

## Measuring university service quality by means of servqual method

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### ABSTRACT

In this study, a total of 102 students in 5 courses (Electronic engineering, Civil engineering, Mechanical engineering, Chemical engineering and MBA) in the international branch of Amirkabir University, were asked to complete a SERVQUAL questionnaire. This questionnaire measured students' perceptions and expectations in five dimensions of service that consists of assurance, responsiveness, empathy, reliability and tangibles. The quality gap of university services was determined based on differences between students' perceptions and expectations. The results demonstrated that in all of the five SERVQUAL dimensions, there was a negative quality gap ( $p < 0.05$ ). Also responsiveness was the most important dimension for the students but had the largest gap. So, improvements are necessary and university must pay more attention to the students requirements. There was limitation in this research because the current research was conducted among international branch of Amirkabir university. So, the results are limited to these faculty, not to the whole of the university. Also there were many questions in the questionnaire which makes the students tired and impatient. There are limited researches that consider service quality in the Iranian higher education. However, for the first time, the service quality of international branch of Amirkabir university was measured by the SERVQUAL in this research.

## INTRODUCTION

The problem in managing service companies is that quality is not easily measurable. To solving this problem different scales for measuring service quality have been put forward and Servqual is one of the most famous of them. Parasuraman *et al.* (1988) were amongst the earliest researchers to emphatically point out that the concept of quality prevalent in the goods sector is not extendable to the services sector. As against the goods sector where tangible cues exist to enable consumers to evaluate product quality, quality in the service context is explicated in terms of parameters that largely come under the domain of 'experience' and 'credence' properties and are as such difficult to measure and evaluate (Parasuraman *et al.*, 1988).

In an equation form, their operationalization of service quality can be expressed as follows (Jain and Gupta, 2004:27):

$$SQ_i = \sum_{j=1}^k (P_{ij} - E_{ij})$$

where:

$SQ_i$  = Perceived service quality of individual 'i'

$k$  = Number of service attributes/items

$P$  = Perception of individual 'i' with respect to performance of a service firm attribute 'j'

$E$  = Service quality expectation for attribute 'j' that is the relevant norm for individual 'i'

But when we can say a service is good? The idea is that the service is good if perceptions meet or exceed expectations and problematic if perceptions fall below expectations (Ahmed and Shoeb, 2009: 18). So, filling the gaps between customer perceptions and expectations about the service received is vital for customer satisfaction. More and more firms use satisfaction ratings as an indicator of performance for services and consequently an indicator of company's future. Since service quality is a vital element in creating customer satisfaction, it also plays an important role in sustaining profit levels of companies (Baki *et al.*, 2009: 106). Consumers inferences about quality rather than the reality itself can be

critical (Lam, 2002: 43); they also perceive service quality as a multidimensional concept (Markovic and Raspor, 2010: 196). Thus, it becomes important to assess how customers evaluate service quality (Bayraktaroglu and Atrek, 2010: 47).

The quality of higher education as a service is also fundamental to a country's development because universities prepare the professionals who will work as managers in companies and manage public and private resources and care for the health and education of new generations (Oliveira, 2009). Higher education environment is a pure service; it provides person-to-person interaction. In this situation, customer satisfaction is often achieved through the quality of personal contacts (Fong Yu, 2008: 9). Furthermore, higher education needs to keep in perspective the needs and interests of groups such as students, employers, government, alumni, parents and funding agencies, among others (Rózsa, 2010: 24).

Out of the stakeholders of the educational quality, students are considered to be one of the most important, as they are directly affected by the quality of service and satisfaction of other stakeholders like parents, employer, is dependent upon the satisfaction of students (Ahmed *et al.*, 2010: 2528). In education, students are customers who come to contact with service providers of an educational institution for the purpose of acquiring goods or services (Kitchroen, 2004: 19). It becomes even more difficult to attract students, since new generation students have more influence and greater awareness as consumers, becoming more interactive and selective as regards their future (Zafiroopoulos and Vrana, 2008: 35). But unfortunately, there are few researches on the service quality concept which can be used to improve it in Iranian universities as per expectations of students. Therefore, this study intends to assess the service quality offered by behavioral science faculties of University of Tehran in the perception of the students through SERVQUAL model.

