SERVICE TANGIBILITY, TEACHING AND LEARNING, AND STUDENTS' SATISFACTION AT THE UNIVERSITY OF NAIROBI, KENYA

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Abstract

To sustain a learning society that understands and deals appropriately with herself and the rest of the world, higher education institutions must provide efficient and effective services. Research demonstrates that in service organisations, service tangibility has a powerful influence on customers' evaluation of the services provided. Students tend to rely on tangibles cues to evaluate quality of academic services. This study endeavoured to establish the indirect relationship between student satisfaction and tangibilities related to teaching and learning at the University of Nairobi. The study employed cross-sectional correlational survey designs. All the 7,173 Fourth Year on-campus undergraduates in the 6 colleges were targeted. Using stratified random, simple random, and purposive sampling methods, 379 students were selected. Data were collected using student questionnaires. Factor by factor analysis revealed that out of the 11 tangibility factors, 3 had strongest loadings; library should have adequate learning materials (.896); there should be adequate learning spaces (.802); and examinations should be set within course content taught (.770). Using a seven point Likert scale, Item–by-item gap score mean indicated that students were more dissatisfied with the conditions in the hostels (-2.92); equipment in the computer laboratories (-2.44); and the state of the equipment in the campuses (-2.39). The overall service quality gap score was negative (-2.11); meaning that students were generally dissatisfied with the service tangibility. Pearson correlation showed a significant moderate, positive association between service tangibility and student satisfaction (r = .483, N = 358, p = .01). Therefore, an increase in improvement in tangibilities resulted to increase in student satisfaction with teaching and learning facilities. It was concluded that although all the tangibility factors had negative scores, overall, student were moderately satisfied. The University management needs to develop a facilities improvement program.

Key words: Tangibility dimension, Student satisfaction, Quality Service, Teaching, Learning

I. INTRODUCTION

In the 21st century, higher education is considered a service delivery industry. This perspective requires universities to lay greater emphasis on satisfying the needs of students who are their primary customers (Huang, 2009). Studies also show that service quality is a vital instrument for enhancing student satisfaction with teaching and learning services at universities. Zeithaml et al (2009) observed that in an effort to increase student satisfaction, most universities endeavour to improve along the five dimensions of SERVice QUALity (SERVQUAL) including reliability, assurance, empathy, responsiveness and tangibles. This is because of the greater realization that student satisfaction influences student motivation, retention, recruitment efforts, and fundraising, hence raising university image (Schreiner, 2009). To this extent, measuring student satisfaction has become an important determinant of service quality at universities. Indeed guaranteeing student satisfaction is crucial in facilitating fulfillment of university core business of teaching in an effective and efficient way.

In defining the term service quality, Parasuraman et al (1988) opined that service quality is based on customers' comparison of their expectations (what they feel service providers should offer) with their perceptions of the performance of the service provider. Oliver (2010) clarified that service quality is the 'fulfillment response' that results from customers' objective evaluation as well as their emotion-based response to a service. Therefore, the construct of 'quality' is a 'perceived quality' (Hasan et al, 2008); and perceived quality is the ability of a 'service' to meet or exceed customer satisfaction (Veljkovic, 2009). In higher education settings, service quality is the difference between what a student expects to receive and his perceptions of the actual services delivered (O'Neill & Palmer, 2004). Therefore, student satisfaction is a function of a perceived service quality that results from evaluations of experiences with lecturers, examinations, courses offered, library, support staff, hostels, lecture rooms, and laboratories among others. Since most services are intangible, customers mainly depend on tangibles cues to evaluate service quality.

The relationship between quality teaching and learning, quality service and student satisfaction is imperative to the survival of educational institutions. However, most studies tend to measure the direct link between service quality and satisfaction without linking to academic quality (Abili et al., 2012; Asaduzzaman et al., 2013; Dib & Alnazer, 2013). Therefore there is a clear gap of indirect link of student satisfaction, teaching and learning processes, and service quality of higher education institutions. This study addresses this gap, with service tangibility considered as a mediating variable. Universities use a number of models to measure student satisfaction. Most researchers in education employ SERVQUAL model (gap model), which is the most popular for measuring student satisfaction and services offered (Ghotbabadi et al, 2015; Yarimoglu, 2014). Sometimes, SERVQUAL model is specifically adapted for the education sector (Gatfield, 2000; Wright & O'Neill, 2002).

