation analysis determines the direction and strength of the linear association between the variables (Pallant, 2007), regression was used to investigate the predictive power of certain variable on another variable. Regression analysis helps in determining the impact of the predictor variables on the dependent variables (Malhotra, 2010).For this study, a regression test was used to further realize the relationship between image, culture/value and quality of services.

d) T-tests

T-tests are used for verifying the existence of a significant difference between means (Pallant, 2007) of the sampled groups. It compares sample means to an expected mean (Malhotra, 2010) between the group of data designed for the analysis. T-test was used in

this study for investigating if a significant difference exists in the perceptions of services quality based on the demographic factors of the participants.

5.8 Ethical Considerations

The ethical issues are a necessity that must be addressed adequately in any research. According to Saunders (2009) ethical concerns should be considered at all stages of the research—while collecting data, analyzing data, and reporting the findings. Moreover, Ghauri and Gronhaug(2010) advised to start the process of ethical consideration as early as the design stage to avoid unfavorable impact resources and time if ethical consideration was considered late or at final stages of the research. Lodico et al.(2006)pointed out that ethical issues should focus on protecting the respondents and participants of the research. Accordingly, the following ethical issues were taken into consideration while conducting the questionnaire:

a) Informed Consent

Silverman(2006)pointed out that it is crucial to provide the participant with information on the purpose of the research and for avoiding deception. Therefore, the respondents of the questionnaire were informed about the study's nature and purpose.

b) Privacy and Confidentiality

Saunders(2009)highlighted the importance of respecting and providing participants with confidentiality and privacy to obtain their interest. With this regard to this study, it was stated to participants that their participation is voluntary and respondent's confidentiality was ensured through anonymity.

Chapter 6 : ANALYSIS AND DISCUSSION OF THE FINDINGS

In this chapter, the statistical analysis performed on the collected data is presented. Discussion of the findings and a comparison with other studies findings are also provided.

6.1 Response Rate

The questionnaires were sent to 4000 students via university email accounts. A total of 500 responses were received, a 12.5% percent response rate. This response rate is low due to the short period of fifteen days, during which the data was collected. Following the data preparation, only 397 responses were found usable. In the literature review, it was seen that authors have used a comparable number of responses in order to analyze the perception.

6.2 Tabulation of the Data

Tabulation of data used for statistical analysis is given in APPENDIX D.

6.3 Descriptive Analysis

This section will provide descriptive information on the collected data.

a) Profile of the Respondents (Sample Characteristics)

From Table 6-1 below, it is noticed that 85 percent of the respondents were female and the remaining 15 percent were males. This can be explained by the distribution of student's

gender at Qatar University. As per 2014 Qatar University Factbook, the student's population is composed of 30 percent male and 70 percent female.

Table 6-1:
Profile of the Respondents -Gender (Source: Primary Data 2016)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	334	84.1	85.0	85.0
	Male	59	14.9	15.0	100.0
	Total	393	99.0	100.0	
Missing information		4	1.0		
Total		397	100.0		

As per Table 6-2, among the respondents, 75.8 percent were less than 25 years old and the remaining were 25 years or above. Usually, undergraduate students are less than 25 years old.

Table 6-2:
Profile of the Respondents- Age (Source: Primary Data 2016)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 25	301	75.8	76.0	76.0
	25 & Above	95	23.9	24.0	100.0
	Total	396	99.7	100.0	
Missing information		1	.3		
Total		397	100.0		

It was also observed that 55.3 of the respondents were Qatari students and the remaining 44.7 were non-Qataris (Table 6-3). As per 2014 Qatar University Factbook, the Qatari students represent 58 percent of the student's population and non-Qatari students represent 42 percent.

Table 6-3:
Profile of the Respondents -Nationality (Source: Primary Data 2016)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Qatari	215	54.2	55.3	55.3
	Non Qatari	174	43.8	44.7	100.0
	Total	389	98.0	100.0	
Missing information		8	2.0		
Total		397	100.0		

Table 6-4 below shows that 85 percent of the respondents were undergraduate students and 11.8 percent were post-graduate students. The university population is composed of 87.5 percent undergraduate and the remaining 12.5 percent are postgraduate.

Table 6-4:
Profile of the Respondents -Education Level (Source: Primary Data 2016)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	341	85.9	87.9	87.9
	Post Graduate	47	11.8	12.1	100.0
	Total	388	97.7	100.0	
Missing information		9	2.3		
Total		397	100.0		

b) Variance Measures (Mean, Mode & Standard Deviation)

The variance measures of the items used for measuring students' expectations and perceptions of the services quality dimensions. The standard deviation of the expectations ranged from 1.25 to 1.54 and standard deviation of the perception ranged from 1.54 to 1.80 for all dimensions (please refer to APPENDIX E).

6.4 Reliability Test of the Developed Instrument

To test the internal reliability of the items under the seven dimensions and the overall instrument, Cronbach's alpha coefficient was used. The Cronbach's alpha coefficient values are between zero to one, the closer to one the greater the reliability of the scale.

According to George (2003), alpha values between 0.9-1.0 are considered as excellent, values between 0.80-0.89 are considered as good, values between 0.7-.79 are considered as acceptable, values between 0.60-0.69 are considered as questionable, values 0.5-.59 are considered as poor, and values between 0.49-0.0 are considered as intolerable. Hair et al.(2006) also considered an alpha value of 0.7 and greater as acceptable.

The results of the scale reliability test yielded Cronbach's alpha coefficient ranging from 0.90 to 0.96 for service quality expectation dimensions, 0.98 for overall service quality expectations, 0.87 to 0.95 for service quality perception dimensions, and 0.98 for overall service quality perceptions, showing that the instrument is very reliable in providing consistent results overtime.

The test also showed the resulted Cronbach's alpha value if a certain item was removed from the developed instrument. The results showed that removing any of the items resulted in Cronbach alpha value of 0.9 or greater for the expectations and 0.87 or greater for the perception. Provided that the resulted values are 0.8 or greater, none of the items were deleted and all were used for the analysis. Therefore, the developed scale is considered reliable with excellent consistency and they could be used for similar methodologies. For the test results, please refer to APPENDIX F.

Zeithaml et al. (1996) used a modified version of SERVQUAL with alpha values ranging from 0.80 to 0.96 of the used dimensions. Sultan and Wong (2010) considered an instrument with 0.85 Cronbach's coefficient as reliable. The instrument provided in Appendix C met the requirements of criterion related to validity and is comparable with other instruments. Therefore, the seven dimensions of service quality investigated by this study can be considered as dimensions of service quality in the context of Qatar higher education sector.

6.5 Service Quality Level

The gap analysis was performed to address service quality level from students' point of view. Mean gaps scores were calculated as the gap between the perceptions and the expectations and rank was set to indicate to the management on the importance of taking immediate action based on the gap size.

The gap analysis reported negative means gap scores for all service quality dimensions. This meant that the provided services fall short of meeting the students' expectations (refer to APPENDIX G).

6.6 Results of Hypothesis Testing

The primary Data for the chosen variables was used for constructing the statistical analysis. The confidence level was 95 percent for all hypotheses.

Hypothesis 1

Hypothesis one investigates the association between image and service quality as follows:

H_{o1} : There is no significant correlation between image and service quality in higher education sector.

Table 6-5:
Image and Perceived Service Quality Descriptive Statistics (Source: Primary Data 2016)

	Mean	Std. Deviation	N
Perceived Service Quality	-.8147	1.07160	397
Image	-.7436	1.31153	397

Correlation

Table 6-5 shows the statistical analysis and Table 6-6 shows the correlation analysis; the Pearson correlation coefficient between perceived image (image) and perceived service quality, which is considered statistically significant at level 0.01 with a p-value of 2.75E-56. Thus hypothesis, H_{01} was rejected. This meant that there is statistically significant correlation between service quality and image.

Table 6-6:
Image and Perceived Service Quality Descriptive Correlation Test (Source: Primary Data 2016)

		Perceived Service Quality	Image
Perceived Service Quality	Pearson Correlation	1	.685**
	Sig. (2-tailed)		.000
	N	397	397
Image	Pearson Correlation	.685**	1
	Sig. (2-tailed)	.000	
	N	397	397

Regression

A regression analysis was performed using perceived service quality as the dependent variable and image as the predictor variable. Table 6-7 below presents the model summary. The coefficient of determination value is 0.469. This meant that 46.9 percent of the variations in perceived service quality are explained by predictor variable (image).

Table 6-7:
Model Summary of Image and Perceived Service Quality (Source: Primary Data 2016)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685	.469	.468	.78171
a. Predictors: (Constant), Image				
b. Dependent Variable: Perceived Service Quality				

According to the ANOVA Table 6-8, the model is significant at level 0.01 with F-value of 349.163. This indicated that significant relationship existed between image and service quality level. The normality tests are available at APPENDIX J using the histogram and APPENDIX K using the P-P plot.

Table 6-8:
ANOVA Table of Image and Perceived Service Quality (Source: Primary Data 2016)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	213.362	1	213.362	349.163	.000 ^a
	Residual	241.371	395	.611		
	Total	454.734	396			
a. Dependent Variable: Perceived Service Quality						
b. Predictors: (Constant), Image						

The unstandardized B coefficients equal 0.56 which meant that one unit increase in image perception, increase the perceived service quality by 0.56 almost 0.6 units. This also means that an enhancement in the image building would result in enhancement of the perceived service quality (refer to Table 6-9).

Table 6-9:

Image and Perceived Service Quality Descriptive Coefficients (Source: Primary Data 2016)

Model	Unstandardized Coefficients		Standardized Coefficient	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	-.399	.045		-8.834	.000	-.487	-.310
Image	.560	.030	.685	18.686	.000	.501	.619

a. Dependent Variable: Perceived Service Quality

Equation 1: Service Quality and Image

$$\text{Perceived Service Quality} = -0.399 + 0.56(\text{Image})$$

Hypothesis 2

Hypothesis two investigated the association between culture/value and service quality as follows:

H_{02} : There is no significant correlation between culture/value and service quality in higher education sector.

Table 6-10:

Culture/Value and Perceived Service Quality Statistical analysis (Source: Primary Data 2016)

	Mean	Std. Deviation	N
Perceived Service Quality	-.8147	1.07160	397
Culture/Value	-.4535	1.38227	397

Correlation

The statistical analysis is presented in Table 6-10 and correlation analysis is given in Table 6-11. The correlation coefficient between culture/value and perceived service quality are considered as significant at level 0.01 with a p-value of 2.60E-43. Thus, hypothesis H₀₂ is rejected. This means that there is statically significant positive correlation between perceived services quality and culture/value.

Table 6-11:
Culture/Value and Perceived Service Quality Correlation Test (Source: Primary Data 2016)

		Perceived Service Quality	Culture/Value
Perceived Service Quality	Pearson Correlation	1	.619**
	Sig. (2-tailed)		.000
	N	397	397
Culture/Value	Pearson Correlation	.619**	1
	Sig. (2-tailed)	.000	
	N	397	397

Regression

A regression analysis was performed using perceived service quality as the dependent variable and culture/value as the predictor/independent variable. Table 6-12 below presents the model summary. The coefficient of determination value was 0.383. This meant that 38.3 percent of the variations in perceived service quality is explained by predictor variable (culture/value).

Table 6-12:
Model Summary of Culture/Value and Perceived Service Quality (Source: Primary Data)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.619 ^a	.383	.381	.84290

a. Predictors: (Constant), Culture/Value

b. Dependent Variable: Perceived Service Quality

The ANOVA Table 6-13 shows that the model is considered significant at .01 level with F-value of 245.041. This indicates that significant relationship exists between culture/value and service quality level. The normality tests are available at APPENDIX J using the histogram and APPENDIX K using the P-P plot.