#### **Problem statement:**

According to Parasuraman *et al.* (1988) due to the unique features of service such as performance-oriented, intangible, heterogeneous, inseparable, and perishable, it is difficult not only to measure service quality, but also to provide the same quality of services to all customers (Yoon and Suh, 2004: 342). It is also, important to note that without adequate information on both the quality of services expected and perceptions of services received then feedback from customer, surveys can be highly misleading from both a policy and an operational perspective (Singh and Khanduja, 2010: 3300). As Parasuraman *et al.* (1988) stated, most of the previous service quality studies have concentrated on the general nature of service quality and its components. While the importance of quality was becoming more widely recognized, its conceptualization and measurement have typically remained understudied. To try to fill this research void, a series of systematic and multiphased research

programme in the mid-1980s, focusing on the concept and measurement of service quality (Kang and Bradly, 2002: 153). The objective of designing SERVQUAL has been to obtain an overall measure of quality, or excellence, based on customer expectations versus experience (Eastwood *et al.*, 2005: 82). Researchers have examined the application of the SERVQUAL instrument for many different types of service organizations ranging from retail organizations to universities and educational contexts (Tyran and Ross, 2006: 358; Chua, 2004). There have been quite many attempts to apply SERVQUAL in the academic environment. A strong link was between service quality and behavioral intentions of university students, including saying positive things about their school, future financial contributions, and referring prospective graduate students for employers to recruit (Bezjian and Griego, 2006: 3). The study of Tan and Kek (2004) also showed that the foreign students perceived a higher level of service quality than the local students (Tan and Kek, 2004: 22).

Unfortunately, no research has been conducted with the aim of conducting SERVQUAL approach in international branch of Amirkabir University.

Therefore, this research was aimed to investigate the following purposes:

- Measuring the quality of the offered services in the international branch and determining its difference with student's expectations (determining the gap between expectation and perception).
- Ranking the dimensions of service quality according to students idea.
- Giving suggestions to developing service quality.

## **METHODS**

The instrument used in the study was an adaptation of the SERVQUAL survey. The original SERVQUAL instrument was specifically designed to assess organizations and businesses in the service area. Some changes were made to adapt in this survey to an academic setting. This questionnaire consisted of five dimensions: (a) *reliability*, consistency in rendering the service promised reliably and carefully; (b) *responsiveness*, disposition of the staff to help users and provide them with quick service; (c) *assurance*, knowledge, attention and skills shown by the employees that inspire credibility and trust; (d) *empathy*, an effort to understand the perspective of the user through individual attention; and (e) *tangibles*, appearance of the physical facilities, equipment, personnel and communications materials (Salvador-Ferrer, 2010: 168). It was used in this study in order to measure the expectations and perceptions of service quality of international branch of Amirkabir university service as perceived by its students. In this survey, students were asked to rate statements that would measure their expectations of the services provided by an ideal

service higher education organization. Then they were asked to rate another set of statements that would measure their perception of the actual services delivered to them. The instrument comprised four sections: (1) demographic data about the respondents (discipline, year of study, gender), (2) statements focused on student expectations of higher education institutions in general, (3) statements focused on student perceptions of service quality at University of Tehran, and (4) the overall service quality and the importance of the five service quality dimensions where the student were required to indicate the importance by allocating a total of 100 points to the five dimensions.

The scores for expectation and perception items were obtained on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

This study was conducted at the end of full semester in the academic year 2011/2012 in which a total of 102 students were surveyed. Descriptive statistics, paired t-test, were utilized to measure and analyze the data by SPSS software. The means were used to compare the students' perceptions and expectations of educational service quality and the gap between them.

## OBSERVATIONS AND ANALYSIS

The findings of the present study as well as relevant

discussion have been summarized under following heads:

### Measuring the quality of the offered services in the international branch of Amirkabir university and determining its difference with student's expectations:

The main purpose of this study was to assess the feasibility of the SERVQUAL in the framework of university services, through a scale designed for the purpose. The results of research are presented in Table 1.

According to Table 1, in all of the service quality dimensions, the mean of student's expectations were more than the mean of student's perceptions. The highest mean was related to "Reliability (4.303)" and after that with little difference, there was "Responsiveness (4.294)", "Assurance (4.272)", "Empathy (3.953)", and "Tangibles (3.911)". Generally, the mean of student's perception from the service quality was 3.143 and it was lower than student's the mean of student's expectations.

