

Stakeholder's perception of service quality: a case in Qatar

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Abstract

Purpose – The purpose of this paper is to investigate and report students' perception of service quality in a university by examining the perceptual context of service quality with respect to students' loyalty behavior, image of the university and culture/values.

Design/methodology/approach – A research framework is developed for quality assessment with three hypotheses. A questionnaire with 65 instruments was used for gathering the required data for the analysis. The questionnaire was sent through email to all engineering students. The analysis included descriptive statistics, reliability analysis, gap analysis and hypotheses tests. Seven dimensions of service quality were identified: the original dimensions of the SERVQUAL, namely, reliability, responsiveness, assurance, empathy and tangibles. Two additional dimensions image and culture/value were added for the research to understand perceived service quality and loyalty.

Findings – The results provide a significant positive correlation between service quality and student's loyalty. It also shows that there is statistically significant relation between the image of the institution and the perceived service quality, and culture/values of the students in the institution and perceived service quality.

Research limitations/implications – This study used data collected from a survey in the university in a given period.

Practical implications – The findings indicate that to provide quality education, meeting students' needs, wants and expectations of services quality should be carefully understood and addressed. Management also needs to consider factors such as corporate image and culture/value, as they have the ability to heavily impact the type of services provided by the institution.

Originality/value – The findings presented in this paper fill the gap in the current literature by providing empirical knowledge on the quality of service assessment and customer satisfaction in the higher education context. The study is the first of its kind in Qatar's context and provides opportunities for higher institutions to focus more on current students' services. This can lead to an increased brand value representing one of the premier institutes of higher education in the Middle East Gulf Region.

Keywords SERVQUAL, Culture, Quality management, Image, Higher education, Service quality assessment

Paper type Research paper

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1. Introduction

The service sector is considered an important sector in many countries (Abdullah, 2006) due to which the research on the measurement of service quality has also increased (Baron *et al.*, 2009). Many service organizations recognize that good service quality may bring customer satisfaction and increased customer loyalty. Therefore, many researchers mention that customer loyalty and customer satisfaction can be used as an outcome of service quality measures implemented in an organization (Orel and Kara, 2014; Chou *et al.*, 2014; Hussain *et al.*, 2015; Kasiri *et al.*, 2017). Many organizations have considered quality as a strategic weapon for enhancing business performance and achieving operational efficiency (Garvin, 1983; Anderson and Zeithaml, 1984; Zeithaml *et al.*, 1993; Sureshchandar *et al.*, 2002; DeShields *et al.*, 2005). Lupo (2014) and Štimac and Šimić (2012) mention that the education sector is also service-oriented and, therefore, understanding of the service and its continuous measurement becomes important in the education sector as well.

The education sector provides services at different levels of students' learning. Therefore, the quality of service in education is important not only in primary and secondary education, but also more prominently so in the higher education sector. In most cases, primary and secondary education systems are handled by the governments (O'Sullivan, 2006; Braathe and Otterstad, 2014; Rose, 2015; Van der Bij *et al.*, 2016), and quality is defined, implemented and measured through various assurance tools.

In the higher education system, as students generally have a choice to enter a university and a program, service quality and satisfaction become more important. Globalization and increased liberalization of the labor market have also provided opportunities to the students to evaluate the service quality of educational institutes besides the number of programs. Yeo (2009) mentions that, on the side of the educational institution, service quality can form a baseline for adaptation to globalization. However, as the number and types of programs are similar among the higher education institutes, globally or locally, the institutes have to work on the marketing of differentiating factor and building of its image. This is very prominent in the industrial sector (Clow *et al.*, 1997; Alves and Raposo, 2010) in which companies believe that better perception of company image means the better perception of quality and satisfaction. Therefore, attempts by institutions to build the image in the higher education system can make them more competitive (Štimac and Šimić, 2012). It is realized that students tend to focus on the evidence of service quality provided by the institution (Bhuian, 2016) when it comes to higher education. Therefore, not only the quality assurance measures adopted by the university system but also the service perception becomes important.

In some countries, branch campuses of international universities have been established to tap the students from the regional pool. These campuses are often expected to provide the same education and service quality to students as their parent institution. However, Bhuian (2016) mentions that the education and service quality perception between the parent institution and the branch campus can be different. This may happen due to the smaller size of the campus and the smaller number of services offered in branch campuses compared to their parent institution.

