

ASSESSING STUDENTS' SATISFACTION WITH QUALITY OF SERVICE OF STUDENTS INFORMATION SYSTEM

Assistant Professor PhD Suleiman AL KHATTAB

Al-Hussein Bin Talal University, Jordan

Email: suliemanus@yahoo.com

Associate Professor PhD FARES FRAIJ

Al-Hussein Bin Talal University, Jordan

Email: fares@ahu.edu.jo

Abstract:

With the increasing number of higher education institutions in Jordan, universities are competing to attract more students. To achieve this goal, the universities are competing to provide the students with all possible satisfaction means through providing efficient e-services. This paper measures the satisfaction of the students at Al-Hussein Bin Talal University, Jordan, with the quality of e-services. It mainly concentrates on the students' satisfaction with the in-house developed Student Information System (SIS). To measure the satisfaction of the students, a questionnaire was developed and distributed to a sample of the university students. The questionnaire forms were collected and analyzed. The results of the questionnaire showed that the students were satisfied by the transition to e-services and the SIS has a positive impact on the students' satisfaction. The research also provides the university with some suggestions to improve the SIS and, therefore, meet the demand of the students.

Key words: Student Information Systems (SIS), Student satisfaction, SERVQUAL, quality of service.

Introduction

Higher education in Jordan is promising. More than 4.5% of the population of Jordan is enrolled in 25 public and private universities and colleges that spans over Jordanian soil. In addition, the reputation of the Jordanian educational system is also regionally remarkable. Many graduates from Jordanian Universities have profoundly participated in developing many countries in the region. Recently, the World Bank report remarks that the Jordanian higher education system, along with Kuwait and Lebanon, is relatively more successful in providing more equitable access and higher quality education to its population than some countries in the region such as

Iraq, Morocco, and Yemen (Education Reform, 2008). One of the main challenges that are facing the higher education sector in Jordan is the increase number of the students admitted to higher education without the ability to provide enough instructors. This will, therefore, increase the number of students in the classroom and cause the ratio of students to instructors to go up. However, the increase of the number of the students represents an opportunity as well. The number of the universities is increasing and universities are competing to attract more students.

Al-Hussein Bin Talal University (AHU), a Jordanian public university, was established in April 1999. The

university is located in the city of Ma'an, the center of the Ma'an governorate. The city is located in the southern part of the country about 210 Kms. from the capital Amman. In this particular area, all educational disciplines are needed specially Tourism, Hotel Management, Computer Engineering, Education, Marine Science, Transportation, and Mining Engineering. As other Jordanian public universities, AHU faces many challenges such as limited budget and lack of funds, increased number of students, relatively low tuition fees, out dated degree plans, and scarcity of qualified faculty members in many majors. However, some of the challenges may be of AHU alone such as the university is located in the far south of the country away from the capital Amman, low population density in the governorate, low individuals income, the university is newly established therefore most of its budget is consumed in establishing new buildings and infrastructure. It is important to note that more than 66% of the students of AHU are from outside the governorate of Ma'an. Therefore, the university has to build its strategic plan so that the main stakeholder, mainly students, is provided with all possible satisfaction means to compensate for the weaknesses such as far location and harsh environmental factors.

AHU has developed its strategic plan to address the challenges facing the university in all aspects including Information and Communication Technology (ICT). The strategic plan identified the ICT needs of the university and prioritized them as follows: First, developing state-of-the-art infrastructure to meet the academic and administrative needs such as computer networks to connect all offices and laboratories together, computer servers, PCs, high-speed internet connection, and software tools. Second, developing software applications to satisfy the administrative tasks such as registration

and admission duties, financial duties, and human resources duties. Third, managing the academic tasks such as providing a software package through which students and instructors can exchange course material, course syllabus, and home works. Last but not the least, developing software applications to aid teaching courses.