Table 6-13:
ANOVA Table Culture/Value and Perceived Service Quality (Source: Primary Data2016)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	174.096	1	174.096	245.041	.000 ^b
	Residual	280.638	395	.710		
	Total	454.734	396			

a. Dependent Variable: Perceived Service Quality

b. Predictors: (Constant), Culture/Value

The unstandardized B coefficients equal 0.48, which means that one unit increase in the culture/value will increase the service quality by 0.48. This also means that an incensement

or enhancement culture/value perception would result in enhancement of the perceived service quality (refer to Table 6-14).

Table 6-14:
Coefficients of Culture/ Value and Perceived Service Quality (Source: Primary Data 2016)

Model		Coefficients						
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.597	.045		-13.410	.000	-.685	-.510
	Culture/Value	.480	.031	.619	15.654	.000	.419	.540

a. Dependent Variable: Perceived Service Quality

Equation 2: Service Quality and Culture/Value

$$\text{Perceived Service Quality} = -0.597 + 0.48(\text{Culture/Value})$$

Hypothesis 3

Examined whether there is a significant difference in perceived service quality by student's gender in higher education sector.

H_{o3} : There is no significant difference in perception of service quality based on student's gender (Female/Male) in higher education sector.

T-test was performed to investigate if a significant difference existed in service quality perception of female and male students. The statistical analysis of the two genders responses is presented in Table 6-15 below.

Table 6-15:
Perceived Service Quality, Quality Dimensions and Student's Gender Statistical analysis (Source Primary Data 2016)

	Gender	N	Mean	Std. Deviation
Culture/Value	Female	334	-.4741	1.31894
	Male	59	-.6424	1.22797
Image	Female	334	-.7957	1.25832
	Male	59	-.7059	1.19684
Tangibles	Female	334	-.5676	1.27382
	Male	59	-.7132	1.15433
Reliability	Female	334	-1.2380	1.51791
	Male	59	-1.4124	1.76480
Responsiveness	Female	334	-.8625	1.34888
	Male	59	-.8517	1.23623
Assurance	Female	334	-.8268	1.36565
	Male	59	-.7754	1.33784
Empathy	Female	334	-.9710	1.34755
	Male	59	-.9224	1.62760
Perceived Service Quality	Female	334	-.7916	1.04798
	Male	59	-.8314	1.06743

The results of the T-test below (Table 6-16) shows that there is no significant difference existed in the perception of service quality based on the student's gender. Thus hypothesis H_{03} fail to be is accepted.

Table 6-16:
Perceived Service Quality, Quality Dimensions & Student's Gender T-Test (Source Primary Data 2016)

		Gender T-test		
		t-test for Equality of Means		
		T	Df	Sig. (2-tailed)
Culture/Value	Assuming equal variance	.912	391	.362
	Assuming not equal variance	.959	83.444	.340
Image	Assuming equal variance	-.509	391	.611
	Assuming not equal variance	-.527	82.315	.600
Tangibles	Assuming equal variance	.821	391	.412
	Assuming not equal variance	.879	84.952	.382
Reliability	Assuming equal variance	.793	391	.428
	Assuming not equal variance	.714	73.929	.478
Responsiveness	Assuming equal variance	-.058	391	.954
	Assuming not equal variance	-.061	84.311	.951
Assurance	Assuming equal variance	-.267	391	.789
	Assuming not equal variance	-.271	80.840	.787
Empathy	Assuming equal variance	-.247	391	.805
	Assuming not equal variance	-.217	72.711	.829
Perceived Service Quality	Assuming equal variance	.268	391	.789
	Assuming not equal variance	.265	79.033	.792

Hypothesis 4

Examined whether there is a significant difference in perceived service quality by student's age in higher education sector.

H_{o4} : There is no significant difference in perception of service quality based on student's age (less than 25 /25 and above) in higher education sector.

T-test was performed to investigate if a significant difference existed in service quality perception between the two age categories. Table 6-17 presents the analysis.

Table 6-17:
Perceived Service Quality, Quality Dimensions & Student's Age Statistical analysis (Source Primary Data 2016)

	Age	N	Mean	Std. Deviation	Std. Error Mean
Culture/Value	Less than 25	301	-.4754	1.30503	.07522
	25 & Above	95	-.4121	1.59236	.16337
Image	Less than 25	301	-.7540	1.22096	.07037
	25 & Above	95	-.7332	1.56187	.16024
Tangibles	Less than 25	301	-.5924	1.21328	.06993
	25 & Above	95	-.5535	1.38014	.14160
Reliability	Less than 25	301	-1.2719	1.55083	.08939
	25 & Above	95	-1.2735	1.58967	.16310
Responsiveness	Less than 25	301	-.8126	1.29872	.07486
	25 & Above	95	-1.0579	1.50904	.15482
Assurance	Less than 25	301	-.8015	1.34130	.07731
	25 & Above	95	-.9360	1.49083	.15296
Empathy	Less than 25	301	-.9291	1.36880	.07890
	25 & Above	95	-1.1377	1.52664	.15663
Perceived Service Quality	Less than 25	301	-.7748	1.01454	.05848
	25 & Above	95	-.9061	1.19225	.12232

The T-test results in Table 6-18 below prove that there is no significant difference existed in the perception of service quality based on the age of the students. Thus, hypothesis H_{03} is accepted.

Table 6-18:
Perceived Service Quality, Quality Dimensions & Student's Age T-Tests (Source Primary Data 2016)

		T	Df	Sig. (2-tailed)
Culture/Value	Assuming equal variance	-.390	394	.697
	Assuming not equal variance	-.352	136. 161	.725
Image	Assuming equal variance	-.135	394	.893
	Assuming not equal variance	-.119	132. 215	.905
Tangibles	Assuming equal variance	-.264	394	.792
	Assuming not equal variance	-.247	142. 786	.806
Reliability	Assuming equal variance	.009	394	.993
	Assuming not equal variance	.008	154. 583	.993
Responsiveness	Assuming equal variance	.050	1.542 394	.124
	Assuming not equal variance	1.426	140. 677	.156
Assurance	Assuming equal variance	.409	.829 394	.408
	Assuming not equal variance	.785	145. 196	.434
Empathy	Assuming equal variance	.324	1.259 394	.209
	Assuming not equal variance	1.189	144. 830	.236
Perceived Service Quality	Assuming equal variance	.231	1.053 394	.293
	Assuming not equal variance	.969	139. 591	.334

Hypothesis 5

Examined if there is a difference in perceived service quality based on student's Nationality in higher education sector.

H_{05} : There is no significant difference in perception of service quality based on student's nationality (Qatari / non-Qatari) in higher education sector.

T-test was performed to investigate if significant difference existed in service quality perception between Qatari and non-Qatari students. Table 6-19 presents the statistical analysis.

Table 6-19:
Perceived Service Quality, Quality Dimensions & Student's Nationality Statistical Analysis (Source Primary Data 2016)

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Culture/Value	Qatari	215	-.3921	1.36521	.09311
	Non Qatari	174	-.5721	1.29798	.09840
Image	Qatari	215	-.7221	1.45661	.09934
	Non Qatari	174	-.8078	1.04596	.07929
Tangibles	Qatari	215	-.6372	1.31354	.08958
	Non Qatari	174	-.5570	1.18069	.08951
Reliability	Qatari	215	-1.1449	1.49400	.10189
	Non Qatari	174	-1.4175	1.60781	.12189
Responsiveness	Qatari	215	-.7644	1.35313	.09228
	Non Qatari	174	-.9526	1.30538	.09896
Assurance	Qatari	215	-.8093	1.32450	.09033
	Non Qatari	174	-.8214	1.39865	.10603
Empathy	Qatari	215	-.9007	1.31949	.08999
	Non Qatari	174	-1.0264	1.45903	.11061
Perceived Service Quality	Qatari	215	-.7481	1.06658	.07274
	Non Qatari	174	-.8483	1.01807	.07718

The results of the T-tests in Table 6-20 prove that there no significant difference in the perception of service quality based on the student's nationality. Thus hypothesis H_{05} :fail is accepted.

Table 6-20:
Perceived Service Quality , Quality Dimensions & Student's Nationality T-Test (Source Primary Data 2016)

		T	Df	Sig. (2-tailed)
Culture/Value	Assuming equal variance	1.322	387	.187
	Assuming not equal variance	1.329	377.092	.185
Image	Assuming equal variance	.652	387	.515
	Assuming not equal variance	.674	381.830	.501
Tangibles	Assuming equal variance	-.626	387	.531
	Assuming not equal variance	-.633	382.724	.527
Reliability	Assuming equal variance	1.729	387	.085
	Assuming not equal variance	1.716	357.954	.087
Responsiveness	Assuming equal variance	1.386	387	.167
	Assuming not equal variance	1.391	375.284	.165
Assurance	Assuming equal variance	.087	387	.931
	Assuming not equal variance	.087	361.364	.931
Empathy	Assuming equal variance	.890	387	.374
	Assuming not equal variance	.881	352.844	.379
Perceived Service Quality	Assuming equal variance	.940	387	.348
	Assuming not equal variance	.945	376.616	.345

Hypothesis 6

Examined the existence of a significant difference in the perception of service quality based on student education level.

H_{06} : There is no significant difference in perception of service quality based on student's education level (undergraduate/ graduate) in higher education sector.

T-test was performed to investigate if a significant difference existed in the perception of service quality based on student's education level. Table 6-21 presents the statistical analysis.

Table 6-21:
Perceived Service Quality, Quality Dimensions & Student's Education Level Statistical analysis
(Source Primary Data 2016)

	EducationLevel	N	Mean	Std. Deviation	Std. Error Mean
Culture/Value	Undergraduate	341	-.4636	1.32926	.07198
	Post Graduate	47	-.4117	1.68559	.24587
Image	Undergraduate	341	-.7686	1.29029	.06987
	Post Graduate	47	-.6681	1.39457	.20342
Tangible	Undergraduate	341	-.5977	1.25427	.06792
	Post Graduate	47	-.5426	1.20610	.17593
Reliability	Undergraduate	341	-1.2438	1.53448	.08310
	Post Graduate	47	-1.5391	1.70467	.24865
Responsiveness	Undergraduate	341	-.8595	1.34366	.07276
	Post Graduate	47	-.9521	1.44617	.21095
Assurance	Undergraduate	341	-.8062	1.36018	.07366
	Post Graduate	47	-1.0213	1.48620	.21678
Empathy	Undergraduate	341	-.9685	1.32816	.07192
	Post Graduate	47	-1.1383	1.76608	.25761
Perceived Service Quality	Undergraduate	341	-.7926	1.02978	.05577
	Post Graduate	47	-.9404	1.22605	.17884

The results of the T-tests in Table 6-24 prove that there is no significant difference existed in the perception of service quality between undergraduates and post-graduate students. Thus hypothesis H_{06} is accepted.

Table 6-22:

Perceived Service Quality, Quality Dimensions & Student's Education Level T-Test (Source Primary Data 2016)

		T	Df	Sig. (2-tailed)
Culture/Value	Assuming equal variance	-.242	386	.809
	Assuming not equal variance	-.203	54.170	.840
Image	Assuming equal variance	-.496	386	.620
	Assuming not equal variance	-.467	57.387	.642
Tangibles	Assuming equal variance	-.284	386	.777
	Assuming not equal variance	-.292	60.554	.771
Reliability	Assuming equal variance	1.220	386	.223
	Assuming not equal variance	1.126	56.753	.265
Responsiveness	Assuming equal variance	.439	386	.661
	Assuming not equal variance	.415	57.488	.680
Assurance	Assuming equal variance	1.005	386	.316
	Assuming not equal variance	.939	57.131	.352
Empathy	Assuming equal variance	.787	386	.432
	Assuming not equal variance	.635	53.407	.528
Perceived Service Quality	Assuming equal variance	.900	386	.368
	Assuming not equal variance	.789	55.310	.433

Hypothesis 7

Hypothesis seven examined whether there is a significant correlation between perceived service quality and student loyalty intention in a higher education setting.

H_{07} : There is no significant correlation between student's loyalty behavior and service quality in higher education sector.

As shown in Table 6-23 below, the student loyalty intention mean score is 5.12 on 1 to 7 scale. This indicates that the average student has loyalty towards their University.

