

Measuring Service Quality: The Student As Primary Consumer

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ABSTRACT

Competition in the educational market is increasing at a rapid rate. With e-education and the increasing globalisation taking place, universities are competing more and more for student numbers. Service quality has become one of those factors that differentiate institutions from one another. As a result, higher education institutions can use service quality as a competitive advantage to ensure that they stay the first choice in the minds of potential students. It is a known fact that many consumers and students will support a product or university based on the level of service they receive. It is for this reason that universities will benefit from research into service quality and the importance that students attach to this.

In this study, student satisfaction towards the quality of the service received was measured in terms of appearance of the higher education's physical facilities, equipment, staff and communication materials by using the SERVQUAL model. The results may assist higher education institutions to focus on the unknown, yet important elements of the tangibility element in order to improve the students' overall satisfaction. The results indicated that students' perception about the tangibility of the service, as well as the overall level of satisfaction of the service received, is slightly above average.

Keywords: Service Quality; Higher Education; Students' Perception; SERVQUAL; Satisfaction; Tangibility

INTRODUCTION

Higher education has become a worldwide business and institutions have to endlessly search for more ideas in order to distribute their services (Yousapronpaiboon, 2013). In today's business environment, organisations are finding it more and more difficult to survive and service managers understand that improving service quality is important for gaining a competitive advantage over its competitors (Baron, Harris & Hilton, 2009). Poor service quality in the educational field can place higher education institutions at a disadvantage to other institutions who offer good service, which may result in students looking at alternatives (Lovelock & Wirtz, 2011). This can be extremely dangerous as students are becoming increasingly important to higher education institutions, as they are their biggest assets (Wright & O'Neill, 2002).

Service quality plays an important role in any organisation and the provision of quality service could increase an organisation's profitability, consumer satisfaction, consumer retention, consumer attraction, and consumer loyalty (Abdullah, 2006; Nadiri, Kandampully & Hussain, 2009; Voss, Gruber & Szmigin, 2007). In a similar way, service plays a crucial role in educational institutions. Previous research on service quality in higher education primarily concentrated on higher education as a whole and not really on the service experience of the student.

This research study aims to answer the important question, "Can students' perception of the tangibility of the service quality improve the students' overall satisfaction of the higher education institution?"

The findings of this research study are expected to assist higher education institutions not only in South Africa, but also worldwide, to develop new strategies to create student satisfaction and to deliver better quality

service. It can safely be assumed that the findings of this study will be applicable to higher educational institutions worldwide. Therefore, this study aims to achieve the following research objectives:

- Objective 1: To correlate students' perception of the quality of the service received from the higher education institution with their overall level of satisfaction.
- Objective 2: To identify the students' perception in terms of the tangibility of the quality of the service provided.

DISCUSSION

Overall Student Satisfaction

Satisfaction can be described as a process where aspects such as expectations, perceptions and emotions are part of the satisfaction process (Eakuru & Matt, 2008; Rust & Olivier, 1994). Consumer satisfaction is the degree to which the product or service offering met or surpassed the consumer's expectation (Cant & Van Heerden, 2013). The opposite of satisfaction is dissatisfaction or disappointment – when the product or service does not meet the needs and expectations of the consumer. Therefore, in the case of higher education, consumer satisfaction is the sensation a student will develop as soon as his or her expectations have been met or exceeded.

As stated by Kattara, Weheba and El-Said (2008), perceived quality is a forerunner for consumer satisfaction, while other authors see satisfaction as a straight forerunner for perceived quality. Many studies have suggested that satisfaction is the result of excellent service quality and assumed value; consequently, it can be said that service quality and perceived value are forerunners for consumer satisfaction (Ali, 2007; Hutchinson, Fujun & Wang, 2009). Therefore, the following hypothesis is stated:

H_{I(alt)}: There is an affirmative association between the student's perception of the quality of consumer service received and the overall level of student satisfaction.

According to Cant and Van Heerden (2013), quality is defined in terms of consumer satisfaction and it is the organisation's performance to deliver on consumer expectations. Therefore, service quality depends on perceived performance and expectations.

