

# The Relationship between Service Quality and Customer Satisfaction: Case Study of Education Sector in Mogadishu, Somalia

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**Abstract:-** Due to increasing demand of customers, education sector has become competitive, customers know more about their expectations and demand high standards of services, because technology enables them to do comparisons quickly and accurately, and their perceptions and expectations are constantly evolving, making it difficult for service providers to measure and manage services effectively.

The main aim of this article is to examine the relationship between service quality, and SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance, and empathy) and customer satisfaction in the education sector in Mogadishu, Somalia.

## ➤ Method

Questionnaire was used based on this research method which is quantitative approach and it is the best way to collect quantitative data. A sample size of 120 questionnaires were handed out to the students of Simad and Mogadishu universities via survey link to reach students easily. Questionnaire included structured question which helped students to spend less time to select appropriate option.

The aim of the questionnaire was to collect data necessary for testing hypothesis theory of the study about student's general perception of service quality offered by private universities in Mogadishu and how it relates to their satisfaction.

## ➤ Findings

Based on correlation analysis result, the study found that service quality and its dimensions have significant relationship with customer satisfaction in respect of the Parasuraman's SERVQUAL (1985) scale.

Furthermore, according to the outcome of regression analysis method, this empirical study obtained that reliability SERVQUAL dimension has significantly impacted on student's satisfaction, but other SERVQUAL dimensions (Tangibility, Responsiveness, Assurance, Empathy) have not significantly impacted on students' satisfaction in these two universities in Mogadishu/Somalia.

**Keywords:-** Service Quality, Customer Satisfaction, SERVQUAL dimensions, Simad, Mogadishu Universities, Mogadishu/Somalia.

## I. INTRODUCTION

Service quality has been a major concern in recent years by professionals and researchers. It can be defined as a result of comparison between their perceptions of how their expectations of service has been done by the institutions. For example, according to (Zeithaml, Berry, & Parasuraman, 1990), therefore, the purpose of quality of service may be to serve customers in an organization that may be good or bad. It can be defined as the variance between customer expectations and service perception (Parasurman, Zeithaml, & Berry, 1988). According to (Solomon 2009) as cited in (Agbor, 2011, p. 8) quality is one of the most important things that consumers expect from a service that makes the service unique. According to (Kotler, et al, 2002, p. 831). Other quality definitions are characteristics and features of the product or services that reflect their ability to meet the standards set out in order to meet the needs of the customer.

Service quality has been targeted by marketing researchers and it takes decades to comprehend and identify service quality. The issue of service quality measurement is especial topic of interest, most of the studies used to focus on measuring service quality with respect of SERVQUAL instruments. Service quality is well known as crucial for competitiveness of setting and keeping customer satisfied with services or products. Consequences of prior researches show that service quality is a vital factor for customer satisfaction. (Olu, 2010) Satisfying customers is the aim of offering service quality.

“Parasuraman et al, (1985), suggested that the size. These; reliability, response (reassurance), assurance, it is the ability that organization to put in same shoes with customer (empathy), and physical entities(tangibility). When the case is goods most of them are tangible and consumers can judge quality by their style, color, package and fit, but service quality, fewer of tangible signs may exit. Service offer's personel, facilities, and equipment are counted as tangible demonstrations (Zeithaml B. P., 1985). Lack of tangible evidence makes evaluating service quality difficult although authors and researchers suggest various signs but without tangible evidency it is difficult for firms to know how the consumers perceive their service quality.

Customer satisfaction was very important for both institutions and researchers. The biggest reason or purpose of existing organizations is to maximize profits and reduce costs, so profits can be maximized to obtain a minimum cost

in sales. (Eg and Juliet, 1996, 40) customer satisfaction is one of those factors which can help in increasing sales, because satisfaction leads to customer loyalty, advice and re-purchase. In addition, it was proved that importance of customer satisfaction and quality of service to improve the organization's overall activities. According to (Olu, 2010, p. 90) Customer-focused companies emphasize that customer needs and desires are better understood, and then turn customers into what they really want and need. Simply put, customer satisfaction is important for the survival of the company. In general, customer satisfaction increases:

- High customer retention rate,
- Customer enhances repurchase behavior, and
- Ultimately drive higher firm profitability.

#### ➤ *Problem Statement*

Somalia is post-civil war country which has been suffering violence nearly two decades which led to collapse of central government and the country has been without policy and regulation nearly two decades, but nowadays Somalia has recovered from civil war and government is a stronger than before and rules and regulation is gradually getting back. Although civil wars effected all sectors including education sector, but education is one of the most important growing sectors in last decade. At the presence, approximately more than 60 universities are operating in the capital city of Somalia, Mogadishu (University of World News, 2016). This exponential growth was largely occurred without state supervision and quality control. (African Arguments, 2013).

