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## **The Relative Importance of Service Quality Dimensions: An Empirical Study in the Tanzanian Higher Education Industry**

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### **Abstract**

*Service quality can be improved if service provider directs improvement efforts on the dimensions which customers consider most important when assessing the quality of service. Since service quality is determined on the basis of five SERVQUAL dimensions, and the fact that the five dimensions differ in importance to the customer across cultures, countries, and industries, it is important to find out which dimensions are considered as most important by customers in a particular setting, so as to prioritize service improvement investment decisions, given the limited resources available to management. Since customers have different service quality requirements which carry different weights in the evaluation of perceived service quality, the assessment of the importance attached by students to each dimension would enable managers in higher education institutions to set priorities in order to make appropriate investment decisions, given the limited resources available. Thus, this study investigates the relative importance of service quality dimensions in the Tanzania higher education industry, an under-researched industry in an under-researched cultural setting. Data was obtained from 500 students in two public universities. Findings indicate that, among the five dimensions of service quality, Reliability ranked as the most important dimension, followed by: Tangibles, Assurance, Empathy, and Responsiveness in that order of importance. Thus, given the limited resources available to management of higher education institutions in Tanzania, service quality improvement should be prioritized in this order: Reliability, Tangibles, Assurance, Empathy, and Responsiveness.*

**Key Words:** *Dimensions of service quality, Relative importance, Higher education, Tanzania.*

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**Introduction:** The evaluation of service quality is a process in which a consumer compares own expectations with the service one perceives to have received (Grönroos, 1984). Parasuraman et al. (1988) define perceived service quality as the degree and direction of discrepancy between the consumer's perceptions and expectations. In other words, perceived service quality is the comparison of what customer expect before the use of service with their experience of what is delivered. It is the measure of how well the services delivered meet customer expectations, suggesting that the customer is the judge of the

service quality (Parasuraman et al., 1988). If the customers' expectations are high compared to the perceived service quality, this results in dissatisfaction. Conversely, if customer expectations are below the perceived service quality, then the customer is satisfied. Therefore, service providers will only be able to deliver services that will satisfy their customers if they know what their customers expect.

In the context of higher education, management should know what students expect, so as to be able to adapt service encounters to students' underlying expectations. Traditionally, the predominant approach to evaluating quality in higher education has focused on either measuring teaching quality or evaluating students' learning experiences (Stodnick and Rogers, 2008). This has been measured by collecting data from students, administrators and (sometimes) potential employers about their views on the product delivered: courses, workshops, or academic degree programmes (Oldfield and Baron, 2000). In other words, the quality of the core service (academic product) has been the major focus of higher education institutions. However, focusing only on the academic product delivered to students ignores the perceived quality of the services used to deliver the product (Beaumont, 2012). Teaching is only one part of the educational process since the product that higher education institutions offer to their students is much more than the academic teaching. The higher education setting is comprised of a variety of service inputs, such as the social interaction, many physical elements, in addition to other support services (Canic and McCarthy, 2010). Therefore, it is vital that the service quality be formally assessed beyond the academic product because the total student experience is increasingly more central to the students' attitude towards the institution (Sultan and Wong, 2010).

In recent years, higher education environment has undergone dramatic changes all over the world, Tanzania being no exception. Higher education institutions are currently facing an increased competition, both in the home country and globally (Hoe, 2005). In this environment, higher education institutions must realize that they are entities competing for resources and students, both in the local and international market (Paswan and Ganesh, 2009). Thus, they must strive to deliver superior service quality and satisfy their students in order to achieve a sustainable competitive advantage. However, this requires a customer focus in service delivery. Therefore, higher education institutions need to go beyond the traditional modes of assessments and apply marketing techniques for understanding customer requirements. The success depends on customers' perceptions or judgement on the quality of services delivered.