The Concept Of Service Quality

In the early 1980s, research on service quality increased rapidly. Various researchers suggest that service quality involves an evaluation of performance and expectations (Yousapronpaiboon, 2013). There are five characteristics that distinguish a service from a product - intangibility, inseparability, lack of ownership, perishability and heterogeneity (Boshoff, 2013). The same applies for the service that is delivered by higher education institutions. Intangibility poses challenges as services cannot be touched or tasted; however, it can be overcome when the higher education institution creates a strong image that can decrease the level of risk professed by students. Services are inseparable from the person delivering the service and the student receiving the service. Also, every service encounter differs from the other as services are heterogenic. As services cannot be stored, it is vital that the best service is delivered the first time round to satisfy the students. Students purchase the right to receive a service from higher education institutions; however, no transfer of ownership takes place.

Quality is a word that is used interchangeably every day. It is very important that high quality services are delivered to consumers. It is also important to know that quality has different meanings to different people. Service quality is a consumer's evaluative result about the degree of superiority of the service performance (Machado & Diggines, 2012).

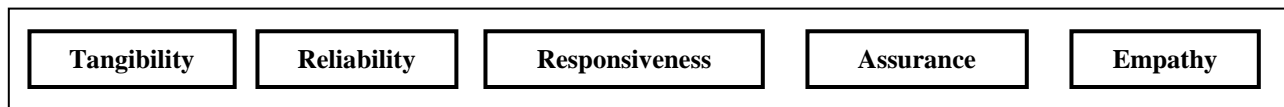
The variance between a student's expectation of a service and their perception of the service received can be defined as service quality in higher education (Voss *et al.*, 2007). Students are the primary consumers in higher education institutions and are aware of their student rights and, therefore, can govern if their service expectation have been met (Darlaston-Jones, Pike, Cohen, Young, Haunold & Drew, 2003). Being aware of and understanding

students' perception, higher education institutions could be in a better position to handle these perceptions (Voss *et al.*, 2007:949-959). When students at a higher education institution are satisfied with the service they receive, it could create positive word-of-mouth for the institution that could lead to student loyalty and the attraction of new students, which may lead to existing students coming back to register for future courses.

Service quality from the consumers' perspective is ruled according to how well a service meets or surpasses expectations (Fisk, Grove & John, 2004). Consumer expectations are essential to the delivery of any service (Cant in Boshoff, 2013). Therefore, all students enter a service encounter with some sort of expectation of what will happen during that service encounter.

Servqual Defined

When students evaluate the quality of the services received from a higher education institution, students will base their assessment on a number of measures. SERVQUAL is used to assist as a logical methodology for revealing general areas of an organisation's service quality weaknesses and strengths. SERVQUAL'S dimensions embody core assessment criteria for organisations when measuring the quality of their service (Parasuraman, Berry & Zeithaml, 1991). It is an instrument used to measure consumers' perception of service quality by using the following measuring instruments: tangibility, reliability, responsiveness, assurance and empathy (Parasuraman *et al.*, 1991).



Source: Machado & Diggins (2012)

Figure 1: Dimensions Of Servqual (Measuring Instruments)

- *Reliability* - the skill to execute a promised service consistently and truthfully
- *Responsiveness* - the readiness of the organisation to listen to the consumer and do what the consumer wants
- *Empathy* - thoughtfulness and the degree to which consumers receive customised service from employees
- *Tangibility* - the physical conveniences, equipment and look of employees. Tangibility can be broken down into two parts. Questions one and two focus on the equipment and physical features and questions three and four focus on employee and communication materials (Parasuraman *et al.*, 1991).
- *Assurance* - the information, ability and politeness of service employees and their capability to motivate hope and sureness

The SERVQUAL dimensions measures consumers' expectations and assessment of a certain performance (Cant in Boshoff, 2013). For this research study, there will only be focus on the students' perception of service quality and not on their expectations. The reason for this is the fact that students form their own perceptions of the experienced service and it might be important for higher education institutions to know exactly what these perceptions of the students' are, as this might lead to potential students in the future. Every individual student has specific expectations about a service; however, this is before the actual service took place. Therefore, the perceptions they have formed after the actual service delivery is very important.