Some authors acknowledge that the measurement of education quality is difficult due mainly to the complicated nature of the educational product, different conceptualization of service quality, and varied stakeholders' perceptions (Becket and Brookes, 2006). One of the factors that institutions should consider is that as the main stakeholders of the university, students' perception of education quality is global, and is based on their exposure to services and their quality throughout their student years (Rojas-Méndez *et al.*, 2009; Jancey and Burns, 2013). The importance of services provided to the current students by the faculty, unit heads and the supporting staff is mentioned in Nadiri *et al.* (2009) and Clewes (2003). An

interaction between the students and the teachers is also mentioned by [Alt \(2015\)](#) as a factor for the learning environment in the higher education institute. [Martin et al. \(2015\)](#) mention service users can benefit if service providers can provide a facilitative environment in their campuses. Therefore, it is necessary for higher education institutions to also focus on a continuous improvement of services.

Qatar considers education to be one of the prominent pillars of the National Vision 2030 and the National Development Strategy [[QGSDP \(Qatar General Secretariat for Development Planning\), 2011](#)]. The government has invested heavily in the higher education sector as well, providing support to Qatar University and Hamad Bin Khalifa University, and welcoming the establishment of branch campuses of prominent international universities. [Borahan and Ziarati \(2002\)](#) mention that this emphasis by the government on higher education can have a better impact on increasing the quality of higher education. Such investments mean that institutes need to focus more on the quality of education, as it will have a direct bearing on a country's competitiveness. The availability of competing institutions for higher education makes the perception of service quality even more important for the prospective students. Therefore, the motivation of the study is to measure students' perception of service quality at an educational institute by using quality metrics. The perception of the students can become a driving factor for the decision makers to develop measures to enhance service quality in the institution. As this type of study has not been done before in Qatar University, it also provides an opportunity to set the determinants by examining the largest university.

The remaining of the paper is as follows. The review of the relevant literature is presented in Section 2 followed by the Section 3, in which research methodology and the conceptual framework is discussed. In Section 4, data analysis, results are discussions are presented. The conclusions of the study and possible future work are given in Section 5.

2. Review of related research

2.1 Service in the higher education sector

Management of service quality is important in higher education institutes due to their inherent aim of producing quality graduates. Due to increased competition, globalization and the reduction of funds allocated by the government, higher education institutions need to put more focus on quality ([Temizer and Turkyilmaz, 2012](#)). They need to develop strategic and operational planning to differentiate their service with competing institutions by addressing the needs of various stakeholders. The following are some of the points considered by the researchers:

- The institutions should monitor the quality of services and be committed to measure and improve it on a continuous basis ([Brochado, 2009](#)).
- An institution's ability in meeting students' wants and expectations can affect a student's choice to enroll in higher studies ([Plank and Chiagouris, 1997](#)).
- Satisfaction of students is an extremely vital issue for higher education management ([Douglas et al., 2008](#)).
- Students are analytical and critical when deciding on the education institution, and they look at evidence of good service quality ([Binsardi and Ekwulugo, 2003](#); [Donaldson and McNicholas, 2004](#)).
- Students develop different perceptions on service quality across different years of their study ([Sumaedi et al., 2012](#); [Moyo and Ngwenya, 2018](#)) and the perception on quality differs with the gender of the students ([Joseph et al., 2005](#); [Sumaedi et al., 2012](#)).

2.2 Service quality measurement

Many studies have used SERVQUAL as a tool to measure service quality. The model was developed based on the service gap between the expectations and perception of a customer towards the quality of a service (Parasuraman *et al.*, 1988). The SERVQUAL model has five quality gap dimensions (reliability, responsiveness, assurance, empathy and tangibles) and 22 items under each of the two sections (expectation and perception). The definitions of quality dimensions (reliability, responsiveness, assurance, empathy and tangibles) for a university system are given in Smith *et al.* (2007).