As a newly established university, AHU has a state-of-the art ICT infrastructure. This infrastructure includes a well-established computer network, PCs that are allocated to administrative and academic offices and student laboratories. Moreover, the university is equipped with main servers and the required software packages. Depending on its well-trained programmers, AHU has developed in-house software to satisfy administrative and to manage academic needs. One of the student-oriented systems is the student Briefcase or Student Information System (SIS). The SIS was mainly established to provide students with web-based services. The services are directed toward alleviating the impact of some of the challenges facing AHU by exploiting the available opportunities and strength. Furthermore, the university is seeking for excellence in implementing the services so that to provide the students with quality services in an effort to attract more of them. To facilitate the management of teaching and learning process, AHU has customized open license and freely available software, namely Claroline. It is a stand alone application and accessed from two brief cases, namely student briefcase and instructor briefcase, aims at supporting e-learning. Through this application, the instructor can post the syllabus of his or her course and the corresponding PowerPoint presentations, handouts, and home works. The student is provided with the ability to browse the available material and upload the corresponding solutions of the home works. AHU has reached a point where

technology should be employed not only in managing and facilitating teaching and learning, but also in aid-teaching material in a collaborative environment, i.e., blended learning, especially in teaching challenging courses and concepts.

Marketing of education has become an area where universities in countries and across the world compete with each other to attract students from a wide range of foreign markets (Altbach, 1998; Arambewela and Hall, 2009). However, there has been a substantial growth in the service-marketing literature, with service quality becoming a significant issue (Zeithaml and Bitner, 2002). Drawing on this literature, service quality and student satisfaction will be considered for their usefulness in the higher education context (Gronroos, 1984; Parasuraman et al., 1985).

Literature review

Student Satisfaction and Service Quality

Due to an increasingly competitive and dynamic educational environment, as well as numerous challenges, universities are becoming more aware of the importance of student satisfaction (Usman, 2010; Altbach, 1998; Arambewela and Hall, 2009). Hence, Focusing on student satisfaction not only enables universities to re-engineer their organizations to adapt to student needs, but also allows them to develop a system for continuously monitoring how effectively they meet or exceed student needs (O'Neill, 2003). Wiers-Jensen et al. (2002), in a recent review of student satisfaction studies, also highlight the complexity of the concept in the higher education context. Within the service-quality literature, a dominant paradigm exists with the definition of quality focused on the consumer (Robinson, 1999). This is not the case in the educational quality literature (Clewes, 2003).

Kotler et al. (2001) have mentioned that any business looking for success in today's marketplace must be customer-centered. It must deliver superior value to its target customer. They also added that companies must become adept in building customer relationships, not just building products and services. Hence, it can be seen that to satisfy the customer must be at the top of managers' agendas, if they want their companies to survive. Furthermore, for many universities, student satisfaction is an avenue. Through which competitive advantage can be gained (Kevin and Dooyoung, 2002). Therefore, satisfaction is not only dependent on the inanimate service environment and the service provider, but also on other consumers as well (Clewes, 2003).

The customer is the foundation of the business and keeps it in existence. A satisfied customer will repeat the purchase of the product / service and convey positive messages about it to another (Abu Hasan et al., 2008; Petruzzellis et al, 2006; Arambewela and Hall, 2009). In contrast, a dissatisfied customer is more likely to switch to an alternative product / service that is provided by another company. A dissatisfied customer may well be negative by word-of-mouth and this could have a serious and damaging effect on the business. Baron and Harris (2003) have pointed out that satisfaction or dissatisfaction will result if the company performance confirms or disconfirms the customer expectations. From the above discussions, it can be said that the essential and major role of any business is to meet its customer's needs and expectations. Failure to meet needs and expectations is assumed to result in dissatisfaction with the product or service. The core function of every service is to satisfy the customer who consumes it.

However, customer satisfaction is defined as "the customer's fulfillment response, it is a judgment that a product

or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfillment” (Oliver, 1997:13). Meanwhile, Petruzzellis et al. (2006) have seen customer satisfaction as a result of students’ assessment of a service based on comparison of the perception of service delivery with their prior expectations. In the same vein, Student satisfaction refers to the favorability of a student’s subjective evaluation of the various outcomes and experiences associated with education (Oliver and Desarbo, 1989). While, Borden (1995) found that student satisfaction is related to the match between student priorities and the campus environment. As Wiers-Jenssen et al. (2002, 193) have stated “student satisfaction approaches may be a tool for building a bridge between more traditional and academic views on how to improve higher education, and more market-orientated perspectives”.