Service quality is therefore a multidimensional concept. Consumers use the dimensions (measuring instruments, as mentioned above) of service quality to base their service quality assessments. This study focuses only on the tangibility element to determine how the students perceive the institution's physical facilities, equipment, staff and communication materials. The tangible elements of an organisation have a significant influence on the consumer and work as physical indicators of the envisioned service quality (Machado & Diggins, 2012).

The SERVQUAL model consists out of 22 questions to measure the five quality dimensions mentioned above. Out of the 22 questions, only four were used to determine the perceptions in terms of the tangibility dimension. In Table 1, the four questions are assembled in terms of the tangibility dimension.

Table 1: Questions In The SERVQUAL Measurement Instrument

Tangibility Due to the lack of physically touching the service, consumers use the physical evidence of the environment to make service quality conclusions.	
1	Contemporary and up to date equipment.
2	Visually appealing facilities.
3	Neatly dressed employees.
4	Visual appeal of supplies.

Source: Yousapronpaiboon (2013)

By taking the above elements of SERVQUAL into consideration, the following hypothesis was formulated:

H_{2(alt)}: There is an affirmative association between the perceived tangibility of the service provided and the overall level of student satisfaction.

Even though SERVQUAL was developed in the 1980s, it is still one of the best models to expansively assess service quality. Other models to assess service quality include HEDPERF (Higher Education PERFORMANCE only) and SERVPERF. Although HEDPERF and SERVPERF are also valuable, the SERVQUAL technique is more suitable as it measures not only consumer perceptions, but also consumer expectations.

Students’ Perceptions In Terms Of Service Quality

Perceptions can be defined as “... the process by which people select, organise and interpret stimuli to the five senses of sight, sound, smell, touch and taste in order to create a meaningful and logical picture of the world around them” (Joubert, 2013). It can therefore be inferred that consumer perceptions in higher education are the subjective conclusions about the actual service experience by being in contact with the higher education institution (Zeithamal in Brochado, 2009).

Quality in higher education is a multifaceted and complex theory (Harvey & Green, 1993). O’Neill and Palmer (2004) describe service quality in higher education as “the difference between what a student expects to receive and his/her perceptions of actual delivery”. If higher education institutions understand the perceptions of their primary consumers – their students, it could contribute to the students overall level of satisfaction (Kara & DeShields, 2004).

METHODOLOGY

Sampling

Undergraduate students in their first and third years were the chosen target for this research study which was conducted in South Africa. Due to the fact that the University is an International institution, students could have been from various countries; however, they were mostly South African. The findings are applicable to all similar institutions as there will be great similarities between students’ perceptions of this nature.

In this study, quantitative research was conducted and a non-probability sample was chosen. A technique called quota sampling was used in order to improve the representativeness of the sample (Cooper & Schindler, 2008). The researchers used quota samples to obtain a large number of completed questionnaires quickly and economically. This method was also chosen for the reason that getting a sample through other means is unfeasible due to time and financial constraints (Zikmund & Babin, 2007).

There were a variety of ways to choose respondents. The researchers decided to group the respondents into gender and year of study. Therefore, gender and year of study were two groups that could easily divide students. Out of the 200 respondents, 100 were male and 100 were female; this was done in order to interpret both genders’ opinions. To get a representative sample out of the two years of study, 100 respondents were chosen out of the first-year group and 100 were chosen out of the third-year group.

Data Collection

Data for this research study were collected by the distribution of a self-administered questionnaire. This method was chosen by the researchers due to the fact that it was an inexpensive means of collecting data, the sample was very accessible, and it was less time-consuming than the other methods (Cooper & Schindler, 2008). It was an anonymous form of data collection.

The questionnaire for this study was pre-tested using the participant pretesting option (Cooper & Schindler, 2008). The questionnaire was field-tested by participants who had similar features and backgrounds and it was distributed in the exact same manner as it was in the actual study. Ten undergraduate students at a higher education institution in South Africa were asked to participate in the pre-testing phase.

Measures

The constructs of this study (tangibility and the overall satisfaction level) were measured through the use of 5-point Likert scales, a semantic differential scale, and a constant sum scale. All were multiple-choice, single-response questions. These scales were based on those used in previous research by Wright and O'Neill (2002).