Buttle (1994) mentions that the SERVQUAL tool provides a platform for the assessment of quality in different dimensions, with a simple scaled analysis, and with a standard procedure. Several authors have used SERVQUAL for assessing higher education service quality (Yeo, 2009; Calvo-Porrall *et al.*, 2013; Cuthbert, 1996; Enayati *et al.*, 2013; Shaari, 2014; Vaz and Mansori, 2013). Smith *et al.* (2007) use the SERVQUAL method for the evaluation of service quality in higher education. The authors have briefly cited other methods for measuring service quality and mention that SERVQUAL is the most widely used and superior method to measure service quality because of the scale that it uses to represent the customer's judgment on the service. Therefore, the SERVQUAL method is used in this paper as well.

2.3 Service quality and corporate image/reputation

Image and reputation refers to the brand of an institution that has delivered services to the highest quality. It identifies the uniqueness of the services (such as in terms of number of majors, number of students and cost of the programs) provided by the institution. Judson *et al.* (2006) mention that one of the major aspects of students' choice of an institution is its image or reputation. Therefore, image or reputation essentially emphasizes the awareness of an university (Joseph *et al.*, 2012) in terms of its services. Sultan and Yin Wong (2013) state that branding of higher education is a marketing tool for gaining competitive advantages. A study by Štimac and Šimić (2012) in three European countries show that the three major reasons for students' choice of a university are employability (after completing the program), program quality and the image and the reputation of the institution. Another study by Ali *et al.* (2016) recognizes the value of image in service provision. The authors develop a relationship between the student loyalty and image in their study. Unlike Štimac and Šimić (2012) and Ali *et al.* (2016) mention image and reputation as two different factors that can lead to student satisfaction. The authors argue that reputation influences student satisfaction, which in turn will influence the image. As reputation is associated with the delivery, the image can be considered a different factor to measure student satisfaction. The study by Ali *et al.* (2016) can be considered as one of the closest ones related to our work. Sarstedt *et al.* (2013) also mention of the importance of evaluating customers' perception of image. Oliver (1980) adds that image and reputation have a role in setting the customers' expectations, although Sultan and Yin Wong (2014) mention of a difficulty in establishing a relation between image and service quality as higher education institutions are perceived as assets for social well-being and human development.

2.4 Service quality and culture/values

Culture/values are defined here in terms of individual perception rather than the culture and values adopted by a higher education institute. Culture/values can refer to individual characteristics in terms of opinions and perceived outcomes based on their own behavior or social relationship (Aparicio *et al.*, 2016). Therefore, the perception towards services provided by the university can change based on the composition of the student body. The importance of the link between service quality and values comes from the means-end

models. The models assume that customers use and acquire services or products to achieve their desired ends. According to [Flint et al. \(2002\)](#), [Gutman \(1982\)](#) and [Payne and Holt \(2001\)](#), these models seek to explain how customers' choices of services or products enable them to achieve desired ends. In this case, services and products are considered means, while the personal values of the customers are considered ends.

According to [Gutman \(1982\)](#) and [De Chernatony et al. \(2000\)](#), values are defined in terms of the customers' mental image, personal values or cognitive representations underlying customers' goals and needs. Therefore, customer evaluation of service quality is partially based on whether the services enable the receiver to achieve the desired values. [Huber et al. \(2001\)](#) state that the means-end theory postulates the linkages between the services or products attributes, the resulted consequences from consumption and the personal values of the customers.

Culture also plays a role in the perception of a service. For example, [Malhotra et al. \(2005\)](#) state that expectations are related to actual service perceptions, which vary significantly in different cultures. [Shih \(2006\)](#) points out that culture is among the factors affecting customer behavior. The author adds that human life and customers behavior is influenced by the culture in terms of shaping values, beliefs, and attitude. The study finds that service quality is influenced by national culture. [Gayatri et al. \(2011\)](#) argue that culture has an effect on customer behavior and purchasing habits. [Karami et al. \(2016\)](#) also show that customers' culture and values have an important effect on the perception and expectation of service quality. [Barbulescu \(2015\)](#) mentions that culture characterizes a population in terms of their shared attitudes, values and practices. Therefore, although culture and values may be assessed separately, in the analysis presented in this paper, they are treated as one variable.