Service quality is increasingly being recognized as of key strategic value by organizations in both the manufacturing and service sectors Rashid and Jusoff (2009). The terms of customer service and service quality have become very important in a variety of fields such as industry, academia and government over recent decades, having taken on different meanings through the years. On the other hand, Townsend (1986) defines quality in two perspectives: quality in ‘fact’ and quality in ‘perception’. Quality in fact is usually the supplier’s point of view, while quality in perception is the customer’s view.

Service quality has been defined as a consumer attitude reflecting the perceived overall superiority and excellence in the process and outcome of a service provider (Parasuraman et al., 1988). Gronroos (1984) pointed out that perceived service quality is a global judgment or attitude relating to service and results from comparisons by consumers of expectations of service with their perceptions of actual service performance.

Gronroos (1984) has discussed two dimensions of service quality: the technical quality of service encounters concerning the outcome of a service (i.e. what is offered and received by customer); and the functional quality of the service-delivery process, which concerns the way in which the service is delivered (i.e. how is it offered and received). A similar distinction is proposed by Lehtinen and Lehtinen (1991), who suggest that a third dimension might be appropriate, namely ‘corporate quality’, which involves the image or profile of the company. The service firm’s image determines service quality and therefore whether a customer keeps the relationship with the service provider or not. If the image is negative, there is little chance that new customers will actually be attracted.

Arambewela and Hall (2009) have stated that the basic concept of quality is simply the match between what customers expect and what they experience. This is perceived quality. These researchers added that any mismatch between these two is a quality gap. Customer perception of quality was found to be influenced by various gaps. Since the quality perceived in a service is a function of the gap between customers’ desires / expectations and their perceptions of the service that is actually received, understanding customer expectations and perceptions is the first step in delivering ‘high service quality’ (Zeithaml and Bitner, 2002).

The concept of expectations has been widely used in many studies about customer behavior (Usman 2010; Parasuraman et al., 1985, 1988; Zeithaml and Bitner, 2002; Baron and Harris, 2003; Arambewela and Hall, 2009). Usually customer expectations are based on their own norms, values, needs, wishes, etc. Moreover, these expectations are not stable, and may change over time due to changes in aspiration levels at a particular moment in time. Thus, customers will switch

service providers if they are not happy or feel dissatisfaction with the service provided (Arambewela and Hall, 2009). At the same time, expectations are determined not only by individuals themselves, but also by reference groups, external situations, time, norms, and the like (Kasper et al., 1999). While perception reflects the service as actually received, it also depends on the nature of discrepancy between the expected service and perceived service (Parasuraman et al., 1985). Many researchers have discussed the concept of perception. According to Bolton and Drew (1991) perceptions are influenced by attributes of the service-delivery process, and Schiffman and Kanuk (1987) have defined perceptions as the process by which an individual selects, organizes and interprets stimuli into a meaningful and coherent picture of the world.

Service Quality Dimension

Researchers and practitioners have found that customers consider many dimensions in their assessments of service quality (Usman 2010; Gronroos, 1984; Parasuraman et al. 1985, 1988; Lehtinen and Lehtinen, 1991; Baron and Harris, 2003 ; Rashid and Jusoff; 2009; Arambewela and Hall, 2009). To improve quality, service providers have to identify the key determinants of service quality. Parasuraman et al. (1988) highlight 5 key determinants of perceived service quality, namely:

Reliability, the ability to perform the promised service dependably and accurately, means that the organization delivers on its promises regarding delivery, service provision, and problem resolution (i.e. a firm performs the service right the first time and honors its promises over a period of time).

Responsiveness, being willing to help, is defined as willingness or readiness of employees to help customers and to provide prompt service. This dimension emphasises

attentiveness and promptness in dealing with customer requests, questions, complaints, and problems.