Parasuraman et al. (1985; 1988) developed a SERVQUAL model which measures the perceived service quality as a difference between customers' expectations or desires and their perceptions of what is delivered based on the five dimensions of service quality, namely: Reliability, Responsiveness, Assurance, Empathy, and Tangibles. These dimensions capture the key features of service quality and they are also known as SERVQUAL dimensions. Since these dimensions differ in importance to the customer across cultures, countries, and industries (Zeithaml et al., 2006), it is vital to find out which dimensions are considered by customers as most important in the evaluation of service

quality in a particular setting, so as to prioritize investment decisions with respect to service improvement, given the limited resources available to management. Service quality can be improved if service provider focuses effort on the dimensions which customers consider most important when assessing the quality of service (Palmer, 2011). Since customers have different service quality requirements which carry different weights in the evaluation of perceived service quality (Zeithaml et al., 2006), the assessment of the importance attached to the service quality dimensions by students would enable managers in higher education institutions to set priorities in order to make appropriate investment decisions, given the limited resources available. Thus, this study investigates the relative importance of service quality dimensions in the Tanzanian higher education industry, an under-researched industry in an under-researched cultural setting.

### **Theoretical Base:**

**The SERVQUAL Model:** The introduction of the Gaps Analysis model encouraged the development of the SERVQUAL model (Parasuraman et al., 1985, 1988). SERVQUAL is founded on the view that quality evaluations as perceived by customers stem from a comparison of what the customers expect the organization should offer, and their perceptions of the performance of the organization providing the service. In other words, the level of perceived service quality is dependent on the magnitude of the gap between expectations and perceptions – the smaller the gap, the higher the level of perceived service quality (Parasuraman et al., 1988).

The SERVQUAL model is the first service quality scale developed for measuring service quality. The scale was developed through in-depth interviews with executives and focus group interviews with consumers from four different service categories: retail banking, credit cards, securities brokerage, and product repair and maintenance. These four service sectors were selected because they represent a cross section of services which vary along key attributes used in the classification of services (Parasuraman et al., 1985). After data analysis, Parasuraman et al. (1985) concluded that customers evaluate service quality along ten general criteria or dimensions (Table 1).

**Table 1: Ten Dimensions of Service Quality (Parasuraman et al., 1985)**

<b>Sl.No.</b>	<b>Dimension</b>	<b>Definition</b>
1.	Tangibles	The appearance of physical facilities, equipment, personnel, and communication materials.
2.	Reliability	The ability to perform the promised service dependably and accurately.
3.	Responsiveness	The willingness to help customers and to provide prompt service.
4.	Competence	The possession of the required skills and knowledge to perform the service.
5.	Courtesy	The politeness, respect, consideration, and friendliness of contact personnel.

6.	Credibility	The trustworthiness, believability, and honesty of the service provider.
7.	Security	The freedom from danger, risk or doubt.
8.	Access	The approachability and ease of contact.
9.	Communication	Keeping customers informed in language they can understand and listening to them.
10.	Understanding the customer	Making the effort to know customers and their needs.

In a subsequent study, Parasuraman et al. (1988) refined the SERVQUAL scale by collapsing the ten original dimensions of service quality into five by using factor analysis, as a result of considerable correlations among seven of the ten original dimensions. Specifically, Competence, Courtesy, Credibility and Security were grouped into one dimension called Assurance. Access, Communication and Understanding were consolidated into another dimension called Empathy. The resulting five dimensions of service quality were Reliability, Responsiveness, Assurance, Empathy and Tangibles (Table 2).

**Table 2: Five SERVQUAL Dimensions (Parasuraman et al., 1988)**

Sl.No.	Dimension	Definition
1.	Tangibles	The appearance of physical facilities, equipment, personnel, and communication materials.
2.	Reliability	The ability to perform the promised service dependably and accurately.
3.	Responsiveness	The willingness to help customers and to provide prompt service.
4.	Assurance	The knowledge and courtesy of employees and their ability to convey trust and confidence.
5.	Empathy	The provision of caring, individualized attention to customers.

