

Saudi University Students' Perceptions of Service Quality in Higher Education

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Abstract

Higher education institutions (HEIs), like any other organizations, consider the customer experience to be an intrinsic component of their strategic plans, decision-making processes, and development. In the higher education (HE) context, the students are the customers and demand high service quality to inform their decisions. This article evaluates the perception of quality of service (QoS) in a HE setting from the perspective of students studying at King Khalid University (KKU) in the Kingdom of Saudi Arabia (KSA). A modified service quality (SERVQUAL) instrument is used to measure five constructs: tangibles, reliability, responsiveness, assurance, and empathy. The research also assesses whether there is a connection between the participants' responses and key demographic variables. Permission was granted to distribute 500 questionnaires to all the students in the selected college. Of these, 350 questionnaires were returned, and 298 were deemed useful. The data collected to assess perceptions of QoS was analyzed using SPSS, a t-test, and a cutoff point (3.4). The table of variance analysis and ETA square identified relationships between the participants' answers and the demographic variables. Evaluation of all the services was lower than predicted. The highest rated construct was assurance with mean (3.0116), responsiveness with mean (2.8465), tangibles with mean (2.7843), reliability with mean (2.6914), and empathy with mean (2.5558). There were statistically significant differences found in the students' evaluation for the first dimension (tangibles) associated with gender difference, with the average evaluation by male students being (2.9532), and the average evaluation by female students (2.6685); otherwise demographic characteristics had no statistically significant influence on students' evaluations.

Keywords: higher education (HE), King Khalid University (KKU), quality of service (QoS), (SERVQUAL) instrument, students

1. Introduction and Literature Review

Higher education (HE) is a rapidly expanding service industry with considerable and increasing exposure to globalization processes (Van Dammer, 2001; O'Neil & Plamer, 2004). HE is typically delivered at universities, academies, colleges, seminaries, and institutes of technology, and is viewed as vital to a nation's individual social and economic development (Mukhtar et al., 2015). Traditionally, the intention of HE was to advance knowledge and circulate new developments, promoting creativity, scientific inquiry and innovation (Escotet, 2012). Additionally, Fortino (2012) affirmed the preparation of students' minds is a primary objective of HE.

1.1 Role of HE

Although historically HE developed to address the fluctuating needs and operational challenges of society, today it is financial realities and changing demographics that drive the services offered on modern campuses. Consequently, Higher education institutions (HEIs) are increasingly interested in identifying and fulfilling students' expectations by measuring their perceptions of quality of service (QoS) (DeShields Jr, 2005). Undoubtedly, successful completion and enhancement of students' educational journeys are central concerns. Therefore, HEIs need to develop proactively to understand the constituents of student satisfaction in an environment characterized by competition (Yusoff et al., 2015).

To ensure their competitiveness, HE providers need to consistently attract more students, and then work to serve their needs and retain them. Currently, globalization is strongly affecting the HE industry. This has led to intensifying competition among HEIs as they adopt market-oriented strategies to differentiate themselves from their competitors and attract as many students as possible. Therefore, many studies have been conducted to

identify the factors influencing students' satisfaction with HE. The level of student satisfaction depends variously on educational experiences, services and facilities offered to students, as well as the different cultures and procedures that take place to support the learning process, and the type of university they are enrolled in.

Globally, countries acknowledge educational institutions as substantial players in national development. This results from the various roles played by educated people working in the sciences, and researching the development of the social-economic and political structures to enhance the lives of individuals, their families and the wider community. Thus, the HE system has an essential role to play in the country's general development, which includes comprehensive aspects like economic, social, and industrial progress. Further, education is a process that encourages the development of human abilities, skills and moral values, which in turn can upgrade standards of living as well as quality of life. Universities are responsible for providing a thorough education for students taking society's values into consideration.

1.2 Definition of Service

Defining services can be complex, and therefore, before attempting to measure QoS it is important to determine whether what is being delivered is a process or an act. Services can also be defined as value-creating activities offered to customers and simultaneously consumed and produced (Sapri et al., 2009). According to Lovelock (1983, 1991, 1994), these services can be grouped into three categories. First, services concerned with people-processing that require customers' presence, such as health care. Second, services of possession-processing that include duties performed on physical objects without customer intervention, such as auto repair. Third, information-based services, which are activities that create value related to data, such as banking services. In addition to these three key categories; service companies also offer eight other categories of complementary services, such as billing and payment. Parasuraman (1986) notes that there is consensus in the literature regarding the characteristics that distinguish between services and goods. Services are distinguished by four unique characteristics, namely, intangibles, damage, indivisibility and changeability.

According to Loony et al. (2003), services are activities or processes that are characterized by two central ideas, namely impalpability and concurrency. Lack of tangibility simply means the result of a service transaction is not a transfer of ownership, as would be the case with physical goods. Concurrency means that completion of the service requires the presence of the service provider, as well as the customer; both playing an active role. A study concluded by Johns (1999) concludes that the word service has great diversity of meaning. This brings about a lack of standardization, with the result that the evaluation of QoS can vary greatly from one case to another, even within the same organization (Berry et al., 1985). Therefore, Johns (1999) suggested that the notion of service should always be accompanied by an eligible word to clarify the meaning in which it is used, and that the context should be carefully illustrated.

1.3 HE as a Service

For the purposes of this study it is vital to remember that HEIs are both service organizations and educational ones. Consequently, they need to emphasize fulfillment of their customers' expectations. However, within the university environment, the fulfilment of customer expectations has rarely been explicitly specified as an aim (Navarro et al., 2005). Students, university employees, families and society as a whole can all be reasonably considered the university's customers. Today's HEIs are progressively viewing HE as a business-like service industry, beginning to concentrate more on fulfilling or even surpassing their students' needs. Oldfield and Baron (2000, p. 86), argued that HE can be seen as a "pure" service and for Hennig-Thurau et al. (2001, p. 332), educational services "come within the field of services marketing". However, the latter authors also draw attention to the elements of those educational services.

In view of the above, the measurement of QoS in HE is increasingly of great importance (Abdullah, 2006). Generally, attention to QoS increases customer satisfaction, stimulating an intention to return and encourage recommendations (Nadiri & Hussain, 2005). The HE sector is expected to realize the importance of improving services to generate a competitive advantage. The importance of quality in the service industry has attracted many researchers to test QoS measures within a wide range of settings; e.g., appliance repair, banking services, hotels, insurance, and long-distance telephone service (Parasuraman et al., 1985; Zeithaml et al., 1990). The debate continues with regard to how to effectively measure QoS (Cronin & Taylor, 1992, 1994; Parasuraman et al., 1988, 1991, 1994).