In order to determine the reliability of the questionnaire, Cronbach's coefficient alpha was used, which is the most applicable method due to the fact that the questionnaire consists of a 5-point Likert scale. A value of 0.92 was achieved; therefore, sufficient internal consistency reliability was obtained.

RESULTS

Descriptive Statistics

The students' perception of the overall service quality is above average, with an average of 3.56 on the 5-point Likert scale. Therefore, it suggests that the students' perception of the service quality lie between "neither agree nor disagree" and "agree". One can imply that the average of 3.56 on the 5-point Likert scale falls more towards "agree" instead of "neither agree nor disagree". As a result, the students are, on average, satisfied with the perceived service quality.

The students' overall satisfaction with the service received from the student administration was measured at a mean of 6.60. This suggests that the average leans towards the excellent label (between 6 and 7 on the 10-point semantic scale). Figure 2 illustrates the percentages of each of the responses from one to ten. The majority of the respondents (75%) represent a scale of seven on the semantic scale from one to ten.

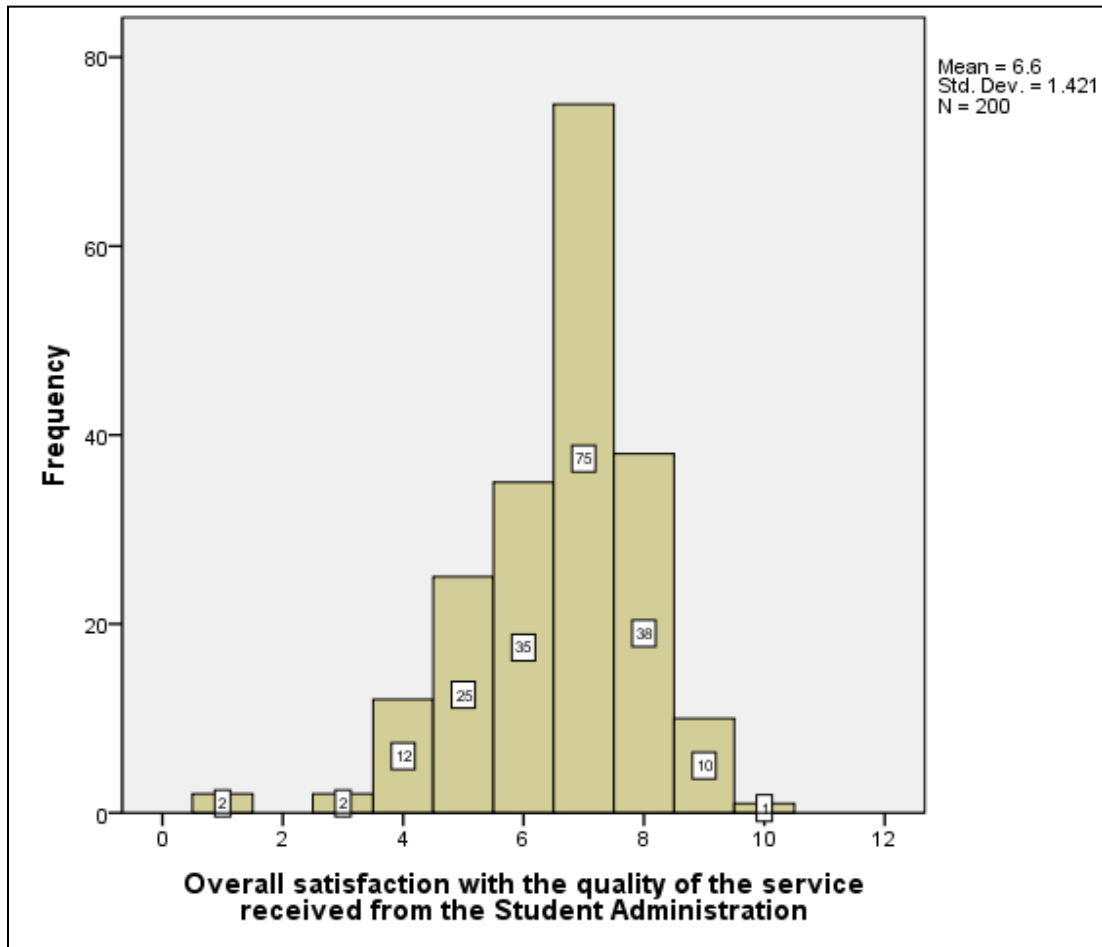


Figure 2: Overall Student Satisfaction

Hypothesis Tests

Hypothesis 1

The first hypothesis (H_1) focuses on the association between the students’ perception of the quality of consumer service received and their overall level of satisfaction. The null and the alternative hypotheses (H_1) are stated below:

$H_{1(null)}$: There is no affirmative association between the students’ perception of the quality of consumer service received and their overall level of satisfaction.