Assurance, inspiring trust and confidence, is defined as the employees' knowledge and courtesy and the ability of the firm and its employees to inspire trust and confidence. The university seeks to build trust and loyalty between its employees and individual students. This dimension is likely to be particularly important for services and customers' ability to evaluate outcomes, such as banking or insurance. In the early stages of the relationship, the customer may use tangible evidence to assess the assurance dimension. Visible evidence of degrees, honors and awards and special certifications may give a new customer confidence in a professional service provider (Zeithaml and Bitner, 2002).

Empathy, treating customers as individuals, is defined as caring, individualized attention that the firm provides to its customers. The customers need to feel understood by, and important to, firms that provide service for them.

Tangibles, representing the service physically, are defined as the appearance of physical facilities, equipment, staff appearance, and communication materials that are used to provide the service. Zeithaml and Bitner (2002) emphasized the relative dominance of intangible attributes in the make-up of the service product. Teaching is classified as highly intangible, because services are performances or actions rather than objects: they cannot be seen, felt or tasted in the same way that one can sense a tangible good. Many services, including education, are also difficult for consumers to comprehend. Therefore, managers need to manage physical evidence to provide tangible cues to service quality; reduce service complexity where possible and encourage word-of-mouth

recommendations from other students. The importance of the more physical component of delivery systems in the educational context, referred to by Bitner (1992) as the 'servicescape', this more tangible component of the service environment is critical to both students' perceptions of service quality immediately post-consumption and their subsequent evaluations over time. This concept helps frame expectations, since it is often the first physical/tangible clue that the student perceives about the educational provider.

Measuring Service Quality

The research on service quality is an important theme in service marketing field. So far, scholars and practitioners have not arrived at a consistent agreement to the concept and evaluation of service quality. Research in defining and measuring service quality has been greatly influenced by the work of Parasuraman et al. (1985, 1988). Based on above factors, a scale called SERVQUAL was developed (Parasuraman et al., 1988). This model works on the philosophy that customers typically assess service quality by comparing the service they have actually experienced (the perceived service quality) with the service they desire or expect (their expected service quality). In other words, service quality involves a comparison of customer expectations with customer perceptions of actual service performance. This can be formalised as $Q = P - E$; Q stands for perceived service quality, P refers to performance perception and E stands for performance expectation (Bennett and Barkensjo, 2005). Empirical research also suggests using the performance perceptions alone to measure service quality. Joseph and Steven (1994) argue that service quality is directly influenced only by perceptions of performance. Generally, much research has agreed that service quality is in fact the perceived quality by customers (Parasuraman, 2000). In the

same vein, Teas (1994) also questions the SERVQUAL and argues that there are a number of problems concerning perceptual and operational definitions of expectation. Perceived service quality Gronroos (1984) introduced the concept of perceived service quality in the development of his widely cited model of service quality. The model suggests that the quality of a given service is the outcome of an evaluation process where the consumer compares what they expected to receive with what they perceive they actually received.

Robinson (1999) provides a review of the main areas of agreement and disagreement in the service-quality measurement debate. The only areas of agreement appear to be that service quality is an attitude and is distinct from customer satisfaction, which perceptions of performance need to be measured, that the number and definitions of dimensions depends on the service context, and that negatively worded statements should be avoided unless the survey is 'short'. Babakus and Boller (1992) have found that service quality, as measured in the SERVQUAL scale, relies more significantly on the perceptions score than on the expectations, while Kasper et al. (1999) see the disadvantage of the SERVQUAL scale as that the questionnaire is too lengthy. Kilbourne et al. (2004:529) have argued that "the SERVQUAL has potential as a reliable measurement instrument and the perception sub scale as a robust measure of service quality". In the same vein, Bennett and Barkensjo (2005:102) stated that "the SERVQUAL instrument, albeit without an expectations dimension generated reasonably robust outcomes".

Cronin and Taylor (1992) have examined a performance-based measure of service quality, called SERVPERF in four industries which is composed of the 22 perception items in the SERVQUAL scale, and therefore excludes any consideration of

expectations. They found that this measure explained more of the variance in an overall measure of service quality than did SERVQUAL. This model is based on the hypothesis that service quality is an antecedent of customer satisfaction (i.e. satisfaction is an outcome of service quality); whilst customer satisfaction has a significant impact on purchase intentions. Managers must discover whether customers are buying from firms that have a 'high level of service quality' or those with which they are most satisfied.