Most conceptual frameworks for measuring QoS rely on marketing concepts (Gummesson, 1991). These frameworks evaluate quality through customer perceptions (Grönroos, 1984), and customer expectations comprise a significant portion of these. According to Hennig-Thurau et al. (2001, p. 332), educational services "fall into the field of service marketing." Moreover, QoS cannot be measured without bias (Patterson & Johnson,

1993); however, since the 1990s, quality initiatives have resulted in a vast body of academic discourse, some focused on access to HE (Avdjieva & Wilson, 2002).

Universities are recognizing the need to adopt technologies to measure QoS, just as other organizations in the business sector do. Harvey stated in 2001 (p. 4) that “observations made by students institution-wide on the quality of their overall educational experience are an area of growing activity in HEIs around the world.” Today this statement is still valid and increasingly important, and the search for general satisfaction of students has been the focus of research in many studies (Postema & Markham, 2002; Tan & Kek, 2004; Lounsbury et al., 2005; Jurkowsitch et al., 2006). HEIs require a variety of information detailing the quality of their different academic and administrative services, so as to be able to prioritize resource allocation, and effectively promote marketing and promotion plans. This can include canvassing students, as the chief consumers of educational services (Hill, 1995; Darlaston-Jones et al., 2003; Lee & Tay, 2008). Researchers have questioned students systematically and rigorously on how satisfied they are with the academic and administrative services provided to them.

We can state that QoS is the main determinant of marketing strategies’ effectiveness in the context of HEIs. Indeed, perceived QoS can lead to favorable or unfavorable attitudes among students with regard to institutions (as found by Zeithaml et al. (1996) when analyzing service influences) and it may also affect “Word-of-Mouth Marketing (WOM marketing)”.

In order to evaluate the quality of education, student satisfaction has been used frequently to assess an institution’s ability to meet strategic needs is of the utmost importance (Cheng, 1990). Brown and Mazarol (2009) observed that if students have a positive image of a university, then they are likely to be satisfied with the institution, and thus their level of loyalty will be high. Moreover, retention is related to perseverance, and in this way Demaris and Kritsonis (2008) hypothesized that students’ overall satisfaction with the learning experience would result in their returning to the same college. Nevertheless, Oldfield and Barron (2000, p. 86) emphasize that “there is a tendency to view QoS in higher education from an organizational perspective.” They suggest that organizations should pay closer attention to students’ feedback.

Universities are capable of adapting their services to a specific degree once they know how their students view the services they provide. Thus, determining students’ opinions should ultimately have a positive impact on the QoS delivered. Rowley (1997) determined four major reasons for gathering student feedback: (1) to provide verifiable evidence that students have had an opportunity to make comments on their courses, and that this information is used to make improvements; (2) to encourage students to reflect as they learn; (3) to allow institutions to set standards and provide indicators that will contribute to bolstering the university’s reputation in the market; and (4) give students an opportunity to express their satisfaction or otherwise with their academic experience.

Student’s notes and comments can play a pivotal role in enhancing the quality of teaching in HEIs (Leckey & Neill, 2001), and according to Harvey (2003), student feedback can be defined as:

Students’ expressed opinions about the service they receive as students. This may include perceptions about learning and instruction, learning support facilities (such as libraries, computing facilities), the learning settings (lecture halls, laboratories, social spaces and university campuses), support facilities (dining rooms, student residency, health facilities, student services) and the external aspects of being a student (such as financial affairs and infrastructure of transportation) (p. 3).

Universities mainly collect information from students in two forms; i.e., internal information as guidance for improvements, and external information for prospective students and other stakeholders, including accountability and compliance requirements.

Students’ perceptions can vary and be collected in relation to different aspects of the HE setting, with data most commonly collected via some form of feedback survey. This differs from other professional services in terms of methods. Education services play a pivotal role in student life, and students require enormous motivation and should be of sufficient intellectual quality to benefit from HE. This makes QoS a complex, multifarious concept in this context, resulting in a challenge determining quality definitively (Harvey & Green, 1993). Consequently, consensus regarding “the most appropriate manner to define and measure QoS” (Clewes, 2003, p. 71) does not yet exist. All stakeholders in HE (e.g., students, government and professional agencies) have their own unique viewpoints and expectations.

1.4 Measurements of QoS

When QoS requires improvement, it needs to be evaluated and measured in a trustworthy manner. Parasuraman

et al. (1988, p. 15) defined QoS as a “global judgment or attitude pertaining to general excellence or service superiority” and envisioned the customer’s evaluation of overall service quality by applying Oliver’s (1980) disconfirmation model to evaluate the gap between expectations and perception (Gap Model) for service performance levels. Moreover, they suggested that total QoS for each case can be determined by a measurement scale called “SERVQUAL” utilizing five general dimensions: (1) tangibles—the physical surroundings represented by things (for example, interior design) and subjects (for example, employee appearance); (2) reliability—the ability of the service provider to provide accurate and reliable services; (3) responsiveness—the company’s willingness to help its customers by providing fast and effective service performance; (4) assurance—various features that provide confidence to customers (such as knowledge of specific customer service; polite and trustworthy behavior from employees); and (5) empathy—the service the company is prepared to render for each customer along with personal service (Yeo, 2009; Oliveira & Ferreira, 2009).

SERVQUAL has become a widely used QoS measurement scale since its development by Parasuraman et al. (1985). It has also been used to measure QoS in business schools (Carman, 1990), banking, dry cleaning, and fast food services (Cronin & Taylor, 1992) among other institutions. SERVQUAL reliability across different domains is subject to controversy. For example, Carman (1990) analyzed SERVQUAL’s five dimensions by adding features associated with different situations; i.e., the fact that the failure ratio is higher for colleges and universities than for businesses or government organizations (Cameron & Tschirhart, 1992). When measuring QoS in HE, it is important to study the meaning of QoS as it pertains to the situation being studied. In the literature, analyses of the practical basis for measuring QoS based on definitions of quality in HE (Lagrosen et al., 2004), and associated dimensions of QoS (Joseph & Joseph, 1997; Lagrosen et al., 2004; Owlia & Aspinwall, 1996) have been performed (Ford et al., 1999; Rowley, 1997). Currently there is no consensus regarding “the best way to determine and measure quality of service” (Clewes, 2003, p. 71). Every stakeholder in HE (e.g., students, government, and professional agencies) holds a different viewpoint regarding quality based on their individual needs. This paper represents the experiences and recommendations made by a single group; students.