$H_{1(alt)}$: There is an affirmative association between the students’ perception of the quality of consumer service received and the overall level of student satisfaction.

This one-tailed hypotheses was tested at a 5% level of significance ($\alpha = 0.05$).

Table 2 describes the descriptive statistics for the students’ perception of the quality of the service received and their overall level of satisfaction.

Table 2: Descriptive Statistics For The Students' Perception Of The Quality Of The Service Received And Their Overall Level Of Satisfaction

	<i>N</i>	<i>M</i>	<i>SD</i>
Overall satisfaction	200	6.60 (10 point scale)	1.42
Total quality	200	3.56 (5 point scale)	0.52

The expectation of H_1 suggests that there should be a positive correlation between the students' perception of the quality of the consumer service received and their overall level of satisfaction. The results above imply that there is, in fact, a positive correlation due to the fact that the students' overall satisfaction rating ($M = 6.60$) is above average, leaning towards the "excellent" label, although the ideal would be a higher rating. The total quality ($M = 3.56$) suggests that the students' perception about the quality of the consumer service received is above average, leaning towards the "strongly agree" label, although the ideal would be an average rating of four or five.

The students' perception of the quality of the consumer service received and their overall level of satisfaction was measured at an interval level of measurement. The appropriate parametric significant test is person's product moment correlation which is based on two assumptions; namely (Green & Salkind, 2005):

- The variables have to be normal (test of normality).
- A linear relationship has to be visible between the variables that are associated (test of linearity).

For the first assumption, Kolmogorow-Smirnov tests for normality were used to test the assumption of normality. A visual inspection of histograms and normal probability plots was also done. The histogram and the normal probability plots for both the variables (overall satisfaction and total quality) showed that they do not have a normal correlation.

The second assumption - that of linearity - was conducted in order to indicate whether there is a linear relationship between the two variables being correlated (overall satisfaction and total quality). The assumption was tested through the visual inspection of a scatter plot. The data points in the scatter plots form a cloud - not a cigar shape - around the regression line. This indicates that there is a positive, but relatively frail, association between the two variables. The fact that the regression line has a sure upward slope indicates that there is a positive association (even though it is weak) and also proposes that the relationship is linear.

Due to the above discussed results, it would be appropriate to use the Spearman rank order correlation. Spearman's correlation coefficient is a non-parametric statistic and can be used when the data have desecrated parametric assumptions. These assumptions include non-normally distributed data. The test works as follows: first rank the data and then apply Pearson's equation to the ranks (Field, 2005).

The correlation matrix in Table 3 shows the correlation of the two variables with each other and with themselves. The table indicates the values of the correlation coefficients and their p-value. One has to determine if the correlation between the overall satisfaction and the total quality is statistically significant or not. The p-value is given in the row labelled "Sig. (1-tailed)" as 0.00. This suggests that the p-value is smaller than 0.05 and that the null hypothesis can be rejected and the alternative hypothesis can be accepted. Therefore, it can be concluded that there is a significant correlation between these two variables.

The correlation coefficient indicates that the direction is positive and that the strength (0.52) of the correlation between the two variables is weak according to the "rules of thumb" proposed by Burns and Bush (2006).

Table 3: Non-Parametric Correlation Of H₁

			Overall Satisfaction	Total Quality
Spearman's rho	Overall satisfaction	Correlation Coefficient	1.00	0.52
		Sig. (1-tailed)	.	0.00
		N	195	195
	Total quality	Correlation Coefficient	0.52	1.00
		Sig. (1-tailed)	0.00	.
		N	195	195

A weak strength positive correlation was found between the two variables (total quality and overall satisfaction), $r(193) = 0.52, p \leq 0.0005$.