These five dimensions are captured in 22 items to measure expectations (expected service), and another 22 items (worded differently) to measure perceptions (perceived service). Expected service is what the service provider would offer, while the perceived service is what the service provider has offered. Respondents are asked to rate each of the items based on the seven-point Likert scale, with one being strongly disagree and seven being strongly agree. According to this scale, the assessment of the service quality involves computing the difference between the ratings customers assigned to the paired expectation/perception statements. The differences between expectations and performance can be calculated on each item, on each dimension or as an overall score (Buttle, 1996). The scale was put into use for the first time in 1988. However, recognizing that the wording of all expectations items, in the original version of SERVQUAL (Parasuraman et al., 1988), might be contributing to unrealistically high expectations scores, Parasuraman et al. (1991) refined their original version of SERVQUAL by changing the wording of all expectations items.

## Methods:

**Data Collection:** The study employed the SERVQUAL scale, with appropriate modifications for an educational setting (Tegambwage & Ame, 2016), to collect data. In addition, five SERVQUAL dimensions were explained to students and they were asked to allocate 100 points to the five dimensions, according to their relative importance to them. This enabled the researcher to know which dimension is relatively more important to students as compared to other dimensions. The survey was conducted in two purposively selected public universities in Tanzania. A total of 250 students were selected from various degree programmes in each of the two universities using systematic sampling method. This method can be taken as an improvement over a simple random sample in as much as the systematic sample is spread more evenly over the entire population (Kothari, 2005). The step of 2 was taken and was easier to administer because students were found in their respective classrooms. The scale was pre-tested and the statistical package for social sciences (SPSS) 19.0 programme was applied to evaluate the item scales for both the expectations and perceptions portions of the SERVQUAL. Internal consistency of the measure was determined using Cronbach's alpha coefficients (Cook & Beckman, 2006). The resulting coefficients were 0.84, 0.92 and 0.93 for expectations, perceptions, and difference (gap) sections of the modified SERVQUAL respectively, as shown in Table 3. As a guideline, an alpha coefficient of 0.70 and above is considered to be the criterion for demonstrating internal consistency of new scales and established scales (Tavakol & Dennick, 2011).

**Table 3: Reliability Coefficients for the Modified SERVQUAL**

Dimension	Number of Items	Reliability Coefficients		
		Perception (P)	Expectation (E)	Gap (P-E)
Tangibles	16	0.87	0.69	0.81
Reliability	6	0.74	0.75	0.69
Responsiveness	6	0.78	0.81	0.82
Assurance	11	0.83	0.68	0.74
Empathy	6	0.69	0.72	0.71
Overall Scale	45	0.92	0.84	0.93

In general, there was good internal consistency for the five dimensions of the modified SERVQUAL in all three sections: expectations, perceptions, and difference (gap). The results are comparable to those reported from other applications of the SERVQUAL, which ranged from 0.76 to 0.97 (Vanpariya & Ganguly, 2010; Brochado & Marques, 2009; Wattanakamolchai, 2008; Yu, 2008; Hoe, 2005). The questionnaire took about 20 minutes to complete. It is important to note that the names of the universities under study have not been mentioned in connection to the data collected because it was agreed as a condition during data collection.

**Data Analysis:** Using the Statistical Package for the Social Sciences (SPSS), version 19.0, the mean values of input variables: expectations, perceptions, and gap scores, both at the overall scale level and along the dimensions of service quality, as well as average scores on the variables: overall service quality, customer satisfaction, and recommend intentions were computed for general pattern checking on the data. To examine the relative importance of five SERVQUAL dimensions in higher education, the points allocated, on average, by students to the five SERVQUAL dimensions were computed for both universities and the combined sample. The study findings related to gaps in students perceived service quality, and students’ ranking of relative importance of SERVQUAL dimensions are presented and discussed in the following section.

**Results and Discussion:**

**Demographic Characteristics of Respondents:** The population of this study was based on students of higher education institutions. Such students constitute the customer base of higher education institutions. Respondents were mostly female (53%), in the 21 to 30 age range (89%), with a sponsorship from the Higher Education Students Loans Board (HESLB) (85%). The demographic characteristics of respondents, overall and within samples, are summarized in Table 4.