A number of previous research studies (see, for example, Galloway, 1998; Banwet & Datta, 2003) have examined students’ perceptions of quality and level of satisfaction used the SERVQUAL framework (Parasuraman et al., 1988). However, SERVQUAL has been widely criticized because it asks only for perceptions of performance in relation to a range of service aspects (in addition to importance), and therefore fails to capture data related to expectations. Proposing an alternative to SERVQUAL, Douglas et al. (2006) developed a “service product package” method to review student satisfaction in HE, taking into account 12 dimensions—the professional and comfort level in the environment, student assessments and learning experiences, the classroom environment, and the lectures and tutorials that facilitate goods, textbooks, tuition fees, student support facilities, business procedures, relationship with faculty, knowledge, response from faculty, employee assistance, feedback, and class sizes. These dimensions are arranged according to four variables: physical goods, facilitating goods, implicit services, and express service. Unlike SERVQUAL, the Service Product Package method presents a more comprehensive set of variables that affect student satisfaction in HE (Jurkowsch et al., 2006).

1.5 Review of Research on QoS in HE

A review of research in this area reveals that educational institutions around the world have collected students’ opinions regarding all aspects of academic life to improve QoS. In the United Kingdom (UK), HE students were considered the University’s “primary clients” (Crawford, 1991). Reports on the economic profile of HEIs in the UK discovered that although the primary mission of HEIs is teaching and research, they collect 25% of revenue from additional sources, such as catering and conference fees.

Also in the UK, Galloway (1998) investigated the role of college management at one university to establish students’ perceptions of QoS. It was found that college management directly affects students and their perceptions of the quality of the entire institution. The performance of employees also directly influenced faculty members and technicians within the college. Front-line staff also had a direct influence on students, prospective students, and other customers. The key predictors of quality for students were found to be the office having a professional appearance. Employees were smartly attired and never too busy to provide help. Moreover, business hours were considered appropriate.

Despite differences across the European education system, levels of satisfaction among students remained fairly stable. Communication with fellow students, course content, learning equipment, library storage, teaching quality, and teaching and learning materials have been found to have the highest levels of influence on levels of satisfaction among students (García-Aracil, 2009). In Finland, research and education facilities, and fundamental

university activities have a greater impact on overall student and employee satisfaction levels than supportive facilities (Kärnä & Julin, 2015).

In the Spanish university system, faculty, teaching methods, and course management have a major impact on levels of satisfaction among students (Navarro et al., 2005), with some being affected by the university's public image (Palacio et al., 2002). The effect of a university's public image can be either direct or indirect (Alvis & Raposo, 2006; Weerasinghe & Dedunu, 2017). In the Norwegian university system, the institution's reputation, the attractiveness of the host university city and the quality of the facilities strongly affects levels of satisfaction among students (Hanssen & Solvoll, 2015).

The evidence suggests students' educational achievement is heavily based on the physical school facility available to them, its age, the condition and design of the school. School facilities played a major role in supporting instruction and formulating students' learning processes both inside and outside the school environment. School buildings and infrastructure to support efficient teaching and learning require considerable investment of public funds, and careful development and maintenance by administrators.

According to Wilkins and Balakrishnan (2013), in the United Arab Emirates (UAE), there is a remarkable correlation between levels of student satisfaction and the quality of lecturers, the availability of resources and the efficient use of technology. In the Palestinian university system, academic programs were found to greatly influence students' level of satisfaction (Kanan & Baker, 2006).

Hill (1995) produced an interesting study, presenting expectations and perceptions of university services among a group of undergraduate students at a UK university. Hill concluded that students' expectations were stable during their college experiences, and suggested they were formed before their arrival at the university. Furthermore, students' perceptions of the service they received became less stable over time. He suggested that students' expectations are ideally measured before they enter university and not during their stay. Benders et al. (1999) also found it appropriate to only measure expectations at the beginning of their university studies, considering that expectations at this point are ambiguous at best, as they are based on unrealistic comparisons with high school experiences. When looking at these conclusions, and as discussed previously, we focused our research on perceptions.

According to Cook's (1997) study conducted with a group of 182 students in the field of nursing at a UK university, students perceive the following factors to be good quality drivers: a) faculty member related factors, b) study factors (library and private study facilities, computer access, favorable study environments), c) general well-being factors, d) practice factors, and e) extra-curricular activity factors. He concluded that the most important factor affecting the perception of service pertains to interactions between faculty members and students, and did not explicitly mention the impact of how administrative staff communicate with students and teachers. Berger and Milem (1999) investigated aspects affecting the survival of undergraduates in a private institution in the Netherlands in a sample consisting of 718 students. They focused specifically on the social and academic inclusion of students, and concluded that those students who have had a more successful integration process are those influenced by their home background (factors that the institution cannot control sufficiently).

Elsewhere, Benders et al. (1999) conducted a study at an Australian university employing a focus group methodology when interviewing 145 undergraduate students. They concentrated their research on students' perceptions of university services, and on the successes and obstacles they perceived during their college experience, excluding academic experience. They concluded that bureaucratic issues and miscommunication can adversely affect students' beliefs about the quality of university services. Tan and Kek (2004) proposed examining the overall satisfaction of students attending the engineering college of two universities in Singapore. A questionnaire was created on the basis of the SERVQUAL tool, and 958 usable returns were received (497 from University A, and 461 from University B) to compare proposals. The findings revealed that students at both universities expected a higher level of service regarding the availability of channels through which to transfer their ideas to management and the willingness of universities to consider their views (communication problems). In Brazil, Walter (2006) identified key factors associated with student loyalty and satisfaction at a business program at the Catholic University of Paraná. The study found a number of uncontrollable variables that affected levels of satisfaction, such as students' and families' economic level, and their associated social status. Mostafa (2007) presented a technical study based on a sample of 508 students from four private universities in Egypt, using the SERVQUAL instrument with an Importance of Performance (IP) analysis to measure QoS. His methodology focused heavily on student perceptions and included a factor analysis, in which he concluded that the requirements of the five dimensions set out in the SERVQUAL tool had not been achieved. Instead, he obtained three factors or dimensions of quality: (1) actual, service-oriented procedures associated with student

registration, payment of fees, and registration, (2) university employees directing their service toward the student body, and (3) physical evidence concerning the importance of the physical service environment.