The Pearson correlation coefficient between student's loyalty, service quality dimensions and perceived service quality are presented below in Table 6-24. The results indicate that loyalty positive behavioral intention has statistically significant positive correlation with the seven service dimensions of service quality and with perceived service quality. This meant also an incensement or enhancement in perceived service quality level and/or the seven dimension of service quality will lead to incensement in positive loyalty behavior intention. Therefore, hypothesis H_{07} : was is rejected.

Table 6-23:
Perceived Service Quality, Service Quality Dimensions, and Student Loyalty Statistical analysis
(Source Primary Data 2016)

	Mean	Std. Deviation	N
Loyalty	5.1202	1.68670	397
Perceived Service Quality	-.8147	1.07160	397
Empathy	-.9887	1.41999	397
Culture/Value	-.4535	1.38227	397
Image	-.7436	1.31153	397
Tangibles	-.5917	1.26373	397
Reliability	-1.2775	1.55966	397
Responsiveness	-.8806	1.36472	397
Assurance	-.8411	1.38393	397

Table 6-24:
Perceived Service Quality , Service Quality Dimensions and Student Loyalty Persian Correlation
(Source Primary Data 2016)

		Loyalty
Loyalty	Pearson Correlation	1
	Sig. (2-tailed)	
	N	397
Perceived Service Quality	Pearson Correlation	.494**
	Sig. (2-tailed)	.000
	N	397
Empathy	Pearson Correlation	.461**
	Sig. (2-tailed)	.000
	N	397
Culture/Value	Pearson Correlation	.304**
	Sig. (2-tailed)	.000
	N	397
Image	Pearson Correlation	.283**
	Sig. (2-tailed)	.000
	N	397
Tangibles	Pearson Correlation	.277**
	Sig. (2-tailed)	.000
	N	397
Reliability	Pearson Correlation	.351**
	Sig. (2-tailed)	.000
	N	397
Responsiveness	Pearson Correlation	.454**
	Sig. (2-tailed)	.000
	N	397
Assurance	Pearson Correlation	.409**
	Sig. (2-tailed)	.000
	N	397

Perceived Service Quality Model

A regression analysis was performed using a stepwise method. The seven dimensions of service quality were used as the predictor variable and perceived service quality as the dependent variable. The statistical analysis is presented in Table 6-25 below.

Table 6-25:
Model Statistical analysis (Source Primary Data 2016)

	Mean	Std. Deviation	N
Perceived Service Quality	-.8147	1.07160	397
Culture/Value	-.4535	1.38227	397
Image	-.7436	1.31153	397
Tangibles	-.5917	1.26373	397
Reliability	-1.2775	1.55966	397
Responsiveness	-.8806	1.36472	397
Assurance	-.8411	1.38393	397
Empathy	-.9887	1.41999	397

Table 6-26 shows that all investigated dimensions are statistically significant predictor variables in the model. The predictive powers of the variables are in the following descending order assurance, reliability, tangibles, tangibles, culture/value, empathy, responsiveness, and image.

Table 6-26:
Significant Dimensions of Service Quality (Source Primary Data 2016)

Variables Entered/Removed		
Model	Variables Entered	Variables Removed
1	Assurance	.
2	Reliability	.
3	Tangibles	.
4	Culture/Value	.
5	Empathy	.
6	Responsiveness	.
7	Image	.

a. Dependent Variable: Perceived Service Quality

Table 6-27 below presents the overall service quality model. The seven dimensions namely value/culture, image, tangibles, reliability, responsive, assurance and empathy explains 97.4 percent of the variance in the perceived service quality level leaving only 2.6 % unexplained. This percentage is considered to be high representing very good model fit.

Table 6-27:
Model Summary (Source Primary Data 2016)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.842 ^a	.708	.708	.57937
2	.915 ^b	.837	.836	.43436
3	.945 ^c	.894	.893	.35075
4	.962 ^d	.925	.924	.29477
5	.975 ^e	.950	.950	.24002
6	.982 ^f	.963	.963	.20653
7	.987 ^g	.974	.973	.17474

a. Predictors: (Constant), Assurance
b. Predictors: (Constant), Assurance, Reliability
c. Predictors: (Constant), Assurance, Reliability, Tangibles
d. Predictors: (Constant), Assurance, Reliability, Tangibles, Culture/Value
e. Predictors: (Constant), Assurance, Reliability, Tangibles, Culture/Value, Empathy
f. Predictors: (Constant), Assurance, Reliability, Tangibles, Culture/Value, Empathy, Responsiveness
g. Predictors: (Constant), Assurance, Reliability, Tangibles, Culture/Value, Empathy, Responsiveness, Image
h. Dependent Variable: Perceived Service Quality

ANOVA Table 6-28 indicated that model is considered to be significant at level .001 with F value of 2072.018 and P value of 1.9112E-303 when considering the seven dimensions service quality. The normality test using is available at APPENDIX J using the histogram and APPENDIX K using the P-P plot.

Table 6-28:
ANOVA table of the Model (Source Primary Data 2016)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	442.856	7	63.265	2072.018	.000 ^b
	Residual	11.877	389	.031		
	Total	454.734	396			

a. Dependent Variable: Perceived Service Quality
b. Predictors: (Constant), Empathy, Culture/Value, Tangibles, Image, Responsiveness, Reliability, Assurance

Table 6-29 presents the model coefficients which was used to derive the overall service quality equation.

The Regression model is presented as follows:

Equation 3: Overall Service Quality

Perceived Service Quality=f(Assurance, Reliability, Tangibles, Culture/Value, Empathy, Responsiveness)

Or,

Perceived Service Quality = -0.004 +0.159 (Assurance) +0.117 (Reliability) +0 .149 (Tangibles) + 0.12(Culture/Value) + 0.167 (Empathy) + 0.154 (Responsiveness) +0 .113 (Image)

Table 6-29:
Model Coefficients Overall Service Quality (Source Primary Data 2016)

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1 (Constant)	-.004	.012		-.321	.748	-.027	.019
Culture/Value	.120	.008	.155	14.895	.000	.104	.136
Image	.113	.009	.138	12.483	.000	.095	.131
Tangibles	.149	.009	.176	16.527	.000	.131	.167
Reliability	.117	.009	.170	13.461	.000	.100	.134
Responsiveness	.154	.011	.196	13.693	.000	.132	.176
Assurance	.159	.011	.205	13.993	.000	.137	.181
Empathy	.167	.010	.221	17.224	.000	.148	.186

a. Dependent Variable: Perceived Service Quality

Summary of Null Hypothesis Test

Table 6-30:
Summary of Null Hypothesis Test

Hypothesis	Decision	Hypothesis
H_{o1}	Rejected	There is no significant correlation between image and service quality in higher education sector.
H_{o2}	Rejected	There is no significant correlation between culture/value and service quality in higher education sector.
H_{o3}	Not Rejected	There is no significant difference in perception of service quality based on student's gender (Female/Male) in higher education sector.
H_{o4}	Not Rejected	There is no significant difference in perception of service quality based on student's age (less than 25 /25 and above) in higher education sector.
H_{o5}	Not Rejected	There is no significant difference in perception of service quality based on student's nationality (Qatari / Non Qatari) in higher education sector.
H_{o6}	Not Rejected	There is no significant difference in perception of service quality based on student's education level (undergraduate/ graduate) in higher education sector.
H_{o7}	Rejected	There is no significant correlation between student's loyalty behavior and service quality in higher education sector.

6.7 Discussion of the Findings

This part of the study discusses the findings obtained from analyzing the primary data. Most of the results arrived at this study conforms to findings of studies available in the literature.

6.7.1 GAP Analysis

According to Brysland and Curry(2001), negative mean gap scores point to customers dissatisfaction. The mean gap scores reported for the University were negative. Those

negative scores indicated service areas requiring enhancements and improvements to attain student's satisfaction and improve the students studying experience.

The analysis done in this study shows that the gaps are listed in descending order of the mean gap values as follows: reliability, empathy, responsiveness, assurance, image, tangibles and culture/value. The highest gap score between students' expectation and perception was the reliability dimension with mean gap score of -1.28. This conforms to the results arrived at by Smith et al. (2007) where the study reported that reliability has the highest gap score.

Reliability is a vital component in the delivery of services. It refers to the institutional ability to perform the provided services accurately and dependently. The negative mean gap scores for the reliability signals that students are dissatisfied with the ability of the study site in performing the provided services accurately and dependently.

The conclusion can be made from the negative values of the mean gaps scores for all seven service quality dimensions is that delivery of quality improvement plans and reforms fall short of students expectations. The gap analysis provided an insight into students' satisfaction with the provided services by their higher education institution.

6.7.2 Dimensions of service quality

The performed statistical analysis proves that the image has statistically significant positive correlation and predictive power with service quality and, therefore, it should be considered when evaluating and assessing quality of services in the higher education sector.

The image of an institution has a vital role in the process of evaluating services quality: customers' expectations and evaluation of services quality are affected by branding and the image of the institution. The image of an institution can play the role of norms or expectations settler in case the customer has no previous experience dealing with the service provider. This view conforms with Sarstedt et al. (2013), who highlighted the significance of image in evaluating any institution because of the power it has on mind and perception of the customers when they hear its name. Oliver (1980) also stated that image plays a role in setting the customer expectations. Since the students are considered customers of higher education institutions, this also applies to them and hence the image should be considered when assessing the quality of the services offered by their higher education.

This conforms to the results arrived at by Sultan and Yin (2012), Sultan and Yin(2013), and Sultan and Wong(2014).The results of their studies proved that educational institution image has a positive relationship with the students' satisfaction, however, the direction of the relationship is different as they considered image as consequence of students' satisfaction.

The findings of the study proved that the dimension culture/value has statistically significant positive correlation and predictive power with service quality and, therefore, it needs be considered when assessing services quality.

Applying the means end theory to students as customers of higher education, students evolution of services quality partially depends on whether the provided services by their higher education institution enable them to achieve their desired values. Shih(2006)in his study, pointed out culture as one factor that affects customer behavior. He added that it influences human life and consumer behavior through shaping values, belief, and attitudes. Customers in different countries have different culture and values, which result in different perceptions of services quality. This conforms to the results found by Witkowski and Wolfinbarger(2002), Carrillat et al.(2007), Java et al.(2007), and Masoud et al.(2016).

Given the fact that values vary across different culture and it has an important role on the customers' decision-making. The study suggested culture/value as a dimension of service quality. The findings indicated a positive significant correlation between perceived quality and culture/vale. The results also proved that enhancement of the culture/value will result in an increment in the overall service quality level perceived by students.

Given the fact that differences in culture and values lead to different expectations and perceptions of servicers, culture and value should be considered when assessing service quality.

6.7.3 Demographic factors

The results showed that the considered students' demographic factors—gender, age, nationality and education level— has no significant influence on the student's perception of service quality.

The results of the T-test shows no statistically significant difference in the perception of service quality between females and males. This conforms to the results arrived by Twaissi and Al-Kilani (2015) and Ilias et al.(2009).T-test result on age factor is also in agreement with the findings of Palli and Mamilla(2012) and Min and Khoon (2013). These authors also found no significant difference in service quality perception based on the age factor.

The results of the T-test on nationality indicated that there is no significant difference in the perception of service quality among Qatar and on-Qatari students. Although culture is an important variable in the perceptions of service quality and proved to have significant correlation and predictive power on service quality perception. The reason behind this could be that most of the university students are Arab that share the same culture and values. This result conforms to the results found by Ilias et al. (2009), however, it doesn't conform with the findings of Min and Khoon(2013).

The T-test results also revealed no significant difference existed in the student's perception of service quality based on the education level (undergraduate/postgraduate) which does not conform to the results found by Min and Khoon (2013).