According to Table 2, the results of T-test for general service quality in 0.05 alpha level, showed that in general, the service quality was less than student's expectations. Among studied factors.

### Ranking the service quality dimensions by means of Friedman test:

According to Table 3 as  $\text{sig} < 0.05$  ranking, the means is

		Mean	N	Std. deviation	Std. error mean
Pair 1	Tangibles	3.911	102	0.629	.04775
	Tangibles2	3.213	102	0.738	.05022
Pair 2	Reliability	4.303	102	0.634	0.062
	Reliability2	3.431	102	0.783	0.077
Pair 3	Responsiveness	4.294	102	0.576	0.057
	Responsiveness2	3.022	102	0.781	0.077
Pair 4	Assurance	4.272	102	0.530	0.052
	Assurance2	3.083	102	0.869	0.086
Pair 5	Empathy	3.953	102	0.651	0.064
	Empathy2	3.212	102	0.660	0.065
Pair 6	Services_quality	4.141	102	0.443	0.043
	Services_quality2	3.143	102	0.601	0.059

		Paired differences			t	df	Sig. (2-tailed)
		Mean	Std. deviation	Std. error mean			
Pair 1	Tangibles - tangibles2	0.695	0.858	0.084	8.219	101	.000
Pair 2	Reliability - Reliability2	0.872	1.054	0.104	8.354	101	.000
Pair 3	Responsiveness - Responsiveness2	1.272	1.041	0.103	12.331	101	.000
Pair 4	Assurance - Assurance2	1.188	1.079	0.106	11.116	101	.000
Pair 5	Empathy - Empathy2	0.741	0.929	0.092	8.050	101	.000
Pair 6	Services_quality - Services_quality2	0.998	0.752	0.074	13.396	101	.000

possible. As we can see in Table 4, findings of this test showed that in the views of students, “Assurance” and “Responsiveness” had the most significance and after that there were orderly “Reliability”, “Tangibles” and “Empathy”.

N	102
Chi-square ( $\chi^2$ )	62.433
df	4
Sig	0.000

Service quality dimensions	Mean
Tangibles	2.59
Reliability	3.20
Responsiveness	3.47
Assurance	3.50
Empathy	2.25

### Conclusion:

Application of SERVQUAL instrument enables higher education institutions to identify dimensions of service where they excel or need to improve, and position their service quality in relation to their societies. So, the purpose of this study was to evaluate the quality gap of university services in one of the famous universities in Iran in the context of developing country by using a modified SERVQUAL instrument. The results showed in all of the five SERVQUAL dimensions, there was a negative service quality gap which means students' expectations were greater than their perception and, therefore, they were dissatisfied with the poor quality of services provided to them. Thus, improvements are needed in related dimensions.

Also according to Friedman test students found “Assurance” and “Responsiveness” the most important dimensions of service quality and after that there were “Reliability”, “tangibles” and “Empathy”.

The finding of Arambewela and Hall's study (2006) demonstrated that students found the tangibles construct as having the greatest impact on their overall satisfaction. The results of Legèevia (2009), Zeshan *et al.* (2010), Zavvar *et al.* (2007), showed that there were significant differences between perceptions and expectations of students in all of the five SERVQUAL dimensions. Among five dimension of SERVQUAL, only in responsiveness and assurance students' perceptions of the educational services quality was greater than their expectations and other dimensions have not been fulfilled well to meet students' expectations. Faganel's (2010) Results showed the highest level of perceived quality with keeping students informed about the time and place of services provided. They also felt that academic staff showed respect to the students. They were satisfied with timely informing about

time and place of services provided.

A follow-up qualitative study may be proved an invaluable step for exploring the causes of the gaps. On the intervention level efforts should be made in order to change the dissatisfaction dimensions to satisfactory ones. Therefore, the following recommendations should be considered:

- Continuous measurement of the service's quality
- Developing standards of service quality at the university and finding some strategy to improving service quality and reducing the gap between student's perceptions and expectations.
- Improving the managers communications with staffs and students.
- Motivating the staff to working better and giving them more authorities.
- Recognising student's needs and expectations and ranking of service quality dimensions.
- Informing and educating university staff about the importance of their role in the quality of university services;
- Developing the university facilities and updating them.

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