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CONTRIBUTION OF SERVICE QUALITY DIMENSIONS TOWARDS STUDENTS' SATISFACTION: A HIGHER INSTITUTION CONTEXT

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ABSTRACT

Universities strive hard to deliver good services to their clients or stakeholders. One of the important stakeholders in university levels is students, where their satisfaction contributes to the sustainability of the services, loyalty and retention. This is because they are the first and final beneficiaries of the services provided by universities. The current paper examines the relationship between five service quality dimensions and customer satisfactions among students' in a major higher institution in Somalia, which is based in the capital city of Mogadishu. Using a sample of 353 students from a higher education institution in Mogadishu, Somalia, the current study is based on the service quality framework and intends to gauge the impact of service quality dimensions on the students' satisfaction with the services provided by the university. The results was analyzed with SmartPLS 3 using bootstrapping to determine the level of significance of the paths. The results of PLS suggested that tangibility dimension ($\beta=0.308$, $p<0.001$) had the highest contribution towards students' satisfaction, followed by assurance dimension ($\beta=0.203$, $p<0.001$) and empathy ($\beta=0.160$, $p<0.05$). In addition, reliability dimension has significant contribution towards students' satisfaction level ($\beta=0.149$, $p<0.05$); however, responsiveness ($\beta=0.145$, $p<0.05$) was least contributor towards students' satisfaction. When aggregated these dimensions as one construct called service quality, it has been found that this construct had significant impact on students' satisfaction with the services ($\beta=0.733$, $p<0.001$). Finally, implications of the study are further explained.

Keywords: students' satisfaction, service quality, university, and PLS.

INTRODUCTION

Measuring service quality was one of the most interested topic which numerous researchers had focused in many years. For instance, service marketing literature paid attention to the relationship between service quality dimensions and customer satisfaction in the context of service sector such as hotels and restaurants (Alexandris, Dimitriadis, & Markata, 2002), banking sector (Angur, Natarajan, & Jahera, 1999), health care sector transportation banking sector (Angur et al., 1999), health care (Shemwell & Yuvas, 1999), transportation (Shefali, 2010) and sports and Leisure Centre (Howat et al., 2002). Although, most of the studies' main focus was private industries but recently, it has been recognized that providing quality service is the prime objective of the private education sector as well as public institutions.

Service quality can be applied to the higher education the same as business sector. Universities have to provide an excellence service to their students; they have to search effective and innovative ways to attract, retain and foster stronger relationships with students because most of its income are generated from enrolment related. This will put the universities at a competitive advantage.

Students in higher education are more concerned to the service quality; they seek excellence education and tremendous services at study environment which will satisfies them and develop their capabilities to gain an effective educational personality (Malik, Danish, & Usman, 2010).

The prime objective of this paper was to examine the relationship between service quality dimensions (tangibility, responsiveness, reliability, assurance, empathy and overall service quality) and students satisfaction in higher education in Somalia.

LITERATURE REVIEW

Service quality and customer satisfaction are well documented in the business and marketing literature. Many studies had also undertaken in the context of the higher education industry. Recently, Zhang et al. (2016) examined the influence of the Curriculum quality and the education service quality on the students' experience. Their results showed that both of them had direct influence on students' perceived quality and their overall satisfaction.

In the last year, El-Said and Fathy (2015) examined the university students' satisfaction using convenience sampling on the University cafeteria. They focused on dimensions including university food and beverage services and found that all service dimensions had positive and significant effect on the students' satisfaction.

Another study explored the students' satisfaction in higher education and found that students realize discrepancy between the perceived quality and the actual experience. Moreover, different genders are in different toward overall satisfaction levels (de Jager & Gbadamosi, 2013).

Walker et al. (2016) specifically focused the satisfaction of the Undergraduate nursing students. Their study found that the satisfaction is most driven by the support students find in their learning journey. Bhuian (2016) studied on Students' perspective on the service quality offered by university. His study found that all service quality dimensions are lower than expected, and that university don't meet the students' expectations.