6.7.4 Student's Behavioral intentions (Loyalty)

Data analysis reported a significant correlation between the seven quality dimensions, perceived services quality and students' positive loyalty behavioral intentions. The higher the services quality level the more the loyal students are. This means that enhancements of

the provided service quality result in more loyal students for the institution, which ultimately results in reducing the cost. This conforms to the results found by Boulding et al. (1993) and Ali et al. (2016) who found a positive association between service quality and loyalty.

6.8 Summary of the study findings

The purpose of this thesis was to study the perceptual context of service quality in the higher education sector among the students of Qatar University and hence the study reported the perceived service quality level by Qatar University students using a customized SERVQUAL scale. The first objective was determining the dimensions of service quality that influence students' perceived service quality level. Seven dimensions/determinants of service quality were identified; the five dimensions of the original SERVQUAL (tangibles, reliability, responsiveness, assurance, and empathy), and two new dimensions (image and culture/value). The second and third objectives were to investigate the association and relationship between the two new dimensions and the service quality. Regression and correlation analysis were performed to investigate the relationship significance; the correlation analysis proved significant correlation with both and the regression model showed a good fit with the percentages 46.9 (image) and 38.3 (culture/value) in explaining the variance in perceived quality. The reliability of the used items for measuring each dimension were tested using Cronbach's alpha and results showed the instrument is very reliable with alpha values of 0.90- 0.96 for the expectations, 0.87- 0.95 for the perception, and 0.98 for both overall expectations and perceptions. The fourth objective was examining the relationship between student's loyalty behavioral intention and service quality. The

correlation test indicated statistically significant correlation between the seven quality dimensions and perceived quality level as well. The study also investigated service quality perception depending on demographic factors of students. The results from T-test showed no significant difference existed in any of the investigated demographic factors (age, gender, and nationality). Finally, the study used a multiple regression models to find the overall service quality equation using perceived service quality as the dependent variable and quality dimensions as the independent variables.

Chapter 7 : CONCLUSIONS AND RECOMMENDATIONS

This chapter starts by provides conclusions, some theoretical, managerial, and policy implications. Some limitations to the study are also discussed. It concludes with some recommendation for future study.

7.1 Conclusions

This thesis focused on understanding perception services quality by students in Qatar's higher education sector. The analysis is based on a framework using a modified version of the SERVQUAL.

The four null hypotheses related to demographic factors of students are rejected, indicating that there is no significant difference in the perception of service quality based on student's gender, age, and nationality and education level.

The study also concluded that quality of services has a significant impact of the loyalty behavior of students in Qatar. An increase in the perceived service quality results in an increase in students' loyalty intentions to the institution.

It can be concluded that the instrument mentioned in this thesis can be applied to the Qatar educational environment for a reliable measure of students' expectations of service quality and their level of perceptions regarding the services quality improvement plans and reforms of Qatar higher education sector.

7.2 Implications

This section provides theoretical, managerial, and policy implications based on data analysis, results, and the discussion of the results. The theoretical implications contributed to the knowledge body and the managerial and policy implications contributed to higher education management in Qatar in general and to Qatar University management.

a) Theoretical implications

This research helps in expanding the knowledge body in the field of service quality assessment and management. The major contribution of this study is the development of customized quality assessment tool for the higher education sector in Qatar. The study expanded the completeness of SERVQUAL model and provided a modified version of the scale that is applicable to Qatar education.

The study identified seven service quality dimensions applicable to Qatar higher education sector, which are the original five dimensions of SERVQUAL and two new dimensions culture/value and image and tested these dimensions empirically in higher education sector of Qatar. The results of hypothesis testing provided strong evidence that both new dimensions have statistically significant correlation between perceived service quality and have predictive power on perceived service quality. This stresses the importance of developing customized measures of service quality based on the culture where the service is provided. Using generic models such as SERVQUAL may result in missing important concerns of the customers.

b) Managerial Implications

The findings provided some implications to higher education management on the utilization of services quality measurement and assessment to achieve customers' satisfaction and influence customer's behavior. Based on the findings, recommendations are made under the following sections. It should be noted that the findings are purely based on the analysis of survey responses.

Areas for immediate improvements based on the Gaps Analysis

The findings arrived at in this study helps Qatar University management to understand the specific areas that are in need for service quality improvements. Identifying the priority areas for improvement puts the management in better place for enhancing the quality of the services.

The results of the gap analysis suggest several implications for the university's ability to provide a quality education experience to its students. The findings indicated that students expect more from their higher education institution than it is providing to them. The negative mean gap score pinpoint some areas requiring priority service quality improvements at Qatar University. Gaps priority order reliability, empathy, responsiveness, assurance, image, tangibles and culture/value in descending order. The management needs to take appropriate actions for closing the gaps between the students' expectations and actual perceptions.

Service Quality Dimensions

The performed statistical analysis indicates that corporate image and culture/value can be considered as a determinant or dimension of service quality in higher education settings and

both are proven to have a positive correlation with perceived service quality. Therefore, considering image and culture/value dimensions are highly recommended for consideration when assessing services quality. Based on the gap analysis, students expect from their university to contribute more to the welfare of the society and to be more in line with the religion values in the community. The university should put more effort into participation in activities and programs that contribute to the welfare of the society and incorporate religion and social values into the university. The university can also consider enhancing the branding and reputation of the university in the society and media.

Student positive behavioral intention (loyalty)

Assessing the quality of the provided services helps gaining better understanding of how the improvement plans and reforms influenced the student's loyalty behavioral intention is very important for higher education institutions.

In the process of gaining a better understanding of higher education, this thesis investigated the linkage and the relation between service quality and students' loyalty. The findings proved that loyalty positive behavioral intentions significantly correlates to the service quality level provided by the institution and the seven dimensions of service quality considered in this study. The higher the quality level, the more loyal students the institution will end up having. Therefore, the management of higher education institutions needs to take actions for closing the gaps between students' expectation and perception of services by providing high quality services that meet or exceeds the expectation of the students in order to maintain the current students and gain new students in future at a lower cost. Loyal students spread positive word of the mouth and participate in lowering the cost of

marketing and advertising in a highly competitive environment, which provides students with many educational options. The study findings suggest maintaining high-quality services as a winning strategy in such a competitive environment. The university should focus on building students loyalty while the students are still active in the university by meeting their needs and expectations and it should maintain the relationship with students after graduation, which can be achieved via alumni relations office.

Policy

The most important contributions of this study is the development of a customized measure of service quality that is pertinent to Qatar higher education sector. The instrument was empirically tested at Qatar University. The higher education management at Qatar can develop instruments for service quality management and assessment. Regulatory body such as SEC can design a policy that requires adopting the instrument as a standard for measuring and assessing the quality of services in Qatar higher education sector.

7.3 Limitations of the study

1. One of the major limitations was finding current literature and related research dealing with service quality management, assessment and improvement in Qatar higher education sector.
2. The findings of the study are limited to one institution of higher education in Qatar, which limits the generalizability of the study.
3. The measured service quality level was limited to one type of stakeholder. Though students are recognized as the main customers higher education institutions, other

stakeholders need to be considered to provide a more comprehensive picture of how service quality is perceived in higher education sector of Qatar.

4. The study findings were limited by used questionnaire reliability and validity and by the data collection timeframe.

7.4 Recommended Areas for Future Study

Future research suggestions include:

1. Additional empirical research needs to consider other internal and external stakeholders of higher education institutions to better understand how the quality of higher education services is perceived in Qatar.
2. Future research needs to use time scales at the same study site to inspect the influence of service quality improvement plans and reforms on long-term.
3. Future research can investigate the association between service quality assessment, improvement plans and outcomes of the plans.

REFERENCES

- Abdullah, F. (2006a) 'Measuring service quality in higher education: HEdPERF versus SERVPERF', *Marketing Intelligence & Planning*, 24(1), pp. 31-47.
- Abdullah, F. (2006b) 'The development of HEdPERF: a new measuring instrument of service quality for the higher education sector', *International Journal of Consumer Studies*, 30(6), pp. 569-581.
- Aldridge, S. and Rowley, J. (1998) 'Measuring customer satisfaction in higher education', *Quality Assurance in Education*, 6(4), pp. 197-204.
- Ali, F., Zhou, Y., Hussain, K., Nair, P. K. and Ragavan, N. A. (2016) 'Does higher education service quality effect student satisfaction, image and loyalty?: A study of international students in Malaysian public universities', *Quality Assurance in Education*, 24(1), pp. 70-94.
- Anderson, C. R. and Zeithaml, C. P. (1984) 'Stage of the Product Life Cycle, Business Strategy, and Business Performance', *Academy of Management Journal*, 27(1), pp. 5.
- Anderson, E. W., Fornell, C. and Lehmann, D. R. (1994) 'Customer satisfaction, market share, and profitability: Findings from Sweden', *Journal of Marketing*, 58(3), pp. 53.
- Angell, R. J., Heffernan, T. W. and Megicks, P. (2008) 'Service quality in postgraduate education', *Quality Assurance in Education*, 16(3), pp. 236-254.
- Awan, M. U., Azam, S. and Asif (2008) 'Library Services Quality Assessment', *Journal of Quality and Technology Management*, 4(1), pp. 51-64.
- Babakus, E. and Boller, G. W. (1992) 'An empirical assessment of the SERVQUAL scale', *Journal of Business Research*, 24(3), pp. 253-268.
- Baron, S., Harris, K. and Hilton, T. (2009) *Services marketing: text and cases*. Palgrave Macmillan Basingstoke.
- Bayraktaroglu, G. and Atrek, B. (2010) 'Testing the Superiority and Dimensionality of SERVQUAL vs. SERVPERF in Higher Education', *The Quality Management Journal*, 17(1), pp. 47-59.
- Becket, N. and Brookes, M. (2006) 'Evaluating quality management in university departments', *Quality Assurance in Education*, 14(2), pp. 123-142.
- Binsardi, A. and Ekwulugo, F. (2003) 'International marketing of British education: Research on the students' perception and the UK market penetration', *Marketing Intelligence & Planning*, 21(4/5), pp. 318-327.
- Bitner, M. J. (1990) 'Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses', *Journal of Marketing*, 54(2), pp. 69-82.
- Bolo, A. Z. (2011) 'Strategic Management: An Empirical Investigation of Selected Strategy Variables on Firms Performance: A Study of Supply Chain Management in Large Private Manufacturing Firms In Kenya'.
- Borahan, N. G. and Ziarati, R. (2002) 'Developing quality criteria for application in the higher education sector in Turkey', *Total Quality Management*, 13(7), pp. 913-926.
- Boulding, W., Kalra, A., Staelin, R. and Zeithaml, V. A. (1993) 'A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions', *Journal of Marketing Research*, 30(1), pp. 7.
- Brochado, A. (2009) 'Comparing alternative instruments to measure service quality in higher education', *Quality Assurance in Education*, 17(2), pp. 174-190.
- Brown, R. M. and Mazzarol, T. W. (2009) 'The importance of institutional image to student satisfaction and loyalty within higher education', *Higher Education*, 58(1), pp. 81-95.
- Brown, S. W. and Swartz, T. A. (1989) 'A Gap Analysis of Professional Service Quality', *Journal of Marketing*, 53(2), pp. 92-98.
- Bryland, A. and Curry, A. (2001) 'Service improvements in public services using SERVQUAL', *Managing Service Quality: An International Journal*, 11(6), pp. 389-401.
- Buttle, F. A. (1994) *What's wrong with SERVQUAL?:* Manchester Business School Manchester.
- Calvo-Porrá, C., Lévy-Mangin, J.-P. and Novo-Corti, I. (2013) 'Perceived quality in higher education: an empirical study', *Marketing Intelligence & Planning*, 31(6), pp. 601-619.