2.5 Service quality and behavioral intentions (loyalty)

[Yao et al. \(2019\)](#) mention of two aspects of loyalty: behavioral loyalty and attitudinal loyalty. Behavioral loyalty refers to the continuous relationship with the institution and attitudinal loyalty refers to the intentions for positive recommendations. Therefore, with respect to an educational institution, loyalty refers to a student's willingness to pursue further studies or participation in university programs (events, training or certifications) in their universities, and to provide recommendations in terms of programs, infrastructure, or facilities provided by the university. [Webb and Jagun \(1997\)](#) mention loyalty in higher education as a student's intention to return to the university for further studies or to provide positive feedback to fellow acquaintances to enrol in the university he/she attended.

[Olorunniwo et al. \(2006\)](#) mention that loyal customers have positive impacts on the success of institutions. [Yao et al. \(2019\)](#) mention that in service institutes, both behavioral and attitudinal loyalty have to be examined separately. However, as this research is related to the students who can be both recommenders and come back for higher studies and training, both aspects are considered to be one loyalty factor.

[Dado et al. \(2011\)](#) mention that loyalty should not only be considered for the period a student spends at the institution but also be continuously considered after graduation as well. [Annamdevula and Bellamkonda \(2016\)](#) state that establishing and maintaining long-term relations with current students and alumni can help management in improving quality. Higher education institutions benefit from graduates pursuing higher level education as they do with tuition-paying students ([Hennig-Thurau et al., 2001](#)). In most universities, most of the loyal and academically competent students would like to continue to pursue their higher education at their alma mater.

[Al-Rousan and Mohamed \(2010\)](#) mention that loyal customers are likely to give positive recommendations. In the higher education context, loyal students can spread positive comments and referrals about the institution to others ([Hennig-Thurau et al., 2001](#)). [Vaz and](#)

Mansori (2013) mention that as higher education is globalized, it is difficult to attract quality students by using conventional marketing. Therefore, referral by loyal students and alumni can create an undercurrent to attract good students to the institutions.

Studies have attempted to develop the relationship between loyalty and service quality. For example, Helgesen and Nettet (2007) develop a relationship in Norwegian higher education in the following order: service quality influencing satisfied customers which subsequently influence the loyalty of the customers. Other studies also empirically support this sequence of the relationship (Dabholkar *et al.*, 2000; Deng *et al.*, 2010).

Ali *et al.* (2016) investigate the relation of the original dimensions of the HEDPERF scale with student satisfaction and loyalty. Their findings show that factors such as academic and non-academic activities in the institution, as well as access to faculty and staff to resolve student issues, influence student satisfaction. When the students are satisfied, they will be more loyal to the institution and its programs.

A study by Boulding *et al.* (1993) on a group of MBAs finds a positive impact of service quality on loyalty intentions. Bitner (1990) proposes an evaluation model to examine the impact of service quality on customers' satisfaction. The findings indicate a direct relation between service quality and customers' loyalty.

2.6 Summary

The review shows that when it comes to education, measurement of service quality is important. The students are the main stakeholders and they go through the services during their duration of the study. Studies have shown that there are links between service quality, stakeholders' satisfaction and loyalty. The studies also show that not only the established SERVQUAL dimensions, but also other dimensions can be used to assess service quality in a higher education institute. Therefore, this research focuses on the understanding and assessing the impact of SERVQUAL, image, culture/values on student satisfaction on service quality and their loyalty in the higher education sector. This study is focused on a national university in Qatar.

3. Research methodology

The research methodology adopted in this paper is given in Figure 1. The study focuses on the service quality assessment and evaluation based on the survey response from students

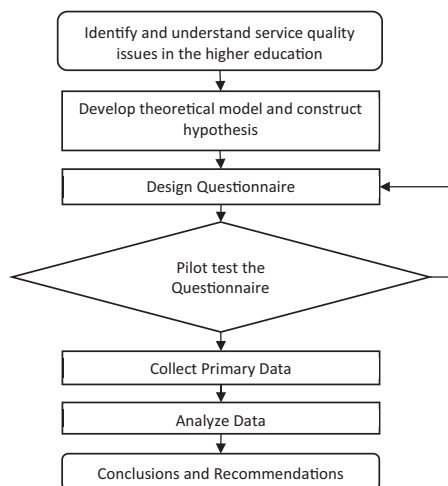


Figure 1.
Research methodology

at Qatar University. The survey focused on current students (graduate and undergraduate) as it is easier to understand their current perception of service quality. This is to note that some of the current graduate students are also alumni of the university.