Students of the University of Nairobi come from different backgrounds, therefore, their expectations and perceptions of satisfaction with service tangibilities that enhance teaching and learning may differ.

The University being a World Class University competes for students not only with the local universities but also with international universities. Consequently, student satisfaction with tangible facilities that enhance teaching and learning process plays a crucial role for the success of the University. This study endeavored to determine student satisfaction with service tangibilities that enhance teaching and learning among undergraduate students at the University of Nairobi**.**

II. LITERATURE REVIEW

Student Satisfaction in the Context of Higher Education Institutions

The copious literature in the field of customer satisfaction bears a number of definitions about satisfaction. The many definitions arise from the different aspects of satisfaction including satisfaction with the events that happen during consumption; satisfaction with the outcome; and satisfaction with the level of satisfaction attained. Satisfaction can be seen as either an outcome or a process. As an outcome, satisfaction is an end-state resulting from consumption of an experience and as a process, the perceptual, evaluative, and psychological processes that contribute to satisfaction are emphasised.

Other authors conceptualise satisfaction within the expectancy-disconfirmation paradigm. Cronin and Taylor (1994) defined customer satisfaction as the difference between one's expectations of service performance and an evaluation with the actual outcomes of service delivery.

In this model, if performance is higher than expectations then the customer is satisfied. Conversely, if performance is less than expectations the consumer becomes dissatisfied. Oliver (2010) stated that satisfaction is the consumer's fulfillment response. He further explained that satisfaction is a subjective evaluation of a performance related to a standard which when that standard is fulfilled results in satisfaction or in dissatisfaction when the standard is not fulfilled. The pleasurable level of under- and over-fulfillment describes the situation where performance is a little less or a little above the standard, but still results in satisfaction. In this paradigm, consumers make judgment on a service performance against their pre-conceived expectations. The comparisons results in either confirmation (satisfaction) or disconfirmation (dissatisfaction).

Huang (2009) argues that students are the customers or clients within a college and colleges should endeavour to fulfill students' expectations and needs. There have been numerous attempts to define the concept of satisfaction in relation to services offered in higher education (Navarro et al. 2005). Some authors argue that student satisfaction is driven by evaluating the quality of coursework, other curriculum activities, and other factors related to the university. Elliot and Healy (2001) aver that students' satisfaction is a short-term attitude that results from the evaluation of their experience with the education services received.

Tangibility is the appearance of physical factors such as equipment, facilities used by a service based institution, and the appearance of service employees. Osman and Sentosa (2013) aver that tangibility is the appearance that service providers give in terms of facilities, equipment, personnel, and communication materials when delivering services.

In most SERVQUAL dimension – by – dimension studies, customers have expressed highest satisfaction with service tangibility dimension. Price et al. (2003) found that students' perceived image of a university's facilities influenced their decision to enroll in the university. The students cited adequacy of courses, accessibility to computers, appropriateness of library facilities, good teaching reputation, comfortable independent-study areas, and positive attitude towards students as the main aspects that they considered. Students' satisfaction decreased when class sizes increased when taking compulsory core courses (Coles, 2002). Physical environment including, design of buildings and grounds, size of classrooms and general cleanliness influenced Saudi Arabian university students' perceptions of service quality (Sohail & Shaikh, 2004).

However, researchers differ in their opinions on the significance of service tangibility. Hishamuddin et al. (2009) studied private higher education institutions in Malaysia and found that out of the five SERVQUAL dimensions, tangibility had the lowest score. Tangibility dimension also ranked third ($\alpha = 0.896$) after reliability ($\alpha = 0.931$) and responsiveness ($\alpha = 0.909$) in a study conducted among Kenyan public and private universities. The variation elements in the Kenya study included appearance of lecture rooms, library facilities, use of technology during lectures and adequacy of computers among others (Owino et al., 2014). In an earlier study, O'Neill and Palmer (2004) opined that with regard to general performance, tangibility scored low compared to process and empathy. These inconsistent results call for further investigation on the tangibility service dimension to ascertain its significance on student satisfaction.