- Cardona, M. M. and Bravo, J. J. (2012) 'Service quality perceptions in higher education institutions: the case of a Colombian university', *Estudios Gerenciales*, 28(125), pp. 23-29.
- Carman, J. M. (1990) 'Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions', *Journal of Retailing*, 66(1), pp. 33.
- Carrillat, F. A., Jaramillo, F. and Mulki, J. P. (2007) 'The validity of the SERVQUAL and SERVPERF scales', *International Journal of Service Industry Management*, 18(5), pp. 472-490.
- Caruana, A. (2002) 'Service loyalty: The effects of service quality and the mediating role of customer satisfaction', *European Journal of Marketing*, 36(7/8), pp. 811.
- Chua, C. 'Perception of quality in higher education'. *Proceedings of the Australian universities quality forum: AUQA Occasional Publication Melbourne*, 181-187.
- Cohen, L. (1985) *Research methods in education / Louis Cohen and Lawrence Manion*. 2nd ed. edn. London ; Dover, N.H. :: Croom Helm.
- Cronin, J. J. and Taylor, S. A. (1992) 'Measuring Service Quality: A Reexamination and Extension', *Journal of Marketing*, 56(3), pp. 55.
- Cronin, J. J. and Taylor, S. A. (1994) 'SERVPERF versus SERVQUAL; Reconciling performance-based and', *Journal of Marketing*, 58(1), pp. 125.
- Crosby, P. (1979) 'Quality is free: The Art of Making Quality Certain McGraw-Hill', *New York*.
- Crosby Philip, B. 1984. *Quality Without Tears: The Art of Hassle-Free Management*. McGraw-Hill, New York.
- Cuthbert, P. F. (1996) 'Managing service quality in HE: is SERVQUAL the answer? Part 2', *Managing Service Quality*, 6(3), pp. 31-35.
- Dabholkar, P. A., Shepherd, C. D. and Thorpe, D. I. (2000) 'A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study', *Journal of Retailing*, 76(2), pp. 139-173.
- Dado, J., Petrovicova, J. T., Cuzovic, S. and Rajic, T. (2011) 'An empirical examination of the relationships between service quality, satisfaction and behavioral intentions in higher education setting', *Serbian Journal of Management*, 7(2), pp. 203-218.
- Deng, Z., Lu, Y., Wei, K. K. and Zhang, J. (2010) 'Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China', *International Journal of Information Management*, 30(4), pp. 289-300.
- DeShields, O. W., Jr., Ali, K. and Kaynak, E. (2005) 'Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory', *The International Journal of Educational Management*, 19(2/3), pp. 128-139.
- Devlin, J. F., Gwynne, A. L. and Ennew, C. T. (2002a) 'The Antecedents of Service Expectations', *Service Industries Journal*, 22(4), pp. 117-136.
- Devlin, J. F., Gwynne, A. L. and Ennew, C. T. (2002b) 'The Antecedents of Service Expectations', *The Service Industries Journal*, 22(4), pp. 117-152.
- 'Doing quantitative research in education with SPSS', (2006) *Reference and Research Book News*, 21(4).
- Donaldson, B. and McNicholas, C. (2004) 'Understanding the postgraduate education market for UK-based students: A review and empirical study', *International Journal of Nonprofit and Voluntary Sector Marketing*, 9(4), pp. 346-360.
- Douglas, J., McClelland, R. and Davies, J. (2008) 'The development of a conceptual model of student satisfaction with their experience in higher education', *Quality Assurance in Education*, 16(1), pp. 19-35.

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SECTOR STARTEGY 2011 - 2016. Available at: <http://www.edu.gov.qa/En/about/Documents/Stratgy2012E.pdf> (Accessed: 2015).

- Edvardsson, B. (1998) 'Service quality improvement', *Managing Service Quality*, 8(2), pp. 142-149.
- Eiglier, P. a. L., E (1987) 'Servuction, Le Marketing des Services ', *Paris: McGraw-Hi*.

- El Hassan, K. (2013) 'Quality assurance in higher education in 20 MENA economies', *L'assurance qualité dans renseignement supérieur dans 20 économies du Moyen-Orient et de l'Afrique du Nord (MENA)*, 24(2), pp. 73-84.
- Enayati, T., Modanloo, Y., Behnamfar, R. and Rezaei, A. (2013) 'Measuring Service Quality of Islamic Azad University of Mazandaran using SERVQUAL Model', *Iranian Journal of Management Studies*, 6(1), pp. 101-118A.
- Eto, S. and Kyngäs, H. (2008) 'The qualitative content analysis process', *Journal of Advanced Nursing*, 62(1), pp. 107-115.
- Feigenbaum, A. V. (1951) *Quality control: Principles, practice and administration: An industrial management tool for improving product quality and design and for reducing operating costs and losses*. McGraw-Hill.
- Festus, O., Maxwell, K. H. and Godwin, J. U. (2006) 'Service quality, customer satisfaction, and behavioral intentions in the service factory', *Journal of Services Marketing*, 20(1), pp. 59-72.
- Flint, D. J., Woodruff, R. B. and Gardial, S. F. (2002) 'Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context', *Journal of Marketing*, 66(4), pp. 102-117.
- Frances, M. H. (1995) 'Managing service quality in higher education: the role of the student as primary consumer', *Quality Assurance in Education*, 3(3), pp. 10-21.
- Frank, H., Andreas, H. and Robert, E. M. (2001) 'Gaining competitive advantage through customer value oriented management', *Journal of Consumer Marketing*, 18(1), pp. 41-53.
- Fred, A. K., III (2006) 'Quality and assessment in context: a brief review', *Quality Assurance in Education*, 14(3), pp. 277-288.
- Furrer, O., Ben Shaw-Ching, L. and Sudharshan, D. (2000) 'The relationships between culture and service quality perceptions: Basis for cross-cultural market segmentation and resource allocation', *Journal of Service Research : JSR*, 2(4), pp. 355-371.
- Garvin, D. A. (1983) 'Quality on the Line', *Harvard Business Review*, (no. 5), pp. 65.
- George, D. (2003) *SPSS for windows step by step: A simple study guide and reference, 17.0 update, 10/e*. Pearson Education India.
- Ghuri, P. and Gronhaug, K. (2010) *Research Methods in Business Studies: A Practical Guide*. FT-Pearson.
- Gita, G., Margee, H. and Gillian Sullivan, M. (2011) 'The role of Islamic culture in service quality research', *Asian Journal on Quality*, 12(1), pp. 35-53.
- Government of the State of Qatar *Qatar National*

Development Strategy

- 2011-2016. Available at: [http://www.eisourcebook.org/cms/February%202016/Qatar%20vision%202011-2016%20\(2011\).pdf](http://www.eisourcebook.org/cms/February%202016/Qatar%20vision%202011-2016%20(2011).pdf) (Accessed: 2015).
- Gracia, E., Bakker, A. B. and Grau, R. M. (2011) 'Positive emotions: The connection between customer quality evaluations and loyalty', *Cornell Hospitality Quarterly*, pp. 1938965510395379.
- Gray, D. E. (2014) *Doing research in the real world*. 3rd edn. London: SAGE.
- Gutman, J. (1982) 'A Means-End Chain Model Based on Consumer Categorization Processes', *Journal of Marketing*, 46(2), pp. 60-72.
- Gutman, J. (1991) 'Exploring the nature of linkages between consequences and values', *Journal of Business Research*, 22(2), pp. 143-148.
- Ha, J. and SooCheong, J. (2012) 'The effects of dining atmospherics on behavioral intentions through quality perception', *The Journal of Services Marketing*, 26(3), pp. 204-215.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L. (2006) *Multivariate data analysis*. Pearson Prentice Hall Upper Saddle River, NJ.

- Hassan, M. U., Malik, A. A., Imran, M., Hasnain, A. and Abbas, J. (2013) 'Relationships among customers' perceived service quality, satisfaction and loyalty in the retail banking sector of Pakistan', *World Applied Sciences Journal*, 24(8), pp. 1020-1030.
- Hennig-Thurau, T., Langer, M. F. and Hansen, U. (2001) 'Modeling and managing student loyalty: An approach based on the concept of relationship quality', *Journal of Service Research : JSR*, 3(4), pp. 331-344.
- Hughes, P. (1988) *The Challenge of Identifying and Marketing Quality in Education: A Publication Reporting on the Bicentennial Conference of the Australasian Association of Senior Educational Administrators, Hobart, Tasmania, 4-9 September 1988*. Ashton Scholastic.
- Ilias, A. I., Hasan, H. F. A. and Rahman, R. A. (2009) 'Student Satisfaction and Service Quality: Any Differences in Demographic Factors?', *International Business Research*, 1(4), pp. 131.
- Jain, S. K. and Gupta, G. (2004) 'Measuring service quality: SERVQUAL vs. SERVPERF scales', *Vikalpa*, 29(2), pp. 25-37.
- Java, R. G., Ueltschy, L. C., Laroche, M., Eggert, A. and Bindl, U. (2007) 'Service quality and satisfaction: an international comparison of professional services perceptions', *Journal of Services Marketing*, 21(6), pp. 410-423.
- Johnson, B. and Christensen, L. B. (2004) *Educational research : quantitative, qualitative, and mixed approaches*. 2nd ed. edn. Boston: Allyn and Bacon.
- Johnson, R. B. and Onwuegbuzie, A. J. (2004) 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*, 33(7), pp. 14-26.
- Juran, J. M. (1998) *Juran's Quality Control Handbook 5th ed*. Available at: <http://www.pqm-online.com/assets/files/lib/books/juran.pdf>.
- Karapetrovic, S. and Willborn, W. (1997) 'Creating zero-defect students', *The TQM Magazine*, 9(4), pp. 287.
- Kolbe, R. H. and Burnett, M. S. (1991) 'Content-Analysis Research: An Examination of Applications with Directives for Improving Research Reliability and Objectivity', *Journal of Consumer Research*, 18(2), pp. 243-250.
- Lee, H., Lee, Y. and Yoo, D. (2000) 'The determinants of perceived service quality and its relationship with satisfaction', *The Journal of Services Marketing*, 14(3), pp. 217-231.
- Leslie de, C., Fiona, H. and Francesca Dall'Olmo, R. (2000) 'Added value: its nature, roles and sustainability', *European Journal of Marketing*, 34(1/2), pp. 39-56.
- Lewlyn, L. R. R., Gopalakrishna, B., Varambally, K. V. M. and Farahnaz Golrooy, M. (2011) 'Comparison of SERVQUAL and SERVPERF metrics: an empirical study', *TQM Journal*, 23(6), pp. 629-643.
- Li, R. Y. and Kaye, M. (1998) 'A Case Study for Comparing Two Service Quality Measurement Approaches in the Context of Teaching in Higher Education', *Quality in Higher Education*, 4(2), pp. 103-113.
- Lodico, M. G., Spaulding, D. T. and Voegtler, K. H. (2006) *Methods in educational research : from theory to practice*. 1st edn. San Francisco, CA: Jossey-Bass.
- Malhotra, N. K. (2010) *Marketing research : an applied orientation* 6th ed edn.: Upper Saddle River, N.J. London Pearson Education.
- Malhotra, N. K., Ulgado, F. M., Agarwal, J., Shainesh, G. and Wu, L. (2005) 'Dimensions of service quality in developed and developing economies: multi-country cross-cultural comparisons', *International Marketing Review*, 22(3), pp. 256-278.
- Marshall, M. N. (2016) 'Oxford Journals | Medicine & Health | Family Practice', *Sampling for qualitative research*.
- Masoud, K., Mohamad Mehdi, M. and Alan, J. D. (2016) 'Cultural values and consumers' expectations and perceptions of service encounter quality', *International Journal of Pharmaceutical and Healthcare Marketing*, 10(1), pp. 2-26.
- Mathew, J., Mehenna, Y. and George, S. (2005) 'An educational institution's quest for service quality: customers' perspective', *Quality Assurance in Education*, 13(1), pp. 66-82.