Ratanavaraha et al. (2016) investigated the relationship between the School policy, service quality and the student loyalty. Results from this study concluded that service quality dimensions had positive and significant impact on the student satisfaction and responsiveness is most important dimension.

Jiewanto et al. (2012) explored how service quality influences the students' satisfaction and university image. He found that Service quality dimensions had positive impact on the students' satisfaction and the university image. Furthermore, tangibility remains to be less important to the students' satisfaction.

Another study suggested that pedagogical methods and technical support of the students are correlated to the students' satisfaction.

Kogovsek and Kogovsek (2013) examined on the perception of the technical education; they found that students in public institutions are more satisfied than those in private institutions. Besides that, mean scores of the service quality dimensions are lower in both institutions.

Mao and Oppewal (2010) explored post-purchase information, cognitive dissonance, satisfaction and the perceived service quality. They found that choice-inconsistence does not affect the satisfaction and perceived quality, but information provision increases students' satisfaction. Dahan et al. (2015) suggested that students are satisfied with the library quality and the library service quality exceeds user's expectation.

Ravichandran et al. (2010) used Bayesian approach to measure service quality dimensions. They suggested that customer satisfaction is enhanced by the customer valuation. Santos (2003) studied customer satisfaction on E-service quality. Study's result showed that reliability and the ease use are the most important dimensions of the customer satisfaction.

Sun et al. (2009) investigated the E-S-Qual impact on the customer of the internet banking. The study highlighted that service quality had positive effect on the customer satisfaction while E-service quality had effect on the customer loyalty. Woo and Ennew (2005) noted service quality was also important and had significant influence even in business to business professionals' context.

Yen and Lu (2008) explored the causality between the E-service quality and the Loyalty intentions; they found that e-service dimensions such efficiency, privacy and the protection are statistically significant and have positive effect on the customer loyalty.

Butt and Aftab (2013) explored service quality, trust and loyalty of Halal banking customer. Their study concluded that attitude towards Halal had positive effect and E-service quality and overall satisfaction. Furthermore, online service increases customer loyalty. Cheng et al. (2013) identified that responsiveness dimension of the service is least associated to the customer intention to mobile banking. But all other dimensions of the service quality had significant positive effect to customer intentions of the mobile banking.

In the banking sector, some customers had certain perceptual problems on the quality of the service that these banks offers; hence the quality of the banking is poor (Joseph, McClure, & Joseph, 1999). Cronin and Taylor (1992) measured service quality by extending its dimensions; they concluded that service quality is antecedent to the customer satisfaction is related to the purchase intentions and perceived service quality.

Against this background of the literature, the following main and sub-hypotheses are posited:

H1: Service quality dimensions significantly contributes to Somali Students' satisfaction with university services

H1.1: Tangibility dimension is significantly related to students' satisfaction.

H1.2: Assurance dimension is significantly related to students' satisfaction.

H1.3: Reliability dimension is significantly related to students' satisfaction.

H1.4: Empathy dimension is significantly related to students' satisfaction.

H1.5: Responsiveness dimension is significantly related to students' satisfaction.

METHODOLOGY

The current study adopted the SERVQUAL model developed by Parasuraman et al. (1988) to assess customer perception of service quality in higher education in Somalia. The scale consists of five dimensions namely: Tangibility which means physical facilities, equipment, staff appearance; Reliability which means ability to perform service dependably and accurately; Responsiveness refers to the help and respond to customer need; Assurance describes the ability of the staff to inspire confidence and trust; and Empathy which means the extent to which caring individualized service is given. The dependent variable in this paper is students' satisfaction that is measured by the overall satisfaction with the university services.

The sample of this study was undergraduate students at universities in Mogadishu. According to Heritage Institute for Policy Studies (HIPS, 2013) report, about 44 universities exist in Somalia; fifty of them located in Mogadishu, the capital city of Federal Republic of Somalia.

The total number of students across all 44 universities as of June 2013 was estimated at 51,471 students as reported by HIPS (2013). The highest number of these students are enrolled in universities in Mogadishu which are approximately 25,147 students.