Quality of Teaching and Learning Facilities and Student Satisfaction

Higher education institutes need to make sure that they offer quality education that conforms to the expectations of students.

This is because satisfaction can motivate students to work harder in their academic work to achieve quality grades. Quality education requires effective facilities, that is, well designed facilities in good condition to support educational processes and objectives. Daigneau (2006) avers that facilities provide a physical environment that supports teaching and learning processes, establishes a visual statement about the quality and viability of the institution, and creates an 'academic' community. Mohd & Zarita (2012) add that physical assets and facilities give educational institutions their complete shape and teaching and learning environment.

In a study conducted by Sapri et al. (2009), it was found that of all the physical facilities studied that relate to academics, students were most satisfied with the library; a place where students conduct their private studies. However, Ndirangu and Udoto (2011) found that the quality of libraries, online resources, and lecture facilities provided by Kenyan public universities were unable to support the desired educational programmes effectively and facilitate the development of learning environments that support students and teachers in achieving educational goals.

III RESEARCH OBJECTIVES

The objectives of the study were:

(a) To determine students' satisfaction with tangibilities related to teaching and learning at University of Nairobi.

(b) To determine students' overall satisfaction level with service tangibilities related to teaching and learning at the University of Nairobi.

Null Hypothesis

$H0_1$ There is no significant relationship between service tangibilities related to teaching and learning and overall student satisfaction level at the University of Nairobi.

Theoretical Framework

The researcher used the disconfirmation paradigm that is based on discrepancy theories. In the disconfirmation theory, Oliver (1980) postulates that customer satisfaction is measured using customers' expectations and perceptions to determine their positive, negative or zero disconfirmations of a service quality. The expectancy-disconfirmation theory is the most dominant theory for explaining customer satisfaction (Oliver, 2010; Phillips & Baumgartner, 2002). The theory postulates that customer satisfaction is determined by the difference between expected performance and actual performance. When a customer's expectations are met or exceeded, the customer experiences positive disconfirmation that leads to increased satisfaction. If performance is worse than expected, the customer is dissatisfied and experiences negative disconfirmation. This framework is widely accepted and tested by several researchers like Phillips and Baumgartner (2002); and Yi and La (2004). The questionnaire items that measured student satisfaction levels with service tangibility at the University of Nairobi were based on this theory.

Conceptual Framework

A conceptual framework is a tentative theory of what is being examined. According to Robson (2011) a conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs research. Figure 1 is a diagrammatic representation of the variables of the study and their hypothesised relationships. The relationships are depicted in terms of a results chain.

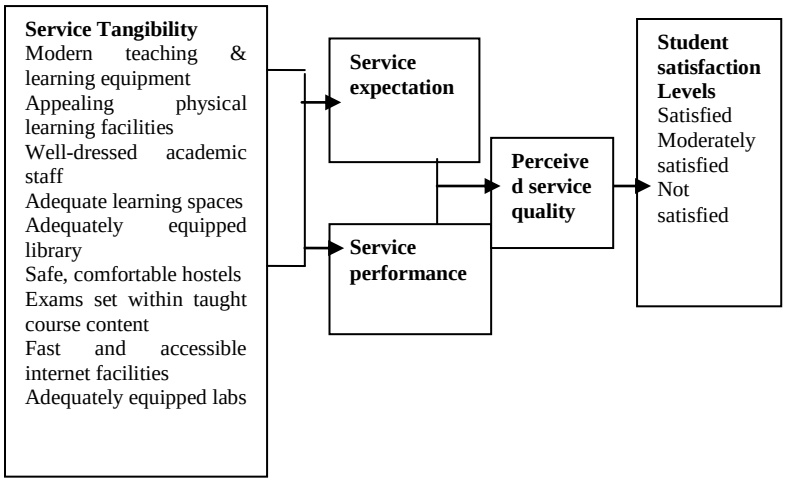

Figure 1: *Quality of Teaching and Learning Tangibilities, and Student Satisfaction*