- Min, S. and Khoon, C. C. (2013) 'Demographic Factors in the Evaluation of Service Quality in Higher Education: International Students' Perspective', *International Review of Management and Business Research*, 2(4), pp. 994-1010.
- Moiescu, O. I. and Gica, O. A. (2013) 'SERVQUAL VERSUS SERVPERF: MODELING CUSTOMER SATISFACTION AND LOYALTY AS A FUNCTION OF SERVICE QUALITY IN TRAVEL AGENCIES', *Studia Universitatis Babeş-Bolyai*, 58(3), pp. 3-19.
- Nadiri, H., Kandampully, J. and Hussain, K. (2009) 'Students' perceptions of service quality in higher education', *Total Quality Management & Business Excellence*, 20(5), pp. 523-535.
- Oh, H. (1997) *Structural assessments of the customer satisfaction and service quality models with lodging services: EDM, SERVQUAL, and SERVPERF*. 9732345 Ph.D., The Pennsylvania State University, Ann Arbor [Online] Available at: <http://0-search.proquest.com.mylibrary.qu.edu.qa/docview/304369902?accountid=13370> (Accessed: [Online] Available at: http://CR8AB2NN2C.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ProQuest+Dissertations+&+Theses+Global&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&rft.genre=dissertations+&+theses&rft.jtitle=&rft.atitle=&rft.au=Oh,+Haem oon&rft.aulast=Oh&rft.aufirst=Haemoon&rft.date=1997-01-01&rft.volume=&rft.issue=&rft.spage=&rft.isbn=9780591418163&rft.btitle=&rft.title=Struct ural+assessments+of+the+customer+satisfaction+and+service+quality+models+with+lodging +services:+EDM,+SERVQUAL,+and+SERVPERF&rft.issn=&rft_id=info:doi/ (Accessed.
- Oliver, R. L. (1980) 'A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions', *Journal of Marketing Research (JMR)*, 17(4), pp. 460-469.
- Owlia, M. S. and Aspinwall, E. M. (1997) 'TQM in higher education - a review', *The International Journal of Quality & Reliability Management*, 14(5), pp. 527-543.
- Palli, J. G. and Mamilla, R. (2012) 'Students' Opinions of Service Quality in the Field of Higher Education', *Creative Education*, 3(4), pp. 430-438.
- Parasuraman, A. (1985) 'A Conceptual Model of Service Quality and Its Implications for Future Research', *Journal of Marketing (pre-1986)*, 49(000004), pp. 41.
- Parasuraman, A., Berry, L. L. and Zeithaml, V. A. (1991) 'Refinement and Reassessment of the SERVQUAL Scale', *Journal of Retailing*, 67(4), pp. 420.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1985) 'A conceptual model of service quality and its implications for future research', *the Journal of Marketing*, pp. 41-50.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1988) 'Servqual: A Multiple-Item Scale For Measuring Consumer Perc', *Journal of Retailing*, 64(1), pp. 12.
- Parves, S. and Ho Yin, W. (2013) 'Antecedents and consequences of service quality in a higher education context: A qualitative research approach', *Quality Assurance in Education*, 21(1), pp. 70-95.
- Payne, A. and Holt, S. (2001) 'Diagnosing Customer Value: Integrating the Value Process and Relationship Marketing', *British Journal of Management*, 12(2), pp. 159.
- Peters, T. J. and Waterman, R. H. 1982. *In Search of Excellence*. New York: Harper & Row.
- Plank, R. E. and Chiagouris, L. (1997) 'Perceptions of Quality of Higher Education: An Exploratory Study of High School Guidance Counselors', *Journal of Marketing for Higher Education*, 8(1), pp. 55-67.
- Quinn, A., Lemay, G., Larsen, P. and Johnson, D. M. (2009) 'Service quality in higher education', *Total Quality Management & Business Excellence*, 20(2), pp. 139.
- Rajani, J., Gautam, S. and Sangeeta, S. (2011) 'Conceptualizing service quality in higher education', *Asian Journal on Quality*, 12(3), pp. 296-314.
- Ramzi, M. and Mohamed, B. (2010) 'Customer loyalty and the impacts of service quality: The case of five star hotels in Jordan', *World Academy of Science, Engineering and Technology*,

- International Journal of Social, Behavioral, Educational, Economic and Management Engineering*, 4(7), pp. 1702-1708.
- Rana, S. 2009. *Measuring Service Quality in Higher Education Industry*. Rochester: Social Science Research Network.
- Rojas-Méndez, J. I., Vasquez-Parraga, A. Z., Kara, A. and Cerda-Urrutia, A. (2009) 'Determinants of Student Loyalty in Higher Education: A Tested Relationship Approach in Latin America', *Latin American Business Review*, 10(1), pp. 21-39.
- Roscoe, J. T. (1975) *Fundamental research statistics for the behavioral sciences. International series in decision processes* 2d edn. New York,: Holt.
- Rowley, C. (2003) 'National Labour Relations in Internationalized Markets: A Comparative Study of Institutions, Change and Performance', *International Journal of Human Resource Management*, 14(2), pp. 355-356.
- Russell, M. (2005) 'Marketing education: A review of service quality perceptions among international students', *International Journal of Contemporary Hospitality Management*, 17(1), pp. 65-77.
- Sahney, S., Banwet, D. K. and Karunes, S. (2004) 'A SERVQUAL and QFD approach to total quality education: A student perspective', *International Journal of Productivity and Performance Management*, 53(1/2), pp. 143-166.
- Sakthivel, P. B., Rajendran, G. and Raju, R. (2005) 'TQM implementation and students' satisfaction of academic performance', *The TQM Magazine*, 17(6), pp. 573-589.
- Sakthivel, P. B. and Raju, R. (2006) 'An Instrument for Measuring Engineering Education Quality from Students' Perspective', *The Quality Management Journal*, 13(3), pp. 23-34.
- Sarstedt, M., Wilczynski, P. and Melewar, T. C. (2013) 'Measuring reputation in global markets—A comparison of reputation measures' convergent and criterion validities', *Journal of World Business*, 48(3), pp. 329-339.
- Saunders, M., -. (2009) *Research methods for business students / Mark Saunders, Philip Lewis, Adrian Thornhill*. 5th ed. edn. Harlow :: Financial Times Prentice Hall.
- Shaari, H. (2014) 'Service Quality in Malaysian Higher Education: Adult Learners' Perspective', *International Journal of Business and Social Science*, 5(1).
- Shih, C.-h. (2006) *Effects of culture on service quality and customer satisfaction ratings*. 3200179 Ph.D., The University of Utah, Ann Arbor [Online] Available at: <http://0-search.proquest.com.mylibrary.qu.edu.qa/docview/304986407?accountid=13370> (Accessed: [Online] Available at: http://CR8AB2NN2C.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rft_id=info:sid/ABI/INFORM+Global&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&rft.genre=dissertation&rft.jtitle=&rft.atitle=&rft.au=Shih,+Ching-he&rft.aulast=Shih&rft.aufirst=Ching-he&rft.date=2006-01-01&rft.volume=&rft.issue=&rft.spage=&rft.isbn=9780542472244&rft.btitle=&rft.title=Effects+of+culture+on+service+quality+and+customer+satisfaction+ratings&rft.issn=&rft_id=info:doi/ (Accessed.
- Shukla, P. (2008) *Essentials of Marketing Research*. Available at: <http://bookboon.com/en/marketing-research-an-introduction-ebook#download>.
- Silverman, D. (2006) *Interpreting qualitative data: Methods for analyzing talk, text, and interaction*. 3rd edn. London: Sage Publications Ltd.
- Smith, G., Smith, A. and Clarke, A. (2007) 'Evaluating service quality in universities: a service department perspective', *Quality Assurance in Education*, 15(3), pp. 334-351.
- Srikanthan, G. and Dalrymple, J. (2003) 'Developing alternative perspectives for quality in higher education', *The International Journal of Educational Management*, 17(2/3), pp. 126-136.
- Stasz, C., Eide, E. R. and Martorell, P. (2008) *Post-secondary education in Qatar: Employer demand, student choice, and options for policy*. Rand Corporation.

- Subrahmanyam, A. and Raja Shekhar, B. (2016) 'The effects of service quality on student loyalty: the mediating role of student satisfaction', *Journal of Modelling in Management*, 11(2), pp. 446-462.
- Sultan, P. and Ho Yin, W. (2010) 'Service quality in higher education - a review and research agenda', *International Journal of Quality and Service Sciences*, 2(2), pp. 259-272.
- Sultan, P. and Ho Yin, W. (2012) 'Service quality in a higher education context: an integrated model', *Asia Pacific Journal of Marketing and Logistics*, 24(5), pp. 755-784.
- Sultan, P. and Ho Yin, W. (2013) 'Antecedents and consequences of service quality in a higher education context', *Quality Assurance in Education*, 21(1), pp. 70-95.
- Sultan, P. and Wong, H. (2010) 'Performance-based service quality model: an empirical study on Japanese universities', *Quality Assurance in Education*, 18(2), pp. 126-143.
- Sultan, P. and Yin Wong, H. (2014) 'An integrated-process model of service quality, institutional brand and behavioural intentions', *Managing Service Quality*, 24(5), pp. 487.
- Suresh, K. and Chandrashekara, S. (2012) 'Sample size estimation and power analysis for clinical research studies', *Journal of Human Reproductive Sciences*, 5(1), pp. 7-13.
- Sureshchandar, G. S., Chandrasekharan, R. and Anantharaman, R. N. (2002) 'Determinants of customer-perceived service quality: A confirmatory factor analysis approach', *The Journal of Services Marketing*, 16(1), pp. 9-34.
- Sweeney, J. C., Soutar, G. N. and Mazzarol, T. (2008) 'Factors influencing word of mouth effectiveness: receiver perspectives', *European Journal of Marketing*, 42(3/4), pp. 344-364.
- Tang, S. F. and Hussin, S. (2011) 'Quality in Higher Education: A Variety of Stakeholder Perspectives', *International Journal of Social Science and Humanity*, 1(2), pp. 126-n/a.
- Teas, R. K. (1994) 'Expectations as a Comparison Standard in Measuring Service Quality: An Assessment of a Reassessment', *Journal of Marketing*, 58(1), pp. 132-139.
- Temizer, L. and Turkyilmaz, A. (2012) 'Implementation of student satisfaction index model in higher education institutions', *Procedia-Social and Behavioral Sciences*, 46, pp. 3802-3806.
- Thorsten, G., Stefan, F., Roediger, V. and Michaela, G. Z. (2010) 'Examining student satisfaction with higher education services: Using a new measurement tool', *International Journal of Public Sector Management*, 23(2), pp. 105-123.
- Twaissi, N. M. and Al-Kilani, M. H. (2015) 'The Impact of Perceived Service Quality on Students' Intentions in Higher Education in a Jordanian Governmental University', *International Business Research*, 8(5), pp. 81-92.
- Vaz, A. and Mansori, S. (2013) 'Malaysian Private Education Quality: Application of SERVQUAL Model', *International Education Studies*, 6(4), pp. 164-170.
- Witkowski, T. H. and Wolfenbarger, M. F. (2002) 'Comparative service quality: German and American ratings across service settings', *Journal of Business Research*, 55(11), pp. 875-881.
- Yavas, U., Benkenstein, M. and Stuhldreier, U. (2004) 'Relationships between service quality and behavioral outcomes: A study of private bank customers in Germany', *The International Journal of Bank Marketing*, 22(2/3), pp. 144-157.
- Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1988) 'Communication and Control Processes in the Delivery of Service Quality', *Journal of Marketing*, 52(2), pp. 35.
- Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1993) 'The nature and determinants of customer expectations of service', *Journal of the academy of Marketing Science*, 21(1), pp. 1-12.
- Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1996) 'The Behavioral Consequences of Service Quality', *Journal of Marketing*, 60(2), pp. 31-46.
- Øyvind, H. and Erik, N. (2007) 'What accounts for students' loyalty? Some field study evidence', *International Journal of Educational Management*, 21(2), pp. 126-143.
- Buttle, F. (1994), "What's wrong with SERVQUAL?", Working Paper Series No. 277, Manchester Business School, Manchester, July.