We have distributed 500 questionnaires for main five universities in the capital city of Mogadishu (SIMAD University, University of Somalia, Mogadishu University, Banadir University and SIU). Finally, 353 respondents completed and returned the questionnaires, which represents about 71 % response rate.

The data analysis for this paper conducted through SmartPLS 3 (Ringle, Wende, & Becker, 2015) using bootstrapping to find out the level of significance of the paths. The construct reliability and validity have been reported with a focus of convergent validity, discriminant validity, and composite reliability.

As for Cronbach's alpha coefficients, it has been reported in table 1 below. As shown in the table, all constructs of the study were found to be reliable and internally consistent (Hair, Black, Babin, & Anderson, 2010). The reliability scores ranged from .712 to .917, where computed scale for service quality obtained the highest and empathy with the lowest score.

Table 1: Reliability analysis for study constructs

No.	Constructs	No. of items	Items deleted (if any)	Cronbach's Alpha
1.	Tangibility	7	-	.750
2.	Assurance	7	-	.776
3.	Reliability	7	-	.756
4.	Empathy	7	-	.712
5.	Responsiveness	7	-	.767
6.	Total scale of service quality	35	-	.917
7.	Satisfaction	10	-	.864

FINDINGS

The data for this study were analyzed using SmartPLS version 3 (Ringle et al., 2015), with the intention to obtain the validity and reliability of the involved constructs in the models as well as testing the hypotheses of the study. This study followed the technique suggested by (Anderson & Gerbing, 1988) when conducting structural equation modeling. They suggested two-level approach where the first level focuses on achieving construct validity and reliability. The second

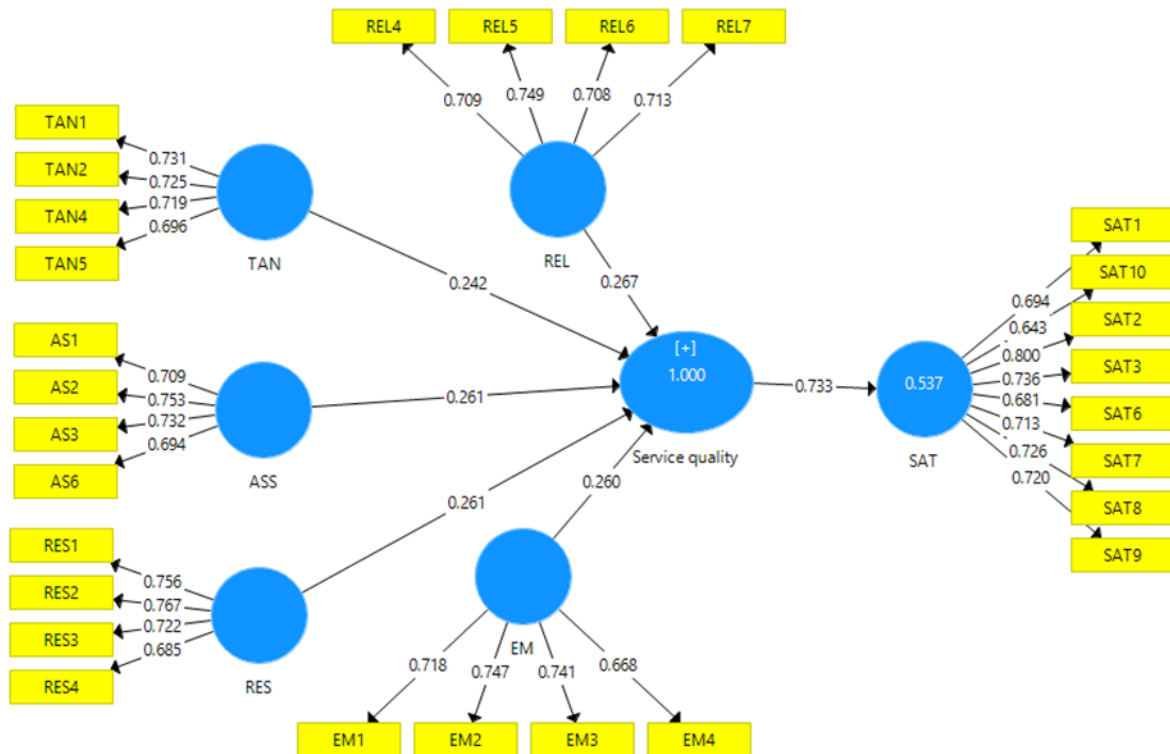
level is intended to test the conceptual model by estimating the relationships and path coefficients of the concerned constructs.