The prior literature shows that ensuring QoS in HE is a concern for all countries and HEIs worldwide. This study adds to this data, being one of only a few addressing this issue in the Kingdom of Saudi Arabia (KSA). It is the first such research to be conducted at KKU. It uses a similar instrument to studies conducted by Mostafa (2007) and Kake (2004).

2. Study Context: King Khalid University (KKU)

In recent years, the Saudi Ministry of Higher Education has established new universities to meet the high demand for HE. Among these new HEIs is KKU, located in Abha city, one of the most beautiful cities in KSA. The city of Abha is surrounded by fertile plains, mountains, and valleys. It is characterized by a temperate climate, experiences torrential rainfall, and is surrounded by thick forest which attracts tourists every summer. KKU was founded by merging two previously established ancient university campuses (Information Center, 2005), and offers a number of different majors across various colleges.

The university itself is considered a charming and comfortable environment for researchers and students to work in. It has a major impact on the local community, and also plays a role in education more generally within the city (Higher Education in Saudi Arabia, 2019). Before 2000 graduate programs were not offered at KKU, but now several colleges offer programs, including the College of Education, College of Sharia, and the College of Arts. KKU is recognized as an innovative academic institution relative to other Saudi universities, and is active in both postgraduate and research. In 2002, the number of undergraduates and graduate students reached 13,055, while the ratio of teachers to students was 1:29 (Al-Hamid, 2002).

KKU has fifteen colleges. It also has six research centers and three academic societies. Like all other Saudi universities, KKU is managed by a chancellor, a vice-chancellor and an additional vice-chancellor for graduate studies and research. There are also several supporting deanships, including one for educational affairs and one for scientific research (Ministry of Education, 2019).

There has been formal acknowledgement by the university that it requires a strategy, vision and mission as set out below:

- **Strategy:** KKU is a state-owned University in the KSA that strives to improve the quality of teaching, research, public services and internal economic development. The university has already formulated and published its unique vision, mission, and overall objectives.
- **Vision:** The university seeks a regional and global leadership role, aiming to achieve excellence in the field of knowledge and research, and contribute to a more effective and competitive society.
- **Mission:** To provide high-quality education and innovative research within an academic environment, so as to provide valuable and useful services to society, while applying the most advanced learning technologies.

KKU's strategic objectives are as follows:

- 1) To accomplish the KSA's aspirations regarding the development of valuable and useful knowledge that contributes to supporting both religious and national objectives.
- 2) To accomplish a high level of knowledge, research and services for the university.
- 3) To achieve comprehensive quality standards and obtain accreditation for programs and institutions according to standards approved locally and globally.
- 4) To create an appropriate academic environment to attract distinguished faculty members to develop their professional knowledge and skills.
- 5) To enhance and spread technology contributing to the knowledge society.
- 6) To ensure balanced outputs from the university according to the needs of the labor market.
- 7) To provide a creative learning environment for students and support communication with graduates.
- 8) To ensure communication between the university and other research centers regionally and internationally.

In terms of the wider Saudi context, at the present time the Saudi government is aiming to develop new ways to finance HE to help expand education services and meet increased demand. One way to do this includes giving universities and other HEIs the opportunity to conduct paid scientific studies and engage in consultation

processes for other Saudi agencies. Almost 25% of external funding goes directly into the budget of the HEI concerned. It is also permitted for universities and other HEIs to accept donations and gifts from individuals and organizations, provided their motives do not contradict the university's mission and objectives. Thus, universities now have a number of stakeholders aside from students.

3. Methodology

The research sample comprises students studying at one college at KKU, located in the southern region of the KSA. Students were selected in accordance with a suitable non-probability sampling method (Aaker et al., 1995). The administration at the university announced the purpose of the study, and after gaining permission, 500 questionnaires were distributed to the students at the college. Of these, 350 questionnaires were returned, of which 298 were deemed usable. The questionnaire survey took place in April 2020.

The questionnaire includes two sections. Section I collects demographics such as gender, age, year of education, and level of education. Section II is the SERVQUAL survey tool. The original SERVQUAL tool was designed to evaluate organizations and companies in the services domain (Parasuraman et al., 1988; Aghamolaei & Zare, 2008). However, the version used incorporated changes proposed by Aghamolaei and Zare (2008) to make it applicable to the academic environment. The questionnaire consists of 39 elements, representing five dimensions of QoS namely tangibles (5 elements), reliability (5 elements), responsiveness (3 elements), assurance (4 elements), and empathy (4 elements). A 5-point Likert type scale was used, ranging from Strongly Disagree (1) to Strongly Agree (5). The SERVQUAL instrument was reviewed with a pilot sample of 50 respondents.

4. Data Analysis and Results

As mentioned above, this article seeks to:

- Assess students' perceptions of QoS based on a modified service quality (SERVQUAL) instrument that measures five constructs: tangibles, reliability, responsiveness, assurance, and empathy.
- It also aims to ascertain whether there is any relationship between participants' answers and demographic variables?

To achieve the research objectives, the researcher employed the following statistical methods:

- 1) T-test for one sample, with a cutoff point (3.4), assessing perceptions of QoS based on a modified service quality (SERVQUAL) instrument to measure five constructs: tangibles, reliability, responsiveness, assurance, and empathy.
- 2) A table of variance analysis and the ETA square to establish if there are any relationships between participants answers and demographic variables.