3.1 Conceptual framework

The conceptual framework used in this study is shown in Figure 2. The framework consists of main parts: the first part is the dimensions of service quality, which includes two new dimensions, image and culture/values for measurement, the inclusion of which is a contribution in this study.

The second part is related to identifying loyalty aspects of the students, through their perception on coming back to the university, referring to the prospective stakeholders and the career service opportunities provided to the students. Figure 2 shows the framework of analysis adopted in this research. Eight different service quality dimensions are measured, but the hypothesis is tested only for the three of them. The framework shows that student demographics are just the input to show the heterogeneity of the respondents.

Several authors have investigated and used five SERQUAL dimensions (responsiveness, reliability, assurance, empathy and tangibles) in a higher education context (Calvo-Porrall *et al.*, 2013; Cuthbert, 1996; Enayati *et al.*, 2013; Shaari, 2014; Vaz and Mansori, 2013). However, as mentioned in Section 2, few authors such as Ali *et al.* (2016), Sultan and Yin Wong (2014) and Sarstedt *et al.* (2013) have mentioned the importance of image in the evaluation of service quality. The service quality perception can change with image and the culture/values that are followed or perceived at or around the location of the higher education. Ali *et al.* (2016) refer to various aspects of image of an educational institution and mention that academic attributes, media coverage, campus appearance, personal attention given to the students and familiarity of the organization can be some of the factors that relates to the image of the university. Therefore, the perception of quality can be based on the image of the university. Similar to the image dimension, culture/values are important personal traits of an individual (Aparicio *et al.*, 2016). As mentioned earlier, culture/values are ingrained in terms of attitudes and practices. Therefore, the service perception can be different among students. Therefore, the null hypotheses with two new service dimensions are developed first. The first null hypothesis relates image and service quality and the second null hypothesis relates to culture/value and service quality as given below.

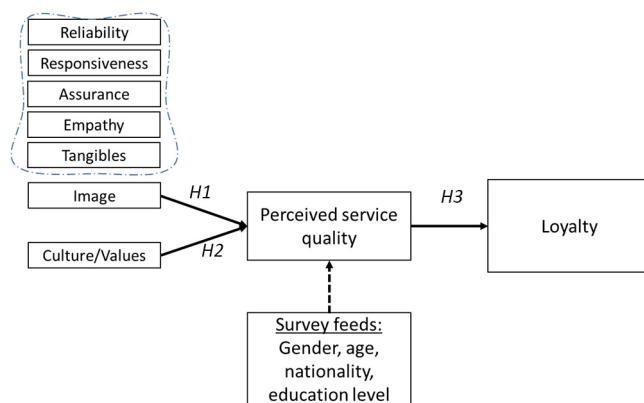


Figure 2. Theoretical framework

H01. There is no significant correlation between image and service quality in the higher education sector.

H02. There is no significant correlation between culture/value and service quality in the higher education sector.

For the next hypothesis, the relation between the service quality and loyalty is considered. The importance of loyalty is highlighted by many researchers (Hennig-Thurau *et al.*, 2001; Olorunniwo *et al.*, 2006; Al-Rousan and Mohamed, 2010). In Qatar's higher education sector, the link with the value part is very important considering the Qatar National Vision 2030. The vision expects the development of a modern and world-class system of education in which the best education is provided. The vision stipulates the education system respecting Qatari society's heritage and values (General Secretariat for Development Planning, Dec 2015).

Many researchers investigated and proved the positive and statistically significant impact of service quality and customers' satisfaction on loyalty (Dabholkar *et al.*, 2000; Helgesen and Nettet, 2007; Deng *et al.*, 2010; Ali *et al.*, 2016). As mentioned earlier, students judge their willingness to come back to their university and make a rational judgment on referral based on the experience that they have received, while they were going through the curriculum. Only a student exposed to a good service quality may be loyal to the university. Therefore, the third hypothesis is constructed to investigate service quality and students' loyalty in higher education:

H03. There is no significant correlation between student's loyalty behavior and service quality in the higher education sector.