The input-process-output framework depicted in Figure 1 represents the interaction of the study variables. The conceptual framework is adopted from Parasuraman et al. (1988) model. The 'input' refers to the service tangibility dimension of the SERVQUAL model and it forms the independent variable in this study. The 'process' is the service delivery process whereas 'output' refers to the satisfaction levels of the students, which is the dependent variable. When service tangibility rendered by the university meet or exceed the expectations of the students, (service expectation) they become satisfied. If the students' expectations are not met (gap), they become dissatisfied. Universities are expected to be responsive to the needs of students, therefore, they can manipulate their environment to improve the quality of the physical facilities that enhance teaching and learning and satisfy students' needs.

IV METHODOLOGY

This study employed cross-sectional, correlational survey designs. The study fitted within these designs because data were collected once across all the students using survey methods; a self-administered questionnaire to help describe, show relationships, and determine strength of associations among the study variables.

The study targeted 7,173 Fourth Year on-campus undergraduates spread out in the 6 colleges of the University of Nairobi (Registrar's Office Main Campus, 2017). Fourth Year students were chosen because they had the longest stint with university life and possessed more experiences on services offered in the university. Students of the Open, Distance and e-Learning (ODeL) Campus were excluded from the study because they do not reside within the precincts of University and much of their learning is conducted on facilities not necessarily owned by the University. Using the sampling frame in Table 1, a sample size of 379 students for the study was determined through Yamane (1967) formula ,assuming a variability of 0.05 and a confidence level of 95%. The Students sample was then stratified according to colleges and simple random sampling method was employed to select individuals to fill out questionnaires. Table 1 presents the sample size for questionnaire respondents.

Table 1
Sample Distribution

College Name	Population	Sample size
College of Education and External Studies	769	41
College of Agriculture and Veterinary Services	756	40
College of Humanities and Social Sciences	3,656	193
College of Health Sciences	639	34
College of Biological and Physical Sciences	576	30
College of Architecture and Engineering	777	41
TOTAL	7,173	379

The researcher designed and pre-tested a students' questionnaire. The students' questionnaire was adapted and adopted from Parasuraman et al. (1988) questionnaire. The questionnaire design was in line with the SERVQUAL model, which is characterized by simultaneous but separate measurements of the customer's expectations and perceptions of service quality. Both parts (customer's expectations and customer's perception) consisted of 11 items on tangibility factors.

The respondents were required to rate the items using a seven-point Likert scale denoted only on the extremes from "strongly agree" that corresponded to a value of 7 to "strongly disagree" that corresponded to a value of 1. Questionnaires helped to reduce bias, enhanced credibility, and were important in gathering primary data from the large number of students within a short time.

To ensure validity, the researcher developed the instruments using similar questions to those from research studies measuring student satisfaction with service tangibility. Nsubuga (2000) advocated for use of expert judgement method to assess content validity. Two assessors rated the questionnaire items on a scale of 1 to 4 using the formula:

CVI $=\frac{n_{3/4}}{N}$, $n_{3/4}$ were the items rated 3 or 4 by both assessors; and *N* was the total items in the instrument (Oso, 2013). This method had advantage with regard to ease of computation, focus on agreement of relevance, and provision of both item and scale information. A pre-test of the instruments was conducted with 60 students; ten from each college, further improved content, construct, and face validity of the instruments. Cooper and Schindler (2011) opine that a sample size of between 25 to 100 respondents suffices for a pre-test.

Internal consistency method was used to ascertain reliability of the questionnaires. Internal consistency is the extent to which test items are related to other test items for them to measure a single construct (Best & Kahn, 2011). All constructs exhibited an alpha value of 0.7 and above and were retained (Cronbach, 2004).