4.1 Presentation of Findings

Table 1. One-sample statistics for perceptions of QoS

Items	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Modern and up to date equipment	258	2.90	1.247	.078			
Visual appeal of physical facilities	258	2.34	1.308	.081	-13.052-	257	.000
Neat and well-dressed staff	258	2.72	1.265	.079	-8.571-	257	.000
Visual appeal of materials	258	2.49	1.309	.082	-11.185-	257	.000
Convenient operating hours	258	2.76	1.300	.081	-7.861-	257	.000
Staff are disciplined	258	2.98	1.317	.082	-5.067-	257	.000
Visually attractive and comfortable physical facilities	258	2.55	1.320	.082	-10.292-	257	.000
Good directional signs	258	3.07	1.368	.085	-3.878-	257	.000
Convenience of university location for you	258	3.26	1.631	.102	-1.382-	257	.168
Well-developed infrastructure (including Wi-Fi)	258	2.49	1.456	.091	-10.017-	257	.000
Adequate seating arrangement	258	2.32	1.398	.087	-12.438-	257	.000
Well air-conditioned environment	258	3.22	1.458	.091	-1.973-	257	.050
Clean looking environment	258	3.49	1.306	.081	1.087	257	.278
Good services at the library	258	3.11	1.354	.084	-3.458-	257	.001
Enough private desks	258	2.21	1.420	.088	-13.514-	257	.000
Staff respond promptly to students	258	2.67	1.328	.083	-8.825-	257	.000
Staff always help students	258	2.83	1.289	.080	-7.157-	257	.000
Staff respond promptly to queries	258	2.81	1.321	.082	-7.221-	257	.000
Speed and ease of admissions (procedures)	258	2.93	1.382	.086	-5.460-	257	.000
Faculty members work well to improve performance	258	3.00	1.314	.082	-4.888-	257	.000
Students trust staff	258	2.61	1.281	.080	-9.927-	257	.000
Students feel safe when receiving services	258	2.98	1.329	.083	-5.022-	257	.000
Staff are courteous to students	258	3.06	1.272	.079	-4.315-	257	.000
Professors have the knowledge to answer students' questions	258	3.27	1.304	.081	-1.585-	257	.114
Employees have the knowledge to answer students' questions	258	3.05	1.259	.078	-4.412-	257	.000
Employees are polite to students	258	3.09	1.287	.080	-3.831-	257	.000
Providing services as promised	258	2.87	1.330	.083	-6.374-	257	.000
Sincere interest of personnel in solving problems	258	2.83	1.250	.078	-7.279-	257	.000
Carrying out services right first time	258	2.69	1.388	.086	-8.217-	257	.000
Providing services at appointment time	258	2.74	1.309	.081	-8.145-	257	.000
Stating when services will be performed	258	2.78	1.330	.083	-7.501-	257	.000
Commitment to providing healthy and varied food choices	258	2.34	1.390	.087	-12.195-	257	.000
Sincere interest in solving student problems at the university	258	2.53	1.318	.082	-10.593-	257	.000
Persistence in performing services correctly	258	2.74	1.252	.078	-8.411-	257	.000
Give individual attention	258	2.38	1.291	.080	-12.738-	257	.000
Dealing with students with care and diligence	258	2.58	1.205	.075	-10.967-	257	.000
Supporting students with their talents and interests	258	2.83	1.377	.086	-6.702-	257	.000
Understanding the specific needs of students	258	2.49	1.264	.079	-11.537-	257	.000
Offering comfortable and fitting schedules for students	258	2.51	1.439	.090	-9.957-	257	.000
Tangibles	258	2.7943	.97099	.06045	-10.019-	257	.000
Responsiveness	258	2.8465	1.13522	.07068	-7.831-	257	.000
Assurance	258	3.0116	1.08356	.06746	-5.757-	257	.000
Reliability	258	2.6914	1.10914	.06905	-10.262-	257	.000
Empathy	258	2.5558	1.13374	.07058	-11.960-	257	.000
Total	258	2.7827	.94782	.05901	-10.460-	257	.000

It is apparent from the previous table that the evaluations for all the services at the university were below the expected level, as the experimental average for all items was below the cut-off point (3.4), and the differences reported were statistically significant. The order of the service evaluation terms from the students' point of view, in light of the arithmetic mean for degree of evaluation was as follows.

Table 2. The order of tangible items in light of the arithmetic mean

Items	N	Mean	Std. Deviation
Clean looking environment	258	3.49	1.306
Convenience of university location for you	258	3.26	1.631
Well air-conditioned environment	258	3.22	1.458
Good services at the library	258	3.11	1.354
Clear directional signs	258	3.07	1.368
Staff are disciplined	258	2.98	1.317
Modern and up to date equipment	258	2.9	1.247
Convenient operating hours	258	2.76	1.3
Neat and well-dressed staff	258	2.72	1.265
Visually attractive and comfortable physical facilities	258	2.55	1.32
Visual appeal of materials	258	2.49	1.309
Well-developed infrastructure (including Wi-Fi)	258	2.49	1.456
Visual appeal of physical facilities	258	2.34	1.308
Adequate seating arrangement	258	2.32	1.398
Enough private desks	258	2.21	1.42

It is apparent from the previous table that the evaluation of Tangibles at the university was lower than expected.

Table 3. The order of responsiveness items in light of the arithmetic mean

Items	N	Mean	Std. Deviation
Faculty members work well to improve performance	258	3	1.314
Speed and ease of admissions (procedures)	258	2.93	1.382
Staff always help students	258	2.83	1.289
Staff respond promptly to queries	258	2.81	1.321
Staff give prompt service to students	258	2.67	1.328

It is clear from the previous table that the evaluation of responsiveness at the university was also below that predicted.

Table 4. The order of assurance items in light of the arithmetic mean

Items	N	Mean	Std. Deviation
Professors have the knowledge to answer students' questions	258	3.27	1.304
Employees to polite with students	258	3.09	1.287
Staff are courteous to students	258	3.06	1.272
Employees have the knowledge to answer students' questions	258	3.05	1.259
Students feel safe when receiving services	258	2.98	1.329
Students trust staff	258	2.61	1.281

It is apparent from the previous table that the evaluation of assurance at the university was also less than expected level.

Table 5. The order of reliability items in light of the arithmetic mean

Items	N	Mean	Std. Deviation
Providing service as promised	258	2.87	1.33
Sincere interest of personnel in solving problems	258	2.83	1.25
Telling when services will be performed	258	2.78	1.33
Providing services at appointment times	258	2.74	1.309
Persistence in performing services correctly	258	2.74	1.252
Carrying out services right first time	258	2.69	1.388
Sincere interest in solving student problems at the university	258	2.53	1.318
Commitment to providing healthy and varied food	258	2.34	1.39

The above table illustrates that the evaluation of reliability at the university was below the expected level.