Cronin and Taylor (1992) suggest that the performance-based scale SERVPERF is more efficient than the SERVQUAL scale, since it reduces the number of items that must be measured from 44 to 22. Perceived service quality is said to be a reflection of the firm's performance. On using the firm's service, customers are said to form an attitude towards service quality performance. This satisfaction level with regard to the products / services indicates how the firm performs. The SERVPERF model claims that to find the performance of a firm (i.e. its service quality) all that is required is to collect data by directly asking the customer through a simple survey and a questionnaire. It has been found that perception scores, by themselves, had a stronger correlation with independent measures, such as quality, than do the SERVQUAL measures (expectations minus perceptions) (Babakus and Boller, 1992). Kilbourne et al. (2004) have mentioned that the perception-only measures of service quality appear to have higher convergent and predictive validity; while Bennett and Barkensjo (2005) have stated that the out-comes of perception scale are robust. At the same time, it has been found that there are conceptual and psychometric problems linked with using differences between perceptions and expectations (Cronin and Taylor, 1992). It has desired to make the task of the

respondents of this research easier; and because of consideration has only been made into the 'student perception of quality'.

Service Quality and Student Satisfaction

Baron and Harris (2003:36) have defined customer experience as "a memorable episode based on a consumer's direct personal participation or observation". Studies from services literature emphasize the importance of quality perceptions and the relationship between service, satisfaction and quality. There is evidence to suggest that service quality leads to customer satisfaction and helps to keep existing customers and attract new ones (Arambewela and Hall, 2009). The distinction and association between service quality and customer satisfaction remains at the forefront of many research endeavours (Brown and Swartz, 1989; Cronin and Taylor, 1992; Baron and Harris, 2003; Arambewela and Hall, 2009). This distinction is very important to managers and researchers alike, since as Cronin and Taylor (1992) stated, service providers need to know whether their objective should be to have customers who are satisfied with their performance, or to deliver the maximum level of perceived service quality. In general the nature of the causal relationship between quality and customer satisfaction is a subject of great academic debate (Baron and Harris, 2003). Based on this evidence from the service literature, service quality and satisfaction will be viewed as two different constructs that are unique but related (Ting, 2004). A study carried out by Bitner (1990) on 145 tourists in an international airport suggested satisfaction as the antecedent to service quality. On the other hand, there are many other researchers who have exactly the opposite point of view. In other words, service quality is considered an antecedent of customer satisfaction

(Cronin and Taylor, 1992; Ting, 2004). The conceptualization of service quality, its relationship to the satisfaction and value constructs and methods of evaluation have been a central theme of the education sector over recent years (O'Neill, 2003). Indeed, an integral part of any educational institute's attempt to achieve competitive differentiation, is a commitment to a process of sustained quality improvement (Athiyaman, 1997).

Spreng and Mackoy (1996) found that customer satisfaction is the result of service quality, Cronin and Taylor (1992) carried out an empirical test of reciprocity between service quality and customer satisfaction. The main finding in their study was that service quality leads to customer satisfaction. In another study that has focused on the relationship between service quality and customer satisfaction, Bloemer et al. (1999) pointed out that service quality is an antecedent of customer satisfaction. This view is also supported by Caruana (2002) who argued that customer satisfaction is indicated as acting as a mediator in the link between service quality and service loyalty. Yavas et al. (2004) have stated that service quality is at the root of customers' satisfaction and is linked to such behavioural outcomes as word-of-mouth, complaint and loyalty

Customer satisfaction is a goal and an essential factor in an organization success. Companies that achieve 'high customer satisfaction' realise that highly satisfied customers produce several benefits for them. Customers will be less price sensitive and remain customers for a longer period, buy additional products / services over time, and they talk favourably to others about the company and its services / products (Kotler et al., 2001). In addition, Arambewela and Hall (2009) see student's satisfaction as playing a vital role in marketing management, and it is assessed to determine repeat sales, increased profits, positive word-of-mouth recommendations and most

importantly, customer loyalty. This is echoed by Vinagre and Neves (2008), who emphasized that satisfied customers serve as an important source of free advertising through referrals and recommendations, whereas dissatisfied customers are more likely to defect and to convey negative experience to other potential customers. These findings highlight the important relationship between customer satisfaction and organizational success. Similarly, Rashid and Jusoff (2009) have stated that customer satisfaction has been found to greatly impact on corporate image and gaining new customers through direct recommendations.