**Table 4: Demographic Characteristics of Respondents**

Demographic Characteristic	University A		University B		Combined Sample	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>Sample Size</b>	250	50.0	250	50.0	<b>500</b>	<b>100.0</b>
<b>Gender</b>						
Male	100	40.0	135	54.0	<b>235</b>	<b>47.0</b>
Female	150	60.0	115	46.0	<b>265</b>	<b>53.0</b>
<b>Age Bracket</b>						
20 or less	5	2.0	5	2.0	<b>10</b>	<b>2.0</b>
21 – 30	215	86.0	230	92.0	<b>445</b>	<b>89.0</b>
31 – 40	30	12.0	15	6.0	<b>45</b>	<b>9.0</b>
<b>Sponsor</b>						
HESLB	235	94.0	190	76.0	<b>425</b>	<b>85.0</b>
Private	15	6.0	60	24.0	<b>75</b>	<b>15.0</b>

**Descriptive Statistics for Input Variables:** The input variables on which this analysis was based were: service expectations, service performance, overall service quality, customer satisfaction, and recommend intentions. Table 5 shows the average scores for the input variables.

**Table 5: Descriptive Statistics for Input Variables**

University	Sample Size	Average Scores of Input Variables					
		P	E	P-E	OSQ	Satisfaction	Recommend Intentions
A	250	4.80	6.27	-1.47	5.46	5.44	6.20
B	250	4.01	6.62	-2.61	4.06	4.12	4.26
Combined Sample	500	4.41	6.44	-2.03	4.76	4.78	5.23

Note: P stands for perceptions; E stands for expectations; P-E stands for Gap scores; and OSQ stands for overall service quality.

As shown in Table 5, expectations scores are consistently higher than perceptions score across all the three data sets under study (6.27 against 4.80 for University A; 6.62 against 4.01 for University B; and 6.44 against 4.41 for the Combined Sample). As a consequence, the gap scores for all groups were negative (-1.47, -2.61 and -2.03 for University A, University B, and the Combined Sample, respectively). This implies that services delivered by both universities do not meet students’ expectations, suggesting that there is room for improvement across all dimensions of service quality. The possible factors behind the negative gap scores might include: inadequate resources, rapid increases in the number of students compared to available resources, and a lack of customer orientation among management and employees of higher education institutions in Tanzania. The negative gaps demonstrate students’ displeasure of services delivered by their universities. This could potentially lead to negative word-of-mouth recommendations which in turn, would impact significantly on student enrolment and available funding (Hoe, 2005). Hence, it is necessary that both universities use students’ opinions to improve their performance in order to meet and exceed students’ expectations. The periodic assessment of the discrepancy or gap between students’ expectations and perceptions of service quality will give insights into areas that require more attention, and provide useful inputs to management for improving the quality of services as perceived by students.

In addition, the study findings have shown that, the average expectations and perceptions scores vary between the two universities. In particular, expectations scores were 6.27 and 6.62 for University A and University B, respectively. On the other hand, the perceptions scores were 4.80 and 4.01 for University A and University B, respectively, as evidenced in Table 5. This might be due to the differences in terms of the size and age between the two universities. Since one university is older and stabilized while the other university is newly established, this fact may have a considerable effect on the students’ expectations and perceptions about the quality delivered by their universities. Mazzarol (1988) reported variances in the delivery of services and student satisfaction among universities, depending on their size, capacity, and customer orientation.