Table 6. The order of empathy items in light of the arithmetic mean

Items	N	Mean	Std. Deviation
Supporting students with their talents and interests	258	2.83	1.377
Dealing with students with care and diligence	258	2.58	1.205
Offering comfortable and fitting schedules for students	258	2.51	1.439
Understanding the specific needs of students	258	2.49	1.264
Give individual attention	258	2.38	1.291

It is clear from the previous table that the evaluation of empathy at the university was less than anticipated.

Table 7. The order of all items in light of the arithmetic mean

Items	Mean	Std. Deviation
1. Clean looking environment	3.49	1.306
2. Professors have the knowledge to answer students' questions	3.27	1.304
3. Convenience of university location for you	3.26	1.631
4. Well air-conditioned environment	3.22	1.458
5. Good services at the library	3.11	1.354
6. Employees are polite to students	3.09	1.287
7. Good directional signs	3.07	1.368
8. Staff are courteous to students	3.06	1.272
9. Employees have the knowledge to answer students' questions	3.05	1.259
10. Faculty members work well to improve performance	3	1.314
11. Staff are disciplined	2.98	1.317
12. Students feel safe when receiving services	2.98	1.329
13. Speed and ease of admissions (procedures)	2.93	1.382
14. Modern and up to date equipment	2.9	1.247
15. Providing services as promised	2.87	1.33
16. Staff always help students	2.83	1.289
17. Sincere interest of personnel in solving problems	2.83	1.25
18. Supporting students with their talents and interests	2.83	1.377
19. Staff respond promptly to queries	2.81	1.321
20. Stating when services will be performed	2.78	1.33
21. Convenient operating hours	2.76	1.3
22. Providing services at appointment times	2.74	1.309
23. Persistence in performing services correctly	2.74	1.252
24. Neat and well-dressed staff	2.72	1.265
25. Carrying out services right first time	2.69	1.388
26. Staff give prompt service to students	2.67	1.328
27. Students trust staff	2.61	1.281
28. Dealing with students with care and diligence	2.58	1.205
29. Visually attractive and comfortable physical facilities	2.55	1.32
30. Sincere interest in solving student problems at the university	2.53	1.318
31. Offering comfortable and fit schedules for students	2.51	1.439
32. Visual appeal of materials	2.49	1.309
33. Well-developed infrastructure (including Wi-Fi)	2.49	1.456
34. Understanding the specific needs of students	2.49	1.264
35. Give individual attention	2.38	1.291
36. Visual appeal of physical facilities	2.34	1.308
37. Commitment to providing healthy and varied food	2.34	1.39
38. Adequate seating arrangements	2.32	1.398
39. Enough private desks	2.21	1.42

Table 8. The order of constructs in light of the arithmetic mean

Constructs	Mean
Assurance	3.0116
Responsiveness	2.8465
Tangibles	2.7943
Reliability	2.6914
Empathy	2.5558

Note. Results: Tangibles Responsiveness Assurance Reliability Empathy total * Gender.

As shown in the previous table, the highest rated construct is assurance with a mean of (3.0116), followed by responsiveness with a mean of (2.8465), tangibles with a mean of (2.7843), reliability with a mean of (2.6914), and then empathy with a mean of (2.5558).

The results of the table of variance analysis and the ETA square analysis were collated, as set out below, to establish any relationships between the participants’ answers and demographic variables.

Table 9. Descriptive statistics for constructs in light of gender

Gender		Tangibles	Responsiveness	Assurance	Reliability	Empathy
Male	Mean	2.9532	2.8667	3.1360	2.8344	2.6351
	N	114	114	114	114	114
	Std. Deviation	.99793	1.17697	1.05725	1.12340	1.13831
Female	Mean	2.6685	2.8306	2.9132	2.5781	2.4931
	N	144	144	144	144	144
	Std. Deviation	.93350	1.10493	1.09760	1.08831	1.13011
Total	Mean	2.7943	2.8465	3.0116	2.6914	2.5558
	N	258	258	258	258	258
	Std. Deviation	.97099	1.13522	1.08356	1.10914	1.13374

Table 10. The results of ANOVA table for constructs in light of gender

Variables	Source of variance		Sum of Squares	df	Mean Square	F	Sig.
Tangibles * Gender	Between Groups	(Combined)	5.157	1	5.157	5.567	.019
	Within Groups		237.146	256	.926	.926	
	Total		242.303	257			
Responsiveness * Gender	Between Groups	(Combined)	.083	1	.083	.064	.800
	Within Groups		331.119	256	1.293	1.293	
	Total		331.202	257			
Assurance * Gender	Between Groups	(Combined)	3.158	1	3.158	2.707	.101
	Within Groups		298.585	256	1.166	1.166	
	Total		301.743	257			
Reliability * Gender	Between Groups	(Combined)	4.180	1	4.180	3.430	.065
	Within Groups		311.980	256	1.219	1.219	
	Total		316.160	257			
Empathy * Gender	Between Groups	(Combined)	1.284	1	1.284	.999	.319
	Within Groups		329.053	256	1.285	1.285	
	Total		330.336	257			
Total * Gender	Between Groups	(Combined)	3.057	1	3.057	3.435	.065
	Within Groups		227.824	256	.890	.890	
	Total		230.881	257			

The evidence from the previous table depicts:

- 1) Statistically significant differences in the degree of student evaluations for the first dimension (Tangibles) associated with gender difference, and in favor of males; whereby the average evaluation of male students was (2.9532), while the average evaluation of female students was (2.6685).
- 2) There are no statistically significant differences in the degree of students’ evaluation of the remaining dimensions.

Table 11. Measures of association

Variables * Gender	Eta	Eta Squared
Tangibles * Gender	.146	.021
Responsiveness * Gender	.016	.000
Assurance * Gender	.102	.010
Reliability * Gender	.115	.013
Empathy * Gender	.062	.004
Total * Gender	.115	.013

It is evident from the previous table that the association between the dimensions of the students’ evaluation of services at the university and the gender of student is weak, whereas the value of the ETA square was 0.02 or less (Cohen determined the levels of ETA square to be 0.02 weak, 0.05 medium, 0.15 high).