Hypothesis 2

The second hypothesis (H₂) focuses on the association between the perceived tangibility of the service provided and the students' overall level of satisfaction. The null and the alternative hypotheses (H₂) are stated below:

- H_{2(null)}:** There is no association between the perceived tangibility of the service provided and the overall level of student satisfaction.
- H_{2(alt)}:** There is an affirmative association between the perceived tangibility of the service provided and the overall level of student satisfaction.

Table 4 describes the descriptive statistics for the students' perception of the tangibility of the service provided and their overall level of satisfaction.

Table 4: Descriptive Statistics For The Students' Perception Of The Tangibility Of The Service Provided And Their Overall Level Of Satisfaction

	N	M	SD
Overall satisfaction	200	6.60 (10 point scale)	1.42
Total tangibility	200	3.67 (5 point scale)	0.55

The expectation of H₂ suggests that there should be a positive correlation between the students' perception of the tangibility of the service provided and their overall level of satisfaction. The results above imply that there is, in fact, a positive correlation due to the fact that the students' overall satisfaction rating ($M = 6.60$) is above average, leaning towards the "excellent" label, although the ideal would be a higher rating. The total tangibility ($M = 3.67$) suggests that the students' perception about the tangibility of the service provided is above average leaning towards the "strongly agree" label, although the ideal would be an average rating of four or five.

The students' perception of the tangibility of the service provided and their overall level of satisfaction were measured at an interval level of measurement. The appropriate parametric significant test is person's product moment correlation. The histogram and the normal probability plots for both the variables (overall satisfaction and total tangibility) showed that they do not have a normal correlation.

The data points in the scatter plots form a cloud – and not a cigar shape - around the regression line. This indicates that there is a positive, but very frail, association between the two variables. The fact that the regression line has a definite upward slope point out that there is an affirmative association, even though it is weak.

Due to the above discussed results, it would be appropriate to use the Spearman rank order correlation.

The correlation matrix in Table 5 shows the correlation of the two variables with each other and with themselves. The table indicates that the p-value is smaller than 0.05 and that the null hypothesis can be rejected and the alternative hypotheses can be accepted. Therefore, it can be concluded that there is a significant correlation between these two variables.

Table 5: Non-Parametric Correlation For H₂

			Overall Satisfaction	Total Tangibility
Spearman's rho	Overall satisfaction	Correlation Coefficient	1.00	0.34
		Sig. (1-tailed)	.	0.00
		N	195	195
	Total tangibility	Correlation Coefficient	0.34	1.00
		Sig. (1-tailed)	0.00	.
		N	195	195

A very weak, but positive, correlation was found between the two variables (total tangibility and overall satisfaction), $r(193) = 0.34, p \leq 0.0005$.

SUMMARY OF FINDINGS

Student satisfaction towards the quality of the service received from the higher education institution was measured in terms of tangibility. This was done in order to determine how the students perceive the appearance of the student administration's physical facilities, equipment, staff and communication materials. The result of this study could assist administrators and academics of higher education institutions to distribute their resources accordingly.

The results indicated that students' perceptions about the quality of the service, as well as the overall level of satisfaction of the service received, are slightly above average. Even though this suggests that the students are not unsatisfied, there is still a lot of room for improvement in order to satisfy them completely. The results indicated that the male students, together with the first-year students, were more satisfied regarding their overall perceptions about the quality of the service received from the student administration.

The study indicates that it is important to understand the students' perceptions in terms of service quality in order to achieve a high level of satisfaction. Therefore, higher education institutions in South Africa could use the results of the SERVQUAL model to better their service offering in the areas where the students are not completely satisfied.

Higher education institutions can benefit from and obtain a competitive advantage above other higher educational institutions by providing excellent quality service that could improve the overall student satisfaction.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future researchers could focus on the benefits a faculty could receive when delivering an exceptional service to their students. They could also study the needs and expectations of students in higher education institutions in order to determine its importance to service quality.

This study's results have indicated that the first-year students, as well as the males, are, on average, more satisfied with the overall service quality. One can do a future study to determine if in fact it is the truth and the reason behind it.

AUTHOR INFORMATION

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