Data analysis involved developing summaries, looking for patterns and applying statistical techniques. Using Statistical Package for Social Science Version 23, descriptive statistics were calculated to characterize all variables. Factor Analysis was run to explore and identify tangibility factors related to teaching and learning that had most influence on students' satisfaction. Two types of gap analyses were utilised; item-by-item and overall single measure of service tangibility (Buttle, 1996). The null hypothesis was tested using Pearson correlation at .05 alpha level of significance.

V RESULTS AND DISCUSSIONS

In order recognise the factors that had the most influence on students' perceptions on tangibilities that influence teaching and learning, Confirmatory Factor Analysis was conducted on the gap scores of the 11 items in the questionnaire. Confirmatory Factor Analysis is a method commonly used to investigate construct validity (Fournier-Vicente et al., 2008). Only factors with Eigen values greater than 1.0 and factor loadings of 0.4 and higher were considered and retained.

First, The Kaiser-Meyer-Olkin (KMO) measure was tested to ascertain whether the items were adequate to predict each factor. A value of zero shows that the sum of partial correlations is large relative to the sum of correlations and the factor analysis is likely to be irrelevant. A value close to one shows that patterns of correlations are relatively compact and factor analysis yield distinct and reliable factors (Field, 2005). Bartlett's Test of Sphericity tests strength of the relationship among variables at 0.05. The data set for student satisfaction analysis satisfied the KMO test at 0.806; confirming sampling adequacy. Kaiser (1974) recommends that for KMO values between 0.7 - 0.8 as acceptable. The Bartlett's test Chi square value of 235.356 was significant (0.001); hence, the correlation matrix was suitable for factor analysis. Taken together, these tests provided minimum standards that were necessary before a factor analysis was conducted.

Confirmatory Factor Analysis with principal components extraction and varimax rotation was conducted to assess the level of factorial validity in the 11 items of the service tangibility SERVQUAL dimensions. Gliem and Gliem (2003) advise researchers to calculate internal consistency of scales and sub-scales when using Likert type scale.

To test for suitability of the service tangibility dimension, reliability scale for all the 11 factors was calculated 'if item deleted' from the dimension. If Cronbach's alpha of the dimension increased when an item was deleted, it showed that that item was not genuine for the service tangibility dimension. Expectations and Perceptions items that had a Cronbach alpha coefficient of ≥ 0.7 were interpreted as acceptable; ≥ 0.8 as good; and ≥ 0.9 as excellent (Hair et al, 2010). All items had a lower value of reliability when item deleted except the Expectation statement 'employees should be well dressed and neat'. This meant the item was not a very reliable measure of service tangibility. Students were not so much concerned about the dressing of the employees. Nevertheless, the reliability coefficients of all the 11 items 'if item deleted' had coefficients above 0.7 and all items were retained. This meant that the items were a true measure of service tangibility dimension and could be relied on as a measure student satisfaction with the quality of the teaching and learning service offered by the University.

SERVQUAL gap scores were computed by subtracting Expectation scores from Perception scores (Quality = Performance – Expectation). The results facilitated an understanding and identification of the specific quality gaps in service tangibility at the University of Nairobi as perceived by Fourth Year students. All measurement items were rated using a seven point Likert scale consisting of Strongly agree =7; Agree = 6; Slightly agree = 5; Neutral = 4; Slightly disagree = 3; Disagree = 2 and Strongly disagree = 1. The modified SERVQUAL questionnaire contained 11 questions of Expectation and 11 questions of Perception with a possible range of values from -7 to +7 (-7 = very dissatisfied and +7 = very satisfied). The more positive the P - E scores, the higher the quality of service tangibility leading to a higher level of student satisfaction. Satisfaction and service quality are treated as functions of students' perceptions and expectations. In cases where expectation and perception are equal, service quality is satisfactory.

Two ways of gap score analysis suggested by Buttler (1996) were utilised in the study:

a) Item–by-item (P1 – E1, P2 – E2 … P11 –E11)

b) Overall single measure of service tangibility [(P1+P2 …+ P11)/11] – [E1+ E2 …+ E11)/11]

Where P1… represents the Perception statements and E1 … represent Expectation statements.