The results in Table 5 also show that University A which recorded higher average scores on perceived service quality (4.80), indicate higher average scores as well for customer

satisfaction and recommend intentions (5.44 and 6.20, respectively), while University B that recorded lower average scores on perceived service quality (4.01), provide lower average scores as well for customer satisfaction and recommend intentions (4.12 and 4.26, respectively). This implies that there exists a direct relationship between perceived service quality and customer satisfaction, as well as recommend intentions in higher education. Thus, the provision of better service quality would increase student satisfaction and create positive recommend intentions. These results are consistent with both theoretical and empirical evidence presented in the extant literature, suggesting the presence of a direct relationship between perceived service quality, customer satisfaction, and behavioural intentions (Ame & Tegambwage, 2016; Brady et al., 2002; Lee et al., 2000; Boulding et al., 1993; Parasuraman et al., 1991). For instance, Boulding et al. (1993) showed that students with higher perceptions of a university are more likely to recommend it to others, and contribute money to it in the future.

**Relative Importance of SERVQUAL Dimensions:** Table 6 shows the points allocated, on average, by students to the five SERVQUAL dimensions.

**Table 6: Relative Importance of SERVQUAL Dimensions**

Dimension	Mean Number of Points Allocated Out of 100					
	University A		University B		Combined Sample	
	Mean	Rank	Mean	Rank	Mean	Rank
Tangibles	22.40	2	23.18	2	23.04	2
Reliability	32.06	1	31.73	1	31.45	1
Responsiveness	10.21	5	11.29	5	10.32	5
Assurance	19.08	3	21.03	3	21.40	3
Empathy	16.25	4	12.77	4	13.79	4
<b>Total</b>	<b>100</b>		<b>100</b>		<b>100</b>	

As shown in Table 6, the allocation pattern is virtually identical across all the three samples, suggesting that the relative importance of five SERVQUAL dimensions is stable across settings. For all the three data sets, Reliability dimension received the highest scores, followed, in descending order, by Tangibles, Assurance, Empathy and Responsiveness. These results suggest that Reliability is the most important dimension in an evaluation of service quality in higher education in Tanzania. This means that the ability to provide the promised service on time, accurately and dependably has the highest impact on students' perceived service quality. In other words, service quality, as perceived by students, will increase significantly if Reliability dimension is improved. These results are consistent with those reported by Tsoukatos (2007), Stergiopoulou (2004) and Parasuraman et al. (1988, 1991), who established that Reliability is the most important dimension. These scholars maintain that meeting customer expectations is largely achieved through Reliability. However, the results differ with those reported by Pariseau and McDaniel (1997), who found that students from a private U.S. business school ranked Responsiveness as the second most important dimension with Tangibles last. The fact that Tangibles was ranked

second most important criteria in this study indicates their crucial role in the developing countries like Tanzania, which are infrastructural handicapped (Sheth, 2011). This dimension might have been taken for granted in developed countries (Manjunatha & Shivalingaiah, 2004).

The implication is that understanding students' preferences along service quality dimensions reveal their priorities and addressing the same would reduce the gaps in service quality. Thus, the greatest improvement in service quality would be achieved through service reliability. Therefore, management of higher education institutions in Tanzania should improve reliability by ensuring that services are delivered on time, accurately, and as promised. Palmer (2011) maintains that channeling quality efforts and resources to the most important dimension has the greatest impact on perceived service quality and customer satisfaction. Furthermore, the findings of the measurement of the relative importance of five SERVQUAL dimensions demonstrate that Tanzanian students are able to make the necessary distinctions among the dimensions of service quality.

**Conclusion and Recommendations:** The study findings provide evidence that Tanzanian higher education institutions do not perform as per students' expectations. Negative gap scores for both universities suggest that there is room for improvement across all dimensions of service quality. However, since Reliability dimension was ranked, by students, as the most important dimension of service quality, followed (in descending order) by: Tangibles, Assurance, Empathy, and Responsiveness, service quality improvement in Tanzanian higher education institutions should be prioritized in this order: Reliability, Tangibles, Assurance, Empathy, and Responsiveness. This means that Tanzanian higher education institutions should provide promised services on time, dependably, and accurately, and should manage students' expectations by not raising them with false or unrealistic promises. They should also be equipped with appealing physical facilities, equipment, personnel, and communication materials.

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