Table 2 provides construct validity and reliability scores. The data shows that all constructs for the current study are valid and reliable. The convergent validity, which is measured with three indicators, was achieved. Average variance extracted (AVE), composite reliability (CR) and loadings were all above the recommended cut-score of 0.50, 0.70 and .050 respectively. This indicates that all items of the respective constructs are converged together showing acceptable inter-relationships. The reliability, measured with two indicators, is also achieved. Three items were dropped from each of five dimensions of service quality and two items from satisfaction construct due to low factor loadings.

Table 2: Construct Validity and Reliability

	Constructs	Factor loadings	AVE	CR	Alpha
Tangibility			0.516	0.810	.750
TAN1	I am satisfied appearance of Lecturers	0.731			
TAN2	I am satisfied with layout of classrooms	0.725			
TAN4	I am satisfied with overall cleanliness	0.719			
TAN5	I am satisfied with decoration and atmosphere	0.696			
Assurance			0.522	0.813	.776
ASS1	University staff are Friendly and courteous	0.709			
ASS2	University lecturers Friendly and courteous	0.753			
ASS3	Lecturers have research efficiency/productivity	0.732			
ASS6	University's staffs are knowledgeable on rules and procedures	0.694			
Reliability			0.518	0.811	.756
REL4	Lecturers are sincere in solving student's problems	0.709			
REL5	This university provides its services at a time it promises to do so	0.749			
REL6	The lecturers are reliable (i.e. keep time/don't cancel classes)	0.708			
REL7	Lectures have good teaching capability and proficiency	0.713			
Empathy			0.517	0.810	.712
EMP1	Administration has students' best interest at heart	0.718			
EMP2	Access to study rooms is accommodate with students' convenient	0.747			
EMP3	Access to facilities is accommodate with students' convenient	0.741			
EMP4	Staff are willing to give students individual attention	0.668			
Responsiveness			0.538	0.823	.767
RES1	Staff are available timely to assist the students	0.756			
RES2	Lecturers are available timely to assist the students	0.767			
RES3	Lecturers have capacity to solve problems when they arise	0.722			
RES4	Staffs have capacity to solve problems when they arise	0.685			
Students' Satisfaction			0.512	0.893	.864
SAT1	I was satisfied with the university	0.694			
SAT2	The university always provides me useful knowledge.	0.800			
SAT3	The university always provides me an adequate environment for personal and intellectual development.	0.736			
SAT6	In comparison with another university, I am satisfied with the education institution where I am now a student.	0.681			
SAT7	Academic support services adequately meet the needs of students	0.713			

SAT8	Students are made to feel welcome in this university	0.726			
SAT9	I enjoyed taking my programme in this university	0.720			
SAT10	I would recommend this university to my friends and relatives	0.643			



As for discriminant validity, two approaches were reported in this study namely Fornell-Larcker (Fornell & Larcker, 1981) criterion and cross-loadings criterion. As suggested by these authors, the square root of each construct should be greater than any relationship of a given construct with other constructs. As such, looking at the table 3 below the diagonal scores with red colour are all greater than the relationship of a given construct with other constructs. Therefore, discriminant validity was achieved in this study. To double confirm the discriminant validity, another technique called cross-loadings was performed and reported. This technique, presented in table 4, also supported the validity of the study.