Item – by – item analysis

Findings of item – by – item analysis are contained in Table 5.

Table 5

Service Tangibility Perception and Expectation Means and Gap Score Mean

Statement	Perception mean score	
Modern college equipment	4.24	
Visually appealing physical facilities	4.09	
Well dressed and neat employees	4.35	
Appearance of facilities keep with services they offer	5.15	
Adequate learning spaces	4.40	
Adequate reference materials and texts in the library	4.30	
Safe and comfortable halls of residence	3.51	
Examination set within the course content taught	4.63	
Accessible and fast internet facilities	4.20	
Science lab adequately equipped with up-to-date equipment	3.85	
Computer lab adequately equipped	4.23	

The three items with the highest Expectation scores were: the internet facilities should be accessible and fast (6.57); there should be adequate learning spaces (6.56); and there should be adequate reference materials and texts in the library (6.51). The three items which students perceived service tangibility was high were: Appearance of facilities keeps with services they offer (5.15); Examination are set within the course content taught (4.63); and there are adequate learning spaces (4.40). The findings revealed that tangibility facilities that relate to teaching and learning tended to meet students' expectations; thus satisfaction. This result confirms Khan et al. (2011) observation that models for service quality dimension that rest largely on academic services

are likely to account for much in students' satisfaction.

The gap score mean revealed that out of the 11 items, students were more dissatisfied with the conditions and safety in the halls of residence (-2.92); science laboratories that did not have adequate and up-to-date equipment (-2.44); and equipments in the college that were not modern (-2.39). The data further indicates that in situations where Perceived service quality mean score is low, the gap score is high denoting more dissatisfaction with the item of the service tangibilities that enhance learning. The results of this study echo findings of studies conducted in various higher education institutions (Price et al, 2003; Sohail & Shaikh, 2004).

An overall single measure of service quality construct was calculated by subtracting the mean Expectation score from the mean Perception score from the 11 items of the simultaneous but separate measurements of the students' expectations and perceptions of service tangibility. Table 2 illustrates the findings.

Table 2
Service Tangibility Average Expectation and Average Perception Scores

	N	Mean	Std. Deviation	Std. Error Mean
Expectation average	358	6.12	.744	.045
Perception average	358	4.26	1.271	.072
Overall gap score		**-1.86**		

The overall service quality gap score was -1.86 showing that students were not satisfied with the service tangibility they received in the university. The findings relate to those of Hishamuddin et al (2009); O'Neill and Palmer (2004); Owino et al (2014); Qadri (2015) where tangibility service dimension was found as dissatisfactory.

Test of Hypothesis

The researcher examined the nature of the relationship that exists between tangibility dimension that offer services related to teaching and learning (independent variable) and student satisfaction with the same (dependent variable) using Pearson moment product correlation at .05 significant level. Since correlation is an effect size, the strength of the correlation was described using the guide suggested by Evans (1996) as indicated in Table 3.

Table 3

R- Values for Inter-correlations

R - Value	Relationship
.00-.19	very weak
.20-.39	Weak
.40-.59	Moderate
.60-.79	Strong
80-1.0	Very strong

$H0_1$ There is no significant relationship between service tangibilities related to teaching and learning and student satisfaction at the University of Nairobi.

A Pearson product-moment correlation was run to determine the relationship between service tangibility and extent to which students were satisfied with the tangibility services related to teaching and learning offered at the university. The results are presented in Table 4.