3.2 Questionnaire design

The survey questionnaire followed the SERVQUAL tool and contained three sections. The first section was focused on the profile of the survey respondents. The second section was focused on university service quality dimensions to assess the respondents expectation and perception of service quality: (questions 1-5 for culture/value); (questions 6-10 for image); (questions 11-14 for tangibles); (questions 15-17 for reliability); (questions 18-21 for responsiveness); (questions 22-25 for assurance); and (questions 26-29 for empathy). The third section was focused on the respondent's loyalty. As the student population is mostly composed of Arabic native speakers, an Arabic version of the questionnaire was also made available. This was expected to connect students to the exact meaning of the question. The questionnaire was piloted with some professors and selected graduate students from Master in Engineering Management Program.

3.3 Data collection

A mass email, upon the authorization from the university, was sent to the College of Engineering (CENG) students in the university to solicit responses. The CENG was chosen as it had not only a large pool of undergraduate programs, but it also started graduate programs (both masters and PhD) since 2010. An engineering student goes through all of the university services as with any student from other disciplines. Therefore, this supported randomness and mitigated bias. The participants were requested to rate the items in the questionnaire on a seven-point Likert-type scale that ranges from 1 indicating strong disagreement to 7 indicating strong agreement. The sample characteristics are discussed in Section 4.

4. Data analysis, results and discussions

The analysis of data, results and discussions based on the results are given below. This is to note that the results presented here are purely based on the responses obtained from the returned questionnaire survey.

4.1 Sample characteristics

At the time of survey, the university had a population of about 17,000; about 15,000 of them were at undergraduate level. Due to the ease in administration of the survey, only engineering college students (4,000) were chosen. The number of responses required for reasonable analysis assuming 95 per cent confidence interval and 5 per cent margin of error is 351. The survey was sent to all engineering program students and a total of 397 responses were found to be usable for the analysis. The details of respondents' profile are given in [Table I](#). The distribution of students in terms of gender, nationality and education level in the university is also given as a comparison to the responses.

4.1.1 Reliability of the instruments. The reliability of the items under the seven dimensions of service quality was analyzed using Cronbach's alpha coefficient. The coefficient ranged from 0.90 to 0.96 for service quality expectation dimensions, and 0.98 for overall service quality expectation. Similarly, the coefficient ranged from 0.87 to 0.95 for service quality perception dimension, and 0.98 for overall service quality perception. These values are above the acceptable Cronbach's alpha values of 0.7 mentioned by [Hair \(2006\)](#) and are in the range of excellent consistency (0.9-1.0) as mentioned by [George \(2011\)](#). This shows that the instrument is very reliable in providing consistent results.

4.1.2 GAP analysis. The gap analysis between perception and expectation is important to understand the opportunity to enhance quality. [Jackson et al. \(2011\)](#) mention that the gap exists when there is a comparison between what is experienced and what is the actual perceived experience. Various reasons that can lead to the gap between the perception and expectation are also given in [Parasuraman et al. \(1988\)](#).

The mean scores of gap analysis for the survey are given in [Table II](#). The highest gap score is seen for reliability and the lowest gap for culture/values. The negative gap indicates students having higher expectations on all fronts. 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 services as mentioned. The student responses indicate that there is some misalignment in terms of service timings, approach to service requirements, and the persistence in providing the right service. The

Profile	Parameters	Responses (%)	Distribution in university (%)
Gender	Female	85	70
	Male	15	30
Age	Less than 25	76	–
	25 years and Above	24	–
Nationality	Qatari	55.3	58
	Non-Qatari	44.7	42
Education level	Undergraduate	87.9	87.5
	Graduate	12.1	12.5

Table I.
Profile of the
respondents
($N = 397$)

Table II.
Gap analysis –
perceived service
quality level by
students

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

lowest value in culture/values may have resulted due to the composition of the students who share similar culture/values and language (Arab).

4.1.3 Hypothesis testing. The results from hypotheses testing are given below. Summary of the results for the chosen dimensions is given in [Table VII](#). The Pearson correlation coefficient is used for the acceptance/rejection of the hypothesis and regression analysis is used to assess the predictive power of tested dimensions.