Table 3: Fornell-Larcker Criterion

Constructs	ASS	EM	REL	RES	SAT	TAN
Assurance (ASS)	0.722					
Empathy (EM)	0.498	0.719				
Reliability (REL)	0.586	0.585	0.720			
Responsiveness (RES)	0.480	0.548	0.557	0.733		
Satisfaction (SAT)	0.577	0.563	0.569	0.539	0.715	

Tangibility (TAN)	0.453	0.451	0.417	0.413	0.589	0.718
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Table 4: Cross Loadings

	ASS	EM	REL	RES	SAT	TAN
AS1	0.700	0.356	0.394	0.345	0.389	0.325
AS2	0.767	0.401	0.421	0.380	0.466	0.324
AS3	0.734	0.333	0.422	0.306	0.408	0.327
AS6	0.686	0.338	0.454	0.357	0.402	0.331
EM1	0.367	0.744	0.475	0.390	0.465	0.355
EM2	0.277	0.746	0.398	0.400	0.388	0.310
EM3	0.392	0.742	0.433	0.404	0.425	0.336
EM4	0.395	0.635	0.378	0.377	0.333	0.285
REL4	0.400	0.480	0.734	0.381	0.450	0.273
REL5	0.465	0.405	0.758	0.411	0.448	0.367
REL6	0.413	0.368	0.686	0.389	0.346	0.250
REL7	0.406	0.438	0.696	0.422	0.387	0.309
RES1	0.390	0.403	0.431	0.768	0.441	0.331
RES2	0.337	0.440	0.433	0.757	0.397	0.344
RES3	0.355	0.397	0.382	0.716	0.378	0.297
RES4	0.326	0.359	0.380	0.688	0.362	0.227
SAT1	0.428	0.380	0.356	0.353	0.699	0.514
SAT10	0.319	0.405	0.412	0.319	0.640	0.325
SAT2	0.482	0.461	0.450	0.407	0.802	0.481
SAT3	0.477	0.435	0.375	0.424	0.737	0.448
SAT6	0.373	0.349	0.381	0.430	0.685	0.505
SAT7	0.402	0.430	0.435	0.403	0.709	0.361
SAT8	0.412	0.374	0.444	0.375	0.724	0.374
SAT9	0.396	0.407	0.427	0.367	0.717	0.364
TAN1	0.403	0.345	0.328	0.342	0.456	0.728
TAN2	0.312	0.315	0.318	0.261	0.459	0.746
TAN4	0.280	0.345	0.265	0.289	0.367	0.697
TAN5	0.292	0.291	0.286	0.290	0.412	0.699

After establishing construct validity and reliability, the authors proceeded with the estimation and testing the conceptual model. The structural model was tested with two separate analyses. The first one reported the contribution of individual dimensions of service quality while the second one reported the aggregated dimensions as one construct (service quality). The five dimensions all together had explained about 55% of variance in students' satisfaction with university services, whereas service quality construct had accounted for almost 55% in students' satisfaction.

Tangibility dimension of service quality had made the biggest contribution towards students' satisfaction with university services ($\beta=0.308$, $t=7.69$, $p=.000$) followed by assurance ($\beta=.203$, $t=3.81$, $p=.000$) and empathy ($\beta=.160$, $t=3.01$, $p=.003$). Moreover, the other two dimensions also made remarkable contribution towards customer satisfaction (reliability, $\beta=0.149$, $t=2.47$, $p=.014$; & responsiveness, $\beta=.145$, $t=2.90$, $p=.004$). Furthermore, the service quality construct had significantly and statistically contributed towards students' satisfaction with university services ($\beta=.773$, $t=25.92$, $p=.00$). Therefore, all the hypotheses of the study were supported.

DISCUSSION AND CONCLUSION

Higher Education is one of the most important sectors that have become of utmost concern to most regions of the Somalia, for the role it plays in the field of knowledge creation and production, as well as contribution to the supply of qualified staff to private and the public institutions. The importance of higher education is in the composition of qualified human capital and adapted to the needs of economic development, which is capable to respond to the requirements of continuous change locally or globally.