Table 4

Relationship Between Service Tangibility and Student Satisfaction

		Tangibility gap	Mean total satisfaction score
Tangibility gap	Pearson Correlation	1	.483**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	979.678	227.672
	Covariance	2.791	.672
	N	358	358
Mean total satisfaction score	Pearson Correlation	.483**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	227.672	241.178
	Covariance	.672	.705
	N	358	358

**. Correlation is significant at the 0.01 level (2-tailed).

The findings in Table 4 show that there is a moderate, positive correlation between service tangibility and students satisfaction which was statistically significant (r = .483, N = 358, p = .001). The null hypothesis was rejected and the alternative hypothesis was accepted; 'there is a statistically positive significant relationship between service tangibilities related to teaching and learning and students satisfaction at the University of Nairobi'. Results show that an improvement in the tangibilities would result to increase in levels of student satisfaction; and a decrease in the quality of the tangibilities would result to decrease in student satisfaction levels. These findings agree with the study of Hassan et al (2008) who found positive moderate correlation between tangibility dimension and student satisfaction (r = 0.568). However, some studies had found a strong and positive correlation between service tangibility and student satisfaction (Khattab & Fraij, 2011; r = 0.726.).

Students were requested to rate their overall satisfaction levels with service tangibilities related to teaching and learning that they received at the University using the three core questions of American Customer Satisfaction Index; desire disconfirmation (DD), expectation disconfirmation (ED) and overall customer satisfaction (OCS) measures.

The ED item *(To what extent has the service tangibilities related to learning offered at the university met your expectations?)* measure had a five-point Likert scale ranging from "much better than expected" to "much worse than expected". The scale for DD item *(In your opinion, how well do the service tangibilities related to learning provided in your college compare with the ideal?)* measure was also a five-point Likert scale from "ideal" to "very far from ideal". The OCS item *(What is your overall satisfaction with the service tangibilities related to learning offered by the University?)* measure used a five-point Likert scale rated from "very satisfied" to "very dissatisfied". Student satisfaction levels were collapsed into three scales namely: satisfied = 4 to 5; moderately satisfied = 3; and dissatisfied = 1 to 2. Table 5 presents the findings.

Table 5

Students Overall Satisfaction Levels

Statement	Mean	Std. Dev	Skewness		Kurtosis	
			Statistic	Std. Error	Statistic	Std. Error
Overall satisfaction with the service tangibility offered by the university	3.06880	.9507	.248	.132	.534	.258
Extent service tangibility met your expectations	3.07289	.8397	.249	.132	.664	.263

How well service tangibility provided by university compare with the ideal	3.06122	.9608	-.103	.132	-.535	.263
Average satisfaction score	3.0671	.80379	.056	.132	-.077	.263

N = 358

As shown in Table 5, expectation disconfirmation *measure (To what extent has the service tangibility offered at the university met your expectations?)* had the highest mean score (*M* = 3.07; *SD* ± .83). The overall (total) average of students perceived level of satisfaction on quality of tangibility services was (*M* = 3.06, *SD* = 0.8). In relation to normality, kurtosis and skewness, values for all the items were within the acceptable ±1 range (George & Mallery, 2003). All the three mean scores on the statements measuring student satisfaction were slightly above 3. This meant that students were moderately satisfied with the tangibility services offered by the University. This finding correlate with the Pearson correlation finding in Table 6 (*r* = .483, *N* = 358, *p* = .001) that was interpreted as a moderate positive satisfaction level where the alternative hypothesis was accepted: There is a moderate, positive correlation between service tangibilities related to teaching and learning and student satisfaction.

Conclusions

The results in this study clearly manifests that the various antecedents for tangibility service quality dimension have significant positive relationship with student satisfaction. Thus, the study confirms what other literature suggests; that improving the quality of service tangibilities that enhance teaching and learning has the potential to improve students' satisfaction. The findings revealed that tangibility facilities that relate to teaching and learning service show strong association with students' satisfaction. Generally, students' satisfaction was not driven by appearance of the staff. The results of this study show a moderate positive relationship between service tangibility and students' satisfaction with facilities that enhance teaching and learning processes; meaning that improving teaching and learning facilities could result in higher levels of student satisfaction.

Recommendations

The following recommendations were made based on the study:

1. Since universities are competing to attract best students, the Commission of University Education, which is charged with maintaining quality at higher education institutions, should strongly encourage universities to conduct service quality assessment at regular intervals. This would help to identify and address service quality gaps.
2. The University of Nairobi may also formulate and implement an effective service quality policy. Such policy should be comprehensive and capable to ignite continuous improvement on service quality at the University.

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