Table 12. Descriptive statistics for constructs in light of age

Age		Tangibles	Responsiveness	Assurance	Reliability	Empathy
18 years	Mean	3.3333	3.0000	2.9583	2.5000	2.5000
	N	4	4	4	4	4
	Std. Deviation	.83799	.81650	1.26473	1.41789	1.19443
19 years	Mean	2.8143	2.9786	3.1369	2.8616	2.8429
	N	28	28	28	28	28
	Std. Deviation	1.03078	.97425	1.15831	1.05153	.99086
20 years	Mean	2.7565	2.6565	2.8551	2.5571	2.4652
	N	46	46	46	46	46
	Std. Deviation	.93579	1.08539	1.02536	.92972	1.09224
21 years or more	Mean	2.7889	2.8711	3.0333	2.7035	2.5356
	N	180	180	180	180	180
	Std. Deviation	.97699	1.17756	1.08763	1.15687	1.16536
Total	Mean	2.7943	2.8465	3.0116	2.6914	2.5558
	N	258	258	258	258	258
	Std. Deviation	.97099	1.13522	1.08356	1.10914	1.13374

Note. Results: Tangibles Responsiveness Assurance Reliability Empathy total * Age.

Table 13. The results of the ANOVA table for constructs in light of age

			Sum of Squares	df	Mean Square	F	Sig.
Tangibles * Age	Between Groups	(Combined)	1.244	3	.415	.437	.727
	Within Groups		241.058	254	.949		
	Total		242.303	257			
Responsiveness * Age	Between Groups	(Combined)	2.352	3	.784	.606	.612
	Within Groups		328.850	254	1.295		
	Total		331.202	257			
Assurance * Age	Between Groups	(Combined)	1.663	3	.554	.469	.704
	Within Groups		300.080	254	1.181		
	Total		301.743	257			
Reliability * Age	Between Groups	(Combined)	1.814	3	.605	.489	.690
	Within Groups		314.346	254	1.238		
	Total		316.160	257			
Empathy * Age	Between Groups	(Combined)	2.771	3	.924	.716	.543
	Within Groups		327.565	254	1.290		
	Total		330.336	257			
Total * Age	Between Groups	(Combined)	.976	3	.325	.360	.782
	Within Groups		229.905	254	.905		
	Total		230.881	257			

It is evident from the previous table that there are no statistically significant differences in the degree of students’ evaluation of all the dimensions in light of the students’ ages.

Table 14. Measures of association

	Eta	Eta Squared
Tangibles * Age	.072	.005
Responsiveness * Age	.084	.007
Assurance * Age	.074	.006
Reliability * Age	.076	.006
Empathy * Age	.092	.008
Total * Age	.065	.004

It is clear from the previous table that the association between the dimensions of students' evaluation of services at the university and their age is weak, as the value of the ETA square was 0.02 or less.

Table 15. Descriptive statistics of constructs in light of year of education

Year of Education		Tangibles	Responsiveness	Assurance	Reliability	Empathy
First year	Mean	2.9753	3.0222	3.2901	2.8935	2.8519
	N	27	27	27	27	27
	Std. Deviation	1.03728	1.02181	1.15340	1.10761	1.15104
Second year	Mean	2.7803	2.7409	2.9545	2.5455	2.4136
	N	44	44	44	44	44
	Std. Deviation	.92293	1.13677	1.08213	.96678	1.04182
Third year	Mean	2.7485	2.8000	2.9591	2.6864	2.5509
	N	57	57	57	57	57
	Std. Deviation	.93859	1.09675	.99666	1.06201	1.07788
Fourth year	Mean	2.7222	2.7458	2.9687	2.5911	2.2833
	N	48	48	48	48	48
	Std. Deviation	1.03812	1.20406	1.12707	1.17480	1.18561
Fifth year and above	Mean	2.8163	2.9366	3.0122	2.7652	2.6976
	N	82	82	82	82	82
	Std. Deviation	.97128	1.16741	1.10547	1.18152	1.16333
Total	Mean	2.7943	2.8465	3.0116	2.6914	2.5558
	N	258	258	258	258	258
	Std. Deviation	.97099	1.13522	1.08356	1.10914	1.13374

Note. Results: Tangibles Responsiveness Assurance Reliability Empathy total *year of Education.

Table 16. The results of ANOVA table for constructs in light of year of education

			Sum of Squares	df	Mean Square	F	Sig.
Tangibles * Year of Education	Between Groups	(Combined)	1.302	3	.342	.342	.850
	Within Groups		241.001	253	.953		
	Total		242.303	257			
Responsiveness * Year of Education	Between Groups	(Combined)	2.599	3	.500	.500	.736
	Within Groups		328.602	253	1.299		
	Total		331.202	257			
Assurance * Year of Education	Between Groups	(Combined)	2.483	3	.525	.525	.718
	Within Groups		299.260	253	1.183		
	Total		301.743	257			
Reliability * Year of Education	Between Groups	(Combined)	2.971	3	.600	.600	.663
	Within Groups		313.189	253	1.238		
	Total		316.160	257			
Empathy * Year of Education	Between Groups	(Combined)	8.468	3	1.664	1.664	.159
	Within Groups		321.868	253	1.272		
	Total		330.336	257			
Total * Year of Education	Between Groups	(Combined)	2.298	.3	.636	.636	.637
	Within Groups		228.583	253	.903		
	Total		230.881	257			

The previous table shows no statistically significant differences in the degree of students' evaluation of the all dimensions in light of students' year of education.

Table 17. Measures of association

	Eta	Eta Squared
Tangibles * Year of Education	.073	.005
Responsiveness * Year of Education	.089	.008
Assurance * Year of Education	.091	.008
Reliability * Year of Education	.097	.009
Empathy * Year of Education	.160	.026
Total * Year of Education	.100	.010

It is clear from the previous table that any association between the dimensions of student evaluation of services at the university and year of education is weak, as the value of the ETA square was 0.02 or less.

Table 18. Descriptive statistics of constructs in light of education level

Education level		Tangibles	Responsiveness	Assurance	Reliability	Empathy
Undergraduate	Mean	2.7837	2.8127	2.9796	2.6487	2.5122
	N	237	237	237	237	237
	Std. Deviation	.98123	1.12597	1.07397	1.08645	1.12162
Postgraduate	Mean	2.7238	2.8286	2.7619	2.7679	2.6000
	N	7	7	7	7	7
	Std. Deviation	.95640	1.01606	1.18578	1.41316	1.09545
Others	Mean	3.0095	3.4286	3.6786	3.3750	3.2714
	N	14	14	14	14	14
	Std. Deviation	.82643	1.26456	1.04486	1.19595	1.19642
Total	Mean	2.7943	2.8465	3.0116	2.6914	2.5558
	N	258	258	258	258	258
	Std. Deviation	.97099	1.13522	1.08356	1.10914	1.13374

Note. Results: Tangibles Responsiveness Assurance Reliability Empathy total * Education level.