Methodology

Aims of the Study

Several studies have shown that university's environment effects students' academic achievement, and one of the most important elements of university's environment is the available technological facilities at school. Therefore, it is essential to investigate the effect of service quality on student's perceptions.

This study mainly aims at understanding the differences in students' perception towards service quality rendered to them. Moreover, it discusses the conceptual basis of student satisfaction and perceived quality and explores the relationship between service quality and student satisfaction. Finally, the study determines which service quality dimensions are most important to the students. The research question can be stated as follows: What is the effect of employing the Student Information System (SIS) on students' satisfaction?

Research Framework

This study was adopted from Parasuraman's SERVQUAL dimensions. The dependent variable in this study is the overall student satisfaction, measured by the overall satisfaction with the HEIs. The

independent variable in this study is service quality in higher education that measures the level of satisfaction with service performance. The dimensions included in this variable are tangibility, assurance, responsiveness, reliability, and empathy.

Population and Sample

The samples in this study were bachelor degree students studying at Al-Hussein Bin Talal University. A total number of 350 questionnaires were distributed; however, 260 respondents completed and returned usable questionnaires. This number represents about 74% response rate.

Research Instrument and Data Collection Method

This study used questionnaire as medium to obtain the needed data. The questionnaire consists of three parts. Part one is intended to obtain background information of demographic factor. It comprises four questions covering the subjects of gender of students, their age, their year level, and their computer skills. Part two measures students' perception towards service

quality at the university. This part of the questionnaire has 40 items represent the five dimensions of modified SERVQUAL, namely tangibility (16 items), assurance (5items), reliability (10 items), responsiveness (4 items) and empathy (5 items). Finally, part three measures the students' satisfaction, which only has five items. A five-point Likert scale, ranging from "strongly agree", which scored 1, to "strongly disagree", which scored 5, was used for this study and all questions were phrased positively.

The data analysis for this study conducted through the use of software called the Statistical Package for Social Science (SPSS) version 16. The reliability of the scale was tested using Cronbach alpha. A coefficient alpha higher than 0.7 is considered to be good (Nunnally, 1978). The value of 0.94 was achieved indicating good internal consistency for the 45-item. Table (1), below shows the Cronbach alpha values for all SERVQUAL dimensions and student satisfaction dimensions; this confirms the internal consistency of the instrument (Nunnally, 1978).

Table 1
Cronbach alpha values for all measurement scales

Dimension	Alpha
Tangibility	0.90
Assurance	0.71
Reliability	0.86
Responsiveness	0.79
Empathy	0.76
Student Satisfaction	0.76

Results and Discussions

Profiles of the respondents

The demographic information includes the following characteristic of participants: age, gender, study level (year) and computer skills. The demographics information is represented in Table (2) based on frequency distributions and percentages. From the (260) respondents in this study, 100 (38.5%)

are male and 160 (61.5%) are females. the majority of the students 150 being under 20 years old (57.7%). Most of the respondents are in the first year of their study (38.5%), followed by second year 75 student (28.8%). Regarding computer skills, the figures in Table 2 suggests that almost 67% of the students were average computer users and about 19% of them were expert. These figures are a good indication that

the students can interact with the SIS results of this study. serves and therefore support the