APPENDIXA: Approval Letter



Qatar University Institutional Review Board QU-IRB

March 27, 2018

Ms. Amal S.A. Shurair
Graduate Student Project
Qatar University
Tel.: 55490843
Email: 200360225@qu.edu.qa, amal.shurair@gmail.com

Dear Ms. Amal Shurair,

Sub.: Research Ethics Review Exemption (Graduate Student Project)
**Ref.: Project titled, "Stakeholder Perception of Service Quality in Qatar
Higher Education Institutions: An Application of Qatar University"**

We would like to inform you that your application along with the supporting documents provided for the above proposal, is reviewed and having met all the requirements, has been exempted from the full ethics review.

Please note that any changes/modification or additions to the original submitted protocol should be reported to the committee to seek approval prior to continuation.

Your Research Ethics Approval No. is: **QU-IRB 558-E/16**
Kindly refer to this number in all your future correspondence pertaining to this project.

Best wishes,

K. Alali

Dr. Khalid Al-Ali
Chairperson, QU-IRB



APPENDIX B: Questionnaire Introduction Letter

Dear Participant

This questionnaire is part of a graduation project within the Master of Science in Engineering Management program offered by College of engineering at Qatar University and was designed to better understand dimensions of service quality it also addresses service quality gaps between expected service by students and the actual perception of service at Qatar University (QU) .Your input is an important element in this study and will be kept strictly confidential. The information collected will be used for academic research purposes only. It will take around 10-15 minutes to answer it, also be informed that you can stop answering questions anytime, as your participation is voluntary and anonymous

If you have any question please feel free to contact me via my email address:

200360225@qu.edu.qa

If you agree to participate, please click "NEXT" to access the survey.

APPENDIXC: Questionnaire

Section 1: Profile

Please answer the questions below:

A01: Gender:

- Male
- Female

A02: Age:

- less than 25
- 25 and Above

A03: Nationality:

- Qatari
- Non Qatari

A04: Education Level:

- Undergraduate
- Postgraduate

Section 2: Students Expectations and Perception of Service Quality Dimensions

Please indicate the extent to which you disagree or agree with the following statements. Use the scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Disagree somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree

	Expectations (E) This section deals with your opinion of Higher education institutions (HEIs). Please, show the extent to which you think HEIs 'should' possess the following features. We are interested in knowing your expectations from ideal or excellent HEIs.	Rank	Performance (P) The following statements deal with the perceptions of service experienced in Higher education institutions (HEIs) in Qatar. Please, show the extent to which these statements reflect your perception of service in Qatar University	Rank
Value & Culture	<p>E01: Excellent institutions of Higher education values must be in line with the social values</p> <p>E02: Excellent institutions of Higher education must be in line with community religion values</p> <p>E03: Excellent institutions of Higher education must contribute to the welfare of the society</p> <p>E04: Excellent institutions of Higher education must be consistent with its members personal values</p> <p>E05: Excellent institutions of Higher education must be consistent with the life goals of its members</p>		<p>P01: Your higher education institution values are In line with your social values</p> <p>P02: Your higher education institution values are In line with your religion</p> <p>P03: Your higher education institution contributes to the welfare of the society</p> <p>P04: Your higher education institution consistent with your personal values</p> <p>P05: Your higher education institution consistent with your life goals</p>	

Tangibles	<p>E11: Excellent Higher education institutions must have modern equipment, such as laboratories.</p> <p>E12: The appearance of the physical facilities of excellent higher education institutions is attractive.</p> <p>E13: Faculty and employees at excellent institutions of Higher education must present themselves (clothes, cleanliness, etc.) in an appropriate manner for their position.</p> <p>E14: The material associated with the service provided in excellent institutions of Higher education, such as journals, printed matter, must have a good visual appearance and be up to date.</p>		<p>P11: Your HEI has modern and latest equipment, such as laboratories.</p> <p>P12: The appearance of the physical facilities of your current higher education institution is attractive.</p> <p>P13: Faculty and employees has neat, professional appearance</p> <p>P14: The material associated with the service provided in your higher education institution, such as journals, printed matter, has a good visual appearance and is up to date .</p>	
Reliability	<p>E15: When excellent institutions of Higher education promise to do something in a certain time, they must do so.</p> <p>E16: When you have a problem, they demonstrate sincere interest in solving it.</p> <p>E17 Excellent institutions of Higher education must do the job right the first time and must persist in doing it without error.</p>		<p>P15: When your higher education institution promises to do something in a certain time, it does so.</p> <p>P16: When you have a problem, your higher education institution demonstrates sincere interest in solving it</p> <p>P17: Your higher education institution does the job right the first time and will persist in doing it without error.</p>	

Responsiveness	<p>E18: Faculty and employees promise their clients the services within deadlines they are able to meet.</p> <p>E19: Faculty and employees are willing and available during service providing.</p> <p>E20: The faculty and employees must always show good will in helping anyone.</p> <p>E21: The faculty and employees must be always willing to explain doubts that members of the institution might have.</p>		<p>P18: Faculty and employees at your higher education institution promise you the services within deadlines they are able to meet.</p> <p>P19: Faculty and employees at your higher education institution are willing and available during service providing</p> <p>P20: Faculty and employees at your higher education institution always show good will in helping.</p> <p>P21: Faculty and employees at your higher education institution are always willing to explain your doubts.</p>	
Assurance	<p>E22: The behavior of faculty and employees must inspire confidence.</p> <p>E23: Members of excellent or Ideal institutions of Higher education should feel safe in their transactions with the institution.</p> <p>E24: The faculty and employees must be polite.</p> <p>E25: The faculty and employees must have the knowledge needed to answer clients questions</p>		<p>P22: The behavior of faculty and employees at your higher education institution inspire confidence in you.</p> <p>P23: You feel safe in your transactions with your higher education institution.</p> <p>P24: Faculty and employees at your higher education institution are polite</p> <p>P25: Faculty and employees at your higher education institution have the knowledge needed to answer your questions.</p>	

Empathy	<p>E26: Excellent institutions of Higher education must have convenient business hours</p> <p>E27: Excellent institutions of Higher education must have faculty and employees who provide individual attention.</p> <p>E28: Excellent institutions of Higher education must be focused on the best service for their members.</p> <p>E29: Excellent institutions of Higher education must understand the specific needs of their <u>members</u>.</p>	<p>P26: Your higher education institution has convenient business hours</p> <p>P27: Your higher education institution has faculty and employees who provide you with individual attention</p> <p>P28: Your higher education institution is focused on the best service for you</p> <p>P29: Your higher education institution understands your specific needs</p>	
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Section 3: Students Loyalty

Please indicate the extent to which you disagree or agree with the following statements. Use the scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Disagree somewhat	Undecided	Agree Somewhat	Agree	Strongly Agree

loyalty	<p>L01: If you were faced with the choice of pursuing education , you would choose your current higher education institution</p> <p>L02: I'd recommend my higher education institution to someone else to prepare for study</p> <p>L03: I have no qualms about recommending the careers offered by my higher education institution offers to prospective students/ professional</p>	
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Thank you very much for taking your time to complete this questionnaire.

APPENDIX D: Data Tabulation

Tabulation of the Data (Source: Primary Data 2016)

		Expectations (E)							Perceptions (P)									
Culture/Value	Item	Frequency of Responses							Item	Frequency of Responses								
		2	3	4	5	6	6	Total		2	3	4	5	6	6	Total		
Image	1								1									
	E01	8	7	16	26	36	113	191	397	P01	13	13	27	30	71	134	108	396
	E02	9	10	14	19	35	100	209	396	P02	17	12	23	31	58	141	109	391
	E03	6	9	19	22	59	114	167	396	P03	15	20	20	55	63	124	98	395
	E04	10	9	34	42	75	115	109	394	P04	19	22	27	43	81	124	79	395
	E05	9	7	21	44	51	133	127	392	P05	21	22	29	50	77	119	78	396
	E06	5	8	15	15	27	114	213	397	P06	18	19	44	34	61	126	95	397
	E07	5	11	20	30	58	115	153	392	P07	11	18	41	49	63	115	99	396
	E08	4	7	11	15	32	99	225	393	P08	10	16	32	38	78	129	92	395
	E09	4	9	15	14	28	107	216	393	P09	10	19	30	35	63	130	107	394
Tangibles	E10	4	10	15	11	34	114	206	394	P10	17	18	21	59	58	120	104	397
	E11	5	6	12	13	27	109	225	397	P11	9	12	32	27	54	111	150	395
	E12	6	5	11	23	61	125	166	397	P12	18	20	36	39	84	99	100	396
	E13	5	7	14	21	43	106	200	396	P13	10	9	25	27	63	131	132	397
	E14	4	8	12	17	51	134	167	393	P14	13	9	21	54	64	121	111	393

Reliability	E15	7	7	13	14	24	101	230	396	P15	13	23	34	53	101	88	82	394
	E16	6	6	12	16	26	110	217	393	P16	25	22	47	64	80	78	81	397
	E17	5	6	17	25	52	130	158	393	P17	25	33	44	73	80	80	61	396
Responsiveness	E18	4	6	10	24	29	121	201	395	P18	11	18	44	40	80	108	93	394
	E19	3	6	11	26	41	137	173	397	P19	11	12	34	60	67	110	99	393
	E20	7	6	7	17	25	113	221	396	P20	13	14	39	44	74	105	105	394
	E21	6	7	5	20	24	102	233	397	P21	15	17	23	45	60	116	117	393
	E22	6	6	13	14	25	111	220	395	P22	13	19	34	45	72	114	99	396
Assurance	E23	7	7	11	10	28	96	232	391	P23	15	13	41	29	61	110	126	395
	E24	6	7	13	12	27	99	230	394	P24	13	14	16	45	63	118	125	394
	E25	5	9	13	11	17	120	220	395	P25	14	15	31	42	60	134	99	395
Empathy	E26	8	5	11	23	35	118	197	397	P26	21	26	45	54	68	106	76	396
	E27	7	6	14	24	49	129	165	394	P27	9	25	30	63	58	118	89	392
	E28	9	2	10	25	22	123	204	395	P28	15	15	26	45	67	111	117	396
	E29	7	4	10	23	29	112	208	393	P29	24	24	43	62	70	80	92	395
Loyalty										L01	32	28	40	43	54	99	100	396
										L02	23	21	39	38	56	110	109	396
										L03	24	24	43	62	70	80	92	395

APPENDIX E: Dimensions Variance Measures

Service Quality Dimensions Variance Measures (Source: Primary Data 2016)

	Expectations (E)							Perceptions (P)						
	Item	N		Mean	Median	Mode	Std. Deviation	Item	N		Mean	Median	Mode	Std. Deviation
		Valid	Missing						Valid	Missing				
Culture/Value	E01	397	0	5.97	6.00	7.00	1.41	P01	396	1	5.44	6.00	6.00	1.55
	E02	396	1	6.02	7.00	7.00	1.45	P02	391	6	5.46	6.00	6.00	1.60
	E03	396	1	5.85	6.00	7.00	1.40	P03	395	2	5.27	6.00	6.00	1.63
	E04	394	3	5.40	6.00	6.00	1.52	P04	395	2	5.11	6.00	6.00	1.66
	E05	392	5	5.62	6.00	6.00	1.45	P05	396	1	5.04	5.00	6.00	1.69
Image	E06	397	0	6.14	7.00	7.00	1.31	P06	397	0	5.16	6.00	6.00	1.71
	E07	392	5	5.76	6.00	7.00	1.42	P07	396	1	5.21	6.00	6.00	1.63
	E08	393	4	6.21	7.00	7.00	1.25	P08	395	2	5.31	6.00	6.00	1.54
	E09	393	4	6.15	7.00	7.00	1.31	P09	394	3	5.39	6.00	6.00	1.58
	E10	394	3	6.11	7.00	7.00	1.31	P10	397	0	5.26	6.00	6.00	1.66
Tangibles	E11	397	0	6.22	7.00	7.00	1.25	P11	395	2	5.63	6.00	7.00	1.56
	E12	397	0	5.94	6.00	7.00	1.28	P12	396	1	5.14	6.00	7.00	1.70
	E13	396	1	6.05	7.00	7.00	1.32	P13	397	0	5.63	6.00	7.00	1.48
	E14	393	4	5.98	6.00	7.00	1.26	P14	393	4	5.43	6.00	6.00	1.53
Reliability	E15	396	1	6.19	7.00	7.00	1.33	P15	394	3	5.03	5.00	5.00	1.61
	E16	393	4	6.18	7.00	7.00	1.29	P16	397	0	4.79	5.00	7.00	1.77
	E17	393	4	5.89	6.00	7.00	1.32	P17	396	1	4.60	5.00	5.00	1.75