Education sector especially higher education in Mogadishu are facing challenges such as Inadequate teaching capacity, untrained teachers, facilities like, library, science and computer laps and competitive business environment due to increased numbers of private universities established in Mogadishu.

The main purpose of the study is to determine the relationship among service quality and customers(student's) satisfaction in education sector. The study adopts SERVQUAL model and measures service quality according to the five determinants of service quality model.

#### ➤ *Significant of the Problem*

This study will bring a valuable information about the relationship between service quality and customer satisfaction in education sector which will be useful for service organizations especially for universities and to bring evidence in students' satisfaction due to impact of service quality so having general evidence about student's perception of service quality factors which has most significant relationship or effects students' satisfaction, it makes easier for universities to get student's general perception about service quality and apply the result of the study to their students.

#### ➤ *Questions and Hypothesis*

At the end, the research study should answer these questions below.

1. Is there a significant relationship between service quality, SERVQUAL dimensions and Customer Satisfaction?
2. To what extent service quality dimensions impact on customer satisfaction?

In addition to the research questions above, the following hypothesis also will be tested.

#### **Ha1: There is a significant relationship between service quality and customer satisfaction**

**Ha1.1:** There is a significant relationship between tangibility and customer satisfaction

**Ha1.2:** There is a significant relationship between reliability and customer satisfaction

**Ha1.3:** There is a significant relationship between responsiveness and customer satisfaction

**Ha1.4:** There is a significant relationship between assurance and customer satisfaction

**Ha1.5:** There is a significant relationship between empathy and customer satisfaction

#### **Ha2: There is a significant impact of service quality on customer satisfaction**

**Ha2.1:** There is a significant impact of tangibility on customer satisfaction.

**Ha2.2:** There is a significant impact of reliability on customer satisfaction

**Ha2.3:** There is a significant impact of responsiveness on customer satisfaction.

**Ha2.4:** There is a significant impact of assurance on customer satisfaction

**Ha2.5:** There is a significant impact of empathy on customer satisfaction.

#### ➤ *Scope of the Study*

The study is limited to the relationship between service quality and student's satisfaction in higher education institution in Mogadishu. The study targeted only two higher education institutions such as (coded: **1:** SIMAD University and **2:** Mogadishu University). The results of this study would be very important if several private education institutions are involved in the research. However, due to lack of time and financial resources, it was not possible to evaluate more than two universities.

## **II. LITERATURE REVIEW**

### *A. Service Quality*

(Kotler & Keller, 2009, p. 789) defines services as intangible transactions or benefits offered by one party to another that does not result in any ownership. All in all, service can also be determined as an intangible offer by a party to another party in exchange for pleasure. Services can also be defined as economic activities that create value and benefit customers' time and locations, as the desired change occurs in or about half of the recipient of the service (**Christopher, 2001**). Differentiating goods is easier than service's characteristic of intangibility, heterogeneity, and inseparability.

➤ *Tangibility:*

Is the biggest determinant that implies service, and it defines whether an offering is service or not, it's true but while few of products are purely tangible or few other are totally intangible

➤ *Heterogeneous;*

Since service can't be stored or kept, performance rely on to some scope level of demand and that is why their performance is differ from manufacturer to manufacturer, from clients to clients and time to time. What is planned to deliver for consumer by firms may be totally different from what consumers reached.

➤ *Inseparability:*

Third, most of production and consumption are inseparable. Goods produced, sold and separately consumed, but services are different because of their production process usually occurs at same time with consumption, and that is why consumers are probably encounter service production.

The concept of service quality is the most discussed topic in the service literature, since there is no consensus. Based on past researches, Parasuraman et al. (1985) three pillars for service quality:

- 1) It is difficult and composite to assess them compared to the quality of tangible goods
- 2) service quality perception results from the performance of the actual service against the expectations of the consumer.
- 3) Quality assessment focuses not only on service results. But also involves assessment of the service delivery process.

Evaluating service quality is a better way to determine whether the service is good / bad and whether the customer is satisfied, therefore SERVQUAL scale is recognized as Gap Model by Parasuraman et al. (1988) proved to be one of the best ways to assess the services quality offered to the customers, and this method of measuring services proved dependable and consistent by many authors (Brown et al., 1993). In terms of feeling more than services, a clear weakness is that quality of service is not satisfactory; And when detected or experienced, this service is less than expected service; Satisfactory service means less than quality (Jain & Gupta, 2004, p. 27) when researcher evaluated the method of presenting the theory, it is the idea that SERVQUAL is most suitable to evaluate the quality of the service from the customer's perspective. The original work by (Parasurman, Zeithaml, & Berry, 1988