Table 2

Characteristics of respondents		
characteristics	Freq. (n)	Percent
Age		
<i>Under 20 Year</i>	150	57.7
<i>21 - 25 Year</i>	100	38.5
<i>26 - 30 Year</i>	5	1.9
<i>More than 31 Year</i>	5	1.9
Gender		
<i>Male</i>	100	38.5
<i>Female</i>	160	61.5
Study Level		
<i>First Year</i>	100	38.5
<i>Second Year</i>	75	28.8
<i>Third Year</i>	50	19.2
<i>Fourth Year</i>	35	13.5
Computer Skills		
<i>Beginner</i>	35	13.5
<i>Average</i>	175	67.3
<i>Expert</i>	50	19.2

Results and Findings

Table 3 shows that the value of Pearson Correlation Coefficient between students' evaluation of quality of services dimensions (SERVQUAL) and their satisfaction is 0.656 which has a statistical significance. In other words,

there is a positive and significant relationship between service quality rendered to the students at the university and their satisfaction, i.e. the more quality of services is used the better results and satisfaction will be.

Table 3

Pearson coefficient between students' satisfaction and SERVQUAL

		<i>Satisfaction</i>	<i>SERVQUAL</i>
<i>satisf action</i>	Pearson Correlation	1	.656**
	Sig. (2-tailed)		.000
	N	260	260
<i>S ERVQ UAL</i>	Pearson Correlation	.656**	1
	Sig. (2-tailed)	.000	
	N	260	260

Table 4 shows a positive relationship of statistical significance between student satisfaction and service quality dimensions. With respect to these dimensions, the highest correlation coefficient was between student satisfaction and tangibles at 0.726.

priorities efforts and resources and deploy them more effectively to improve overall student's satisfaction. The results of this study indicate that students value all five dimensions of service quality (i.e. reliability, responsiveness, assurance, empathy and tangibles), but they value the tangibles dimension most. This result confirms the findings in the marketing literature in general and service quality

Knowing the relative importance of each dimension of service quality can help universities (service provider) to

in particular, which have reported tangibles as a distinctive factor (Bouman and Van der Wiele, 1992; Cui et al., 2003) and the physical appearance has the greatest impact on the overall perception of service quality (Siu and Cheung, 2001). The availability

of quality SIS services that meets the demand of students is a crucial factor in attracting more students. Therefore, a basic factor in competitiveness and continuation of universities is strongly related to offer SIS services.

Table 4
Person Correlations between student satisfaction and service quality 's dimensions

		reliability	assurance	tangible	empathy	responsiveness	satisfaction
reliability	Pearson Correlation	1	.734**	.795**	.733**	.607**	.609**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	260	260	260	260	260	260
assurance	Pearson Correlation	.734**	1	.730**	.739**	.648**	.570**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	260	260	260	260	260	260
tangible	Pearson Correlation	.795**	.730**	1	.594**	.478**	.726**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	260	260	260	260	260	260
empathy	Pearson Correlation	.733**	.739**	.594**	1	.578**	.574**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	260	260	260	260	260	260
responsiveness	Pearson Correlation	.607**	.648**	.478**	.578**	1	.519**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	260	260	260	260	260	260
satisfaction	Pearson Correlation	.609**	.570**	.726**	.574**	.519**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	260	260	260	260	260	260

However, from this study it emerges that the university should pay attention to all five dimensions of service quality, and they should give more focus to the role of service quality in increasing overall student satisfaction.

Limitation of the study

There are two limitations to our study. One of the limitation in this study is to the context of respondents is very limited to only to a Jordanian public university that offered bachelor degree courses. This limitation must be considered when interpreting the study findings' generalizability. Second, the study questionnaire (SERVQUAL) includes only perception scale; in the future the expectation and perception sections should be also considered. This however may introduce extra overhead in contacting the respondents.

Conclusion and Future Work

This study has measured the students' perception toward SIS at Al-Hussein Bin Talal University. The dimensions of the satisfaction of the students were tangibility, assurance, responsiveness, reliability, and empathy. Overall, the study has revealed that the students are satisfied by the SIS services.

The study opens the door to conduct similar studies across public and private universities and compare the results with this study. Furthermore, the results of this study have started effort to measure and compare students' satisfaction regarding SIS services among Jordanian universities. Replication studies using large samples would be useful in order to corroborate our study findings.

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