To produce high quality future staff to serve the nation, higher education institutions have to provide quality services to their students which will contribute to students' satisfaction and retention as well.

The main aim of the current study was to examine the service quality of higher education in Somalia and its impact on student satisfaction. Students' satisfaction is a vital important to higher education institutions especially in today's competitive market.

The objective of this study was to identify the service quality dimensions with respect to students' satisfaction in higher education institutions in Mogadishu, Somalia with more than three hundred and fifty students participated the study using purposive sampling.

This study employed SERVQUA model which explains service quality as the difference between customer expectations for service provided and customer's perceptions of the service received. Students were asked to answer questions about their expectations and their perceptions together.

The current study employed SmartPLS 3 to analyze quantitative data collected using bootstrapping to establish the level of significance of the paths; the level one analyzes included reliability and validity test to check the internal consistency of the data. Furthermore validity test took place. The level two of the analysis anticipated to test the research framework by identifying the relationships and coefficients of the research constructs.

The current study established five sub hypothesis generated from the literature; the all hypothesis posited that there are significant positive relationship between service quality dimensions and students satisfaction

From the findings, the research hypothesis were supported by identifying the determinants of service quality as reliability, assurance, responsiveness tangibles and empathy with relation to students' satisfaction.

Tangibility dimension had statistically significant and positive correlation with the students' satisfaction and it was the highest contributor dimension to the students' satisfaction comparing to other dimensions. This may be explained that students were glad about physical facilities, equipment and staff appearance. However this finding is consisted with a previous study in the context of higher education (Ali & Mohamed, 2014).

Moreover, the results of SmartPLS analysis had shown that all the other four constructs also had statistically significant, positive, and direct effects on the students' satisfaction. As such, all the hypotheses of the study were supported. The results discussed above are in line with the previous literature findings in terms of relationship between five predictors and criterion variable (Ali & Mohamed, 2014; Asaduzzaman, Hossain, & Rahman, 2014; Jiewanto et al., 2012; Kogovsek & Kogovsek, 2013; Malik et al., 2010). These studies confirm the relationship between five predictors of SERVEQUAL model and students' satisfaction construct.

From the literature and this study's findings, it is very clear that students' satisfaction affected by service quality provided by the universities; therefore improving the services and focusing on the quality measurements may potentially improve students' satisfaction, which will lead to create strong and effective educational environment and this will result in the greater performance of the students and furthermore will produce high qualified human capital in the future.

Due to the that fact, higher education institution in Somalia have to offer quality service so that they compete to receive interest from the students to study their institutions since there is no long monopoly in higher education market in the country.

In conclusion; it is very important to confirm from the analysis that two dimensions were most contributing factors in service quality model (tangibility & assurance); they were the most critical determinants in explaining students' satisfaction in higher education institutions in Somalia. Therefore, Somali universities have to increase the physical facilities, equipment such laps and library facilities and invest to develop and promote ability of their staff so as to inspire their confidence, service delivery and trust among the customers (students), which will contribute students' satisfaction. Neglecting to focus on service quality it may cause failure to the competitiveness of higher institutions, by taking it into consideration service quality dimension can essentially explain almost 55% variance in satisfaction. More than that, by focusing on critical determinants in service quality especially tangibility dimension and assurance represent that the organization is concrete a way toward a better appraisal in satisfaction.

Practical implications of the current findings could be used in comparing the service quality of private higher education in least income countries and high income countries. This paper is the first attempt to use SmartPLS 3 software to test the ServQUAL model in the higher education in the country.

There are a number of limitations to be noted. One major limitation in this paper was in the context of respondents, which limited to only higher education institutions in Mogadishu, capital city of Somalia, and excluded public universities in the capital city and universities in other regional federal states. Future research should consider inclusion of those institutions and compare among the different perceptions of the service quality and satisfaction with the service. Another limitation which is noteworthy to be highlighted is related to purposive sampling which limits the generalizability of the study findings. Thus, the results of this study should be interpreted cautiously due to this limitation.

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