4.1.3.1 H01 (image and service quality). The Pearson correlation coefficient (presented in [Table III](#)) between perceived image and perceived service quality is considered statistically significant at level 0.01. Therefore, *H01* is rejected. That means, in the studied institution, students perceive that image and service quality are closely related.

The regression analysis for predictive power of image dimension on perceived service quality given in [Table IV](#) shows the regression coefficient as 0.469. This means that 46.9 per cent of the variations in perceived service quality are explained by the predictor variable (image).

The model is significant at level 0.01 with an F-value of 349.163 indicating a significant relationship between image and perceived service quality, i.e. the image of an institution is important in evaluating service quality. Customers' expectations and evaluation of service quality are affected by branding and image of the institution, and sometimes the image can play the role of norms or expectations settler if the customers have no earlier experience dealing with the service provider. This view conforms with that of Sarstedt *et al.* (2013) who pointed to the importance of image in evaluating an institution because of its power on the perception an institute's name. This also conforms to the results arrived at by Sultan and Yin Wong (2012, 2013, 2014).

4.1.3.2 *H02* (culture/values and service quality). The correlation coefficient between culture/values and perceived service quality is considered statistically significant at level 0.01 (Table V). Therefore, *H02* is also rejected. That means, in the studied institution, students perceive that culture/values and service quality are closely related.

The regression analysis for predictive power of culture/values dimension on perceived service quality, given in Table VI, shows that 38.3 per cent of the variations in perceived service quality are explained by predictor variable (culture/value).

The model is considered significant at 0.01 level with F-value of 245.041 indicating a significant relationship between culture/value and perceived service quality. Shih (2006) mentions that culture does affect consumers' behavior. The author added that culture influences human life and consumer behavior through shaping values, belief and attitudes. Customers in different countries have different cultures and values, which results in different perceptions of quality of services. This finding also conforms to that of Carrillat *et al.* (2007), Ueltschy *et al.* (2007) and Witkowski and Wolfenbarger (2002).

4.1.3.3 *H03* (loyalty and service quality). The Pearson correlation coefficient between student's loyalty, service quality dimensions and perceived service quality are provided in Table VII. The results indicate that loyalty has a statistically significant positive correlation with the seven service dimensions of service quality and with perceived service quality.

Perceived service quality	Image	Table III. Image and perceived service quality descriptive correlation test
Pearson correlation	0.685	
Significance (2-tailed)	0.000	
N	397	

Model	R	R Squared	Adjusted R Squared	Std. Error of the Estimate	Table IV. Model summary of image and perceived service quality
1	0.685	0.469	0.468	0.78171	

Notes: Predictors: (Constant), Image; Dependent Variable: Perceived Service Quality

Perceived service quality	Culture/value	Table V. Culture/value and perceived service quality correlation test
Pearson correlation	0.619	
Significance (2-tailed)	0.000	
N	397	

This means that an enhancement in service quality perception and/or the perception of the seven dimensions will lead to an increase in loyalty. Therefore, *H03* is also rejected.

4.1.4 Discussion on findings. The research focused on image and culture/values dimensions in the education sector, likely done for the first time to assess the service quality in the education sector. Therefore, this contributes to the literature. Specifically, the study is done in Qatar's higher education context and in the largest national university.

The findings show that the perceptual difference is highest for the reliability dimension. This dimension refers to an institution's ability to perform the provided services accurately and dependently. With negative scores, it can be mentioned that the students look for dependable services for specific needs on certain academic issues. The academic support units such as counselling and academic support units, which exist in the university, would have to be more proactive and reach out to the students.

The study also shows the value of the image of an institution. Current students are the future ambassadors of the university. Therefore, engaging current students in activities that highlight the potential of the university management, facilities, and faculty is useful. Therefore, emphasis on image building with current students can enhance the reputation of the university. This type of activity may build up student loyalty for many years to come.