Responsiveness	E18	395	2	6.13	7.00	7.00	1.24	P18	394	3	5.17	6.00	6.00	1.61
	E19	397	0	6.02	6.00	7.00	1.22	P19	393	4	5.25	6.00	6.00	1.57
	E20	396	1	6.21	7.00	7.00	1.26	P20	394	3	5.25	6.00	6.00	1.62
	E21	397	0	6.24	7.00	7.00	1.25	P21	393	4	5.38	6.00	7.00	1.64
Assurance	E22	395	2	6.19	7.00	7.00	1.28	P22	396	1	5.23	6.00	6.00	1.63
	E23	391	6	6.23	7.00	7.00	1.31	P23	395	2	5.38	6.00	7.00	1.68
	E24	394	3	6.21	7.00	7.00	1.30	P24	394	3	5.50	6.00	7.00	1.56
	E25	395	2	6.21	7.00	7.00	1.28	P25	395	2	5.32	6.00	6.00	1.60
Empathy	E26	397	0	6.06	6.00	7.00	1.33	P26	396	1	4.88	5.00	6.00	1.75
	E27	394	3	5.92	6.00	7.00	1.34	P27	392	5	5.16	6.00	6.00	1.61
	E28	395	2	6.12	7.00	7.00	1.30	P28	396	1	5.36	6.00	7.00	1.63
	E29	393	4	6.13	7.00	7.00	1.29	P29	395	2	4.87	5.00	7.00	1.80

Loyalty Variance Measures (Source: Primary Data 2016)

		N	Mean	Median	Mode	Std. Deviation	
Loyalty	L01	396	1	4.91	6.00	7.00	1.92
	L02	396	1	5.14	6.00	6.00	1.81
	L03	394	3	5.32	6.00	7.00	1.72

APPENDIX F: Reliability Test of the Developed Instrument

Internal Reliability of the Scale (Source: Primary Data 2016)

	Expectations (E)			Perceptions (P)				
	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Culture/Value	E01	0.76	0.88	0.90	P01	0.85	0.91	0.93
	E02	0.75	0.88		P02	0.76	0.92	
	E03	0.77	0.87		P03	0.80	0.92	
	E04	0.75	0.88		P04	0.88	0.90	
	E05	0.73	0.88		P05	0.79	0.92	
Image	E06	0.87	0.93	0.94	P06	0.78	0.91	0.92
	E07	0.75	0.95		P07	0.80	0.91	
	E08	0.90	0.92		P08	0.79	0.91	
	E09	0.87	0.93		P09	0.83	0.90	
	E10	0.87	0.93		P10	0.80	0.91	
Tangibles	E11	0.85	0.91	0.93	P11	0.79	0.83	0.88
	E12	0.83	0.91		P12	0.71	0.87	
	E13	0.82	0.92		P13	0.75	0.85	
	E14	0.85	0.91		P14	0.75	0.85	

Reliability	E15	0.84	0.74	0.91	P15	0.70	0.86	0.87
	E16	0.85	0.75		P16	0.78	0.79	
	E17	0.76	0.58		P17	0.77	0.79	
Responsiveness	E18	0.83	0.92	0.93	P18	0.85	0.94	0.95
	E19	0.80	0.92		P19	0.88	0.93	
	E20	0.86	0.90		P20	0.88	0.93	
	E21	0.87	0.90		P21	0.89	0.93	
Assurance	E22	0.91	0.95	0.96	P22	0.87	0.91	0.93
	E23	0.92	0.95		P23	0.87	0.91	
	E24	0.90	0.96		P24	0.84	0.92	
	E25	0.91	0.95		P25	0.81	0.93	
Empathy	E26	0.84	0.93	0.94	P26	0.76	0.89	0.91
	E27	0.83	0.93		P27	0.81	0.87	
	E28	0.89	0.91		P28	0.81	0.87	
			0.92					
	E29	0.87			P29	0.79	0.88	
Cronbach's Alpha for Expectations				0.98	Cronbach's Alpha for Perceptions			0.98

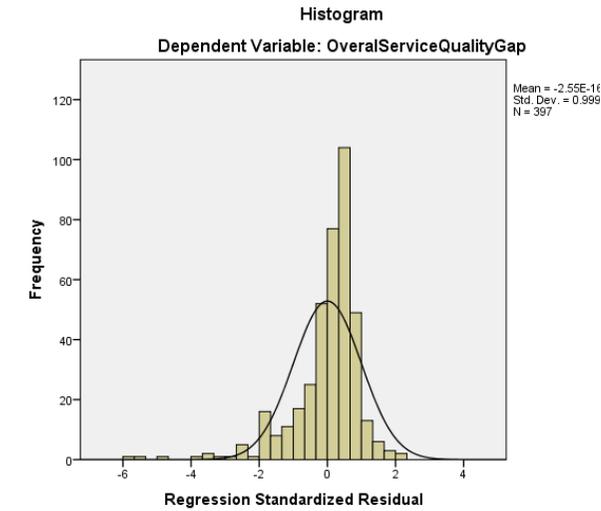
	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Loyalty	L01	0.83	0.89	
	L02	0.90	0.83	.92
	L03	0.78	0.92	

APPENDIX G: Perceived Service Quality Level

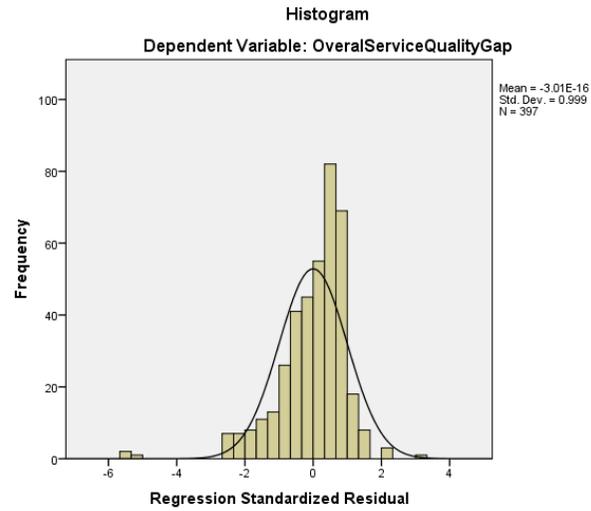
Perceived Service Quality Level by Students (Source: Primary Data 2016)

	Item	GAP (P-E)	Rank
Culture/Value	P01-E01	-0.53	
	P02-E02	-0.57	
	P03-E03	-0.59	7
	P04-E04	-0.29	
	P05-E05	-0.58	
		-0.51	
Image	P06-E06	-0.97	
	P07-E07	-0.55	
	P08-E08	-0.90	5
	P09-E09	-0.76	
	P10-E10	-0.85	
	Average	-0.81	
Tangibles	P11-E11	-0.59	
	P12-E12	-0.80	
	P13-E13	-0.42	6
	P14-E14	-0.56	
	Average	-0.59	
Reliability	P15-E15	-1.17	
	P16-E16	-1.39	1
	P17-E17	-1.29	
	Average	-1.28	
Responsiveness	P18-E18	-0.95	
	P19-E19	-0.77	
	P20-E20	-0.96	3
	P21-E21	-0.87	
	Average	-0.89	
Assurance	P22-E22	-0.96	
	P23-E23	-0.84	
	P24-E24	-0.71	4
	P25-E25	-0.88	
	Average	-0.85	
Empathy	P26-E26	-1.18	
	P27-E27	-0.76	
	P28-E28	-0.76	2
	P29-E29	-1.26	
	Average	-0.99	

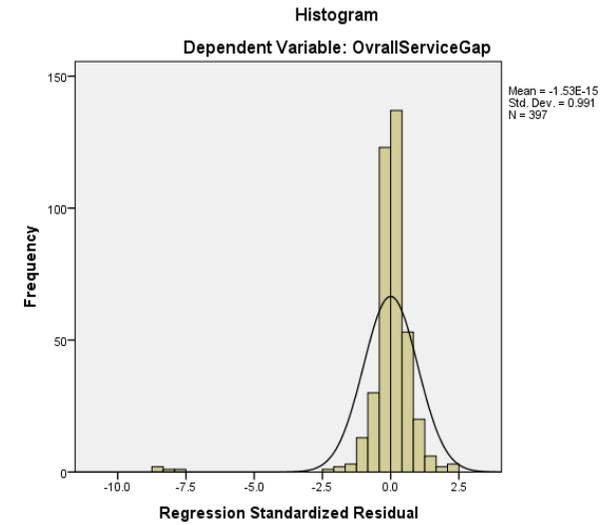
APPENDIXJ: Normality Test Using Histogram



Hypothesis 1 :Image and Perceived Service Quality (Source: Primary Data 2016)

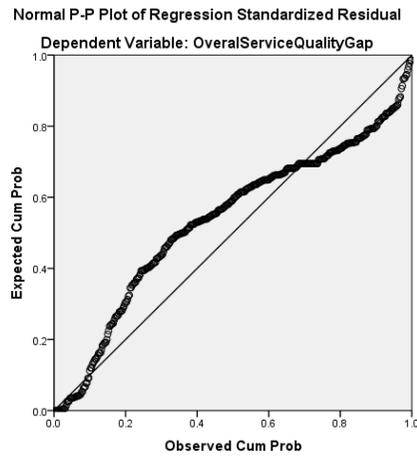


Hypothesis 2 :Culture/Value and Perceived Service Quality (Source: Primary Data 2016)

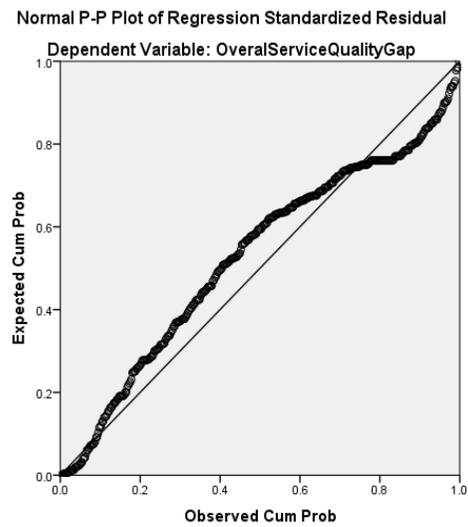


Overall Service Quality (Source: Primary Data 2016)

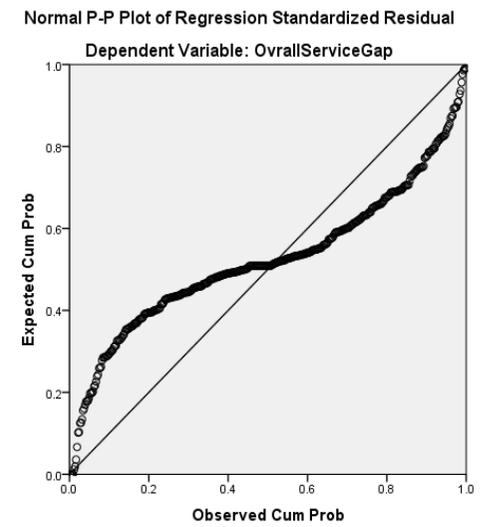
APPENDIXK: Normality Test Using P-P Plot



Hypothesis 1 :Image and Perceived Service Quality (Source: Primary Data 2016)



Hypothesis 2 :Culture/Value and Perceived Service Quality (Source: Primary Data 2016)



Overall Service Quality (Source: Primary Data 2016)