Table 19. The results of ANOVA table for constructs in light of education level

			Sum of Squares	df	Mean Square	F	Sig.
Tangibles * Education level	Between Groups	(Combined)	0.71	2	0.355	0.375	0.688
	Within Groups		241.593	255	0.947		
	Total		242.303	257			
Responsiveness * Education level	Between Groups	(Combined)	5.017	2	2.508	1.961	0.143
	Within Groups		326.185	255	1.279		
	Total		331.202	257			
Assurance * Education level	Between Groups	(Combined)	6.907	2	3.453	2.987	0.052
	Within Groups		294.836	255	1.156		
	Total		301.743	257			
Reliability * Education level	Between Groups	(Combined)	7.015	2	3.507	2.893	0.057
	Within Groups		309.146	255	1.212		
	Total		316.16	257			
Empathy * Education level	Between Groups	(Combined)	7.633	2	3.817	3.016	0.051
	Within Groups		322.703	255	1.266		
	Total		330.336	257			
Total * Education level	Between Groups	(Combined)	3.585	2	1.793	2.011	0.136
	Within Groups		227.296	255	0.891		
	Total		230.881	257			

It is clear from the previous table that there are no statistically significant differences in the degree of students' evaluation of all the dimensions in light of their education level.

Table 20. Measures of association

	Eta	Eta Squared
Tangibles * Education_level	.054	.003
Responsiveness * Education_level	.123	.015
Assurance * Education_level	.151	.023
Reliability * Education_level	.149	.022
Empathy * Education_level	.152	.023
Total * Education_level	.125	.016

It is apparent from the previous table that the association between the dimensions of the students' evaluations of services at the university with education level is weak, as the value of the ETA square was 0.02 or less.

4.2 Summary of Results

- The overall evaluation of services at the university was below expectations.
- The highest rated construct is assurance with a mean (3.0116), then responsiveness with mean (2.8465), tangibles with mean (2.7843), reliability with mean (2.6914), and empathy with mean (2.5558).
- There are statistically significant differences in the degree of the student evaluation for the first dimension (tangibles) due to gender difference, and the differences present were in favor of males, where the average evaluation of male students was (2.9532), while that of female students was (2.6685).
- There are no statistically significant differences in the degree of students' evaluation of the remaining dimensions.
- The association between the dimensions of the student evaluation of services at the university with the gender of student is weak.
- There are no statistically significant differences in the degree of students' evaluations of all the dimensions in light of the students' ages.
- The association between the dimensions of students' evaluation of services at the university and the age of the student is weak.
- There are no statistically significant differences in the degree of the students' evaluation of all the dimensions in light of the students' year of education.
- The association between the dimensions of students' evaluation of services at the university and year of education is weak.
- There are no statistically significant differences in the degree of students' evaluation of all the dimensions in light of the students' education level.
- The association between the dimensions of students' evaluation of services at the university and education level is weak.

5. Discussion and Conclusion

In the HE settings, students are the principal customers and recipient of university services. Thus, universities need to attract their patronage and retain them to ensure their continued viability. As a consequence, HEIs are interested in ascertaining students' perceptions of QoS and the factors that inform them. This article measured the perception of QoS in HE from the perspective of students studying at a college at KKU in KSA, allowing for the possibility of confounding factors arising from demographic characteristics.

The data collected was analyzed using SPSS program, a T-test for one sample with a cutoff point (3.4). The instrument used was a SERVQUAL tool modified for the academic context to measure five constructs: tangibles, reliability, responsiveness, assurance, and empathy. The table of variance analysis and the ETA square were conducted to establish any relationships between participants' answers and demographic variables.

HE providers actively participate in interpreting students' expectations and perceptions of QoS for the purpose of attracting students, serving their needs and retaining them. It is clear from the data analysis that the evaluation of all the services at KKU fell below the expected level, the highest rated construct being assurance with a mean of (3.0116), responsiveness with a mean of (2.8465), tangibles with a mean of (2.7843), reliability with a mean of (2.6914), and empathy with a mean of (2.5558).

Levels of satisfaction among students remained relatively comparable. Communication with fellow students,

course content, learning equipment, library storage, teaching quality and teaching/learning materials all had the greatest influence on students' levels of satisfaction (García-Aracil, 2009). Similarly, in Finland, research and education facilities, and basic university activities, had a greater influence on overall student and employee satisfaction levels than supportive facilities did (Kärnä & Julin, 2015).

According to Cook's (1997) study reviewed previously, the most representative factor affecting the perception of services was interaction between members faculty and students. This was contradicted in the current study, where in the open-ended section of the questionnaire, only 14% of students were concerned about this aspect, requesting an opportunity to express their opinions and complaints.

This research further found that statistically significant differences in the degree of student evaluation for the first dimension (tangibles) arising from gender difference, with the average evaluation of male students being (2.9532), while the average evaluation of female students (2.6685). Such a variation has not been reported elsewhere in the literature.

The study also found the association between the dimensions of students' evaluation of services at the university and education level is weak. This suggests the university needs to carefully prepare a strategic plan to improve all academic related services at the university. The highest rated construct is assurance with a mean of (3.0116), which could be associated with the university's vision and mission to attain a regional and global leadership role, achieving excellence in the field of knowledge and research, and contributing to a more effective and competitive society.

KKU's mission is to provide high-quality education and innovative research within an academic environment, to provide valuable and useful services to society, and to apply the most advanced technologies of knowledge. All these aims are difficult to achieve in an environment with low QoS. It is hoped that this study will draw attention to future researchers' thinking on the issue QoS and its relationship to student achievement at KKU and other Saudi universities. It is vital to conduct further research to ensure increases in budgets are directed towards achieving improvements in those areas that most influence perceptions of QoS and student loyalty. Superior QoS can inform a university's reputation and add to its appeal for students. KKU is ideally positioned geographically to attract students, however the evidence presented here illustrates that changes to its service delivery are imperative if it is to enhance its reputation as a new university in KSA.

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