Based on the findings, it can be noted that measurement of service quality should be a continuous process either at the university level or at the national level. As the perception on service quality is related to its action on image building, it has to focus more on highlighting the achievements and uniqueness of the university. Offering market-based training, certifications, and graduate programs can also help the university build its image and loyalty. The study shows that reliability has the highest negative score. To provide a reliable service, the university can announce service timings, present key personnel to contact (or a student help desk for all student services), and communicate with students on the outcomes of the provided service. In most cases, expectations become higher when service receivers are not aware of the element of services that they should seek from a particular unit in the university. As most of the university students come with similar cultures and values, providing them the opportunity to interact and to participate in the university events and programs can help to boost perception on university services.

In terms of the body of knowledge, this study advances the research on service quality by verifying that not only the five main service quality dimensions, but other dimensions are equally important to understand the perceived value of service quality in an institution. There has been no current research encompassing these all dimensions, specifically related to the Qatar context.

5. Conclusions and recommendations

Delivery of service is important in the education sector, mainly due to the need to enhance its service in the face of competing choices that students have in higher education. Like commercial service-based organizations, educational institutes also face competition in terms of the programs they provide to the students. Therefore, to remain sustainable, institutions need to have a good understanding of service

Table VI.
Model summary of
culture/value and
perceived service
quality

Model	<i>R</i>	<i>R</i> square	Adjusted <i>R</i> square	Std. error of the estimate
1	0.619 ^a	0.383	0.381	0.84290

Notes: ^aPredictors: (Constant), culture/value; dependent variable: perceived service quality

	Loyalty	Stakeholder's perception of service quality
<i>Loyalty</i>		
Pearson correlation	1	
Significance (2-tailed)		
<i>N</i>	397	
<i>Perceived service quality</i>		
Pearson correlation	0.494**	505
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Empathy</i>		
Pearson correlation	0.461**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Culture/value</i>		
Pearson correlation	0.304**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Image</i>		
Pearson correlation	0.283**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Tangibles</i>		
Pearson correlation	0.277**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Reliability</i>		
Pearson correlation	0.351**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Responsiveness</i>		
Pearson correlation	0.454**	
Significance (2-tailed)	0.000	
<i>N</i>	397	
<i>Assurance</i>		
Pearson correlation	0.409**	
Significance (2-tailed)	0.000	
<i>N</i>	397	

Note: **correlation is significant at the 0.01 level

Table VII.
Pearson correlation with perceived service quality, service quality dimensions and student loyalty

perceptions and expectations. Such an understanding can help to enhance the level of service at all times.

In this paper, a model is developed to examine students' perception on service quality. It is shown that service quality offered by an education institution is impacted by service quality dimension such as image, culture/values, and loyalty. The paper reports the outcomes based on a survey conducted in a large university in Qatar. The analysis of survey responses shows that the students have a higher level of expectation on service quality for all the measured dimensions. The continuity or the reliability of service is one of the major factors that needs to be focused on by the institution.

Through the hypothesis testing, it is shown that image and culture/values have significant impacts on student expectations and perceptions of service quality. The study also shows that there is a significant positive association between the provided services quality and student loyalty: the higher the perceived quality level, the more loyal students the institution will end up having. The measurement instruments proposed here are reliable; therefore, the tools proposed in this study may be used for across-the-board evaluation of quality by higher authorities like the Ministry of Education in different campuses of universities in Qatar. Such an evaluation may provide some avenues to continuously increase the level of higher education sector in Qatar.

5.1 Limitations and future work

The exact numbers presented in the paper should be used with caution, as the response is limited to only 397 students. Although statistically significant, it is possible that the survey did not cover every aspect of student expectations or perceptions. Therefore, the research can be extended across different colleges within the university. This will help to validate the student perception from one college to another and will help to adopt best practices in delivering service quality.

The study can also be program-based or service-type-based (like various types of student services or academic services). Students in different programs may perceive service quality differently due to the size of the student population and other factors like composition of instructors in terms of number and expertise.

The cost of education in these institutions can also be studied to relate it with service quality. As we considered only one university, we did not consider price to be a factor. However, in multi-university studies, the relation between the cost and service quality can also be explored.

This study had a small number of alumni (existing graduate students) responses, but they were not assessed separately due to their small number. As the number of alumni and their perceptions on service quality can also be considered import factors, the study can be extended to assess alumni perception on service quality. The results from such a survey can also be compared with the perception of the existing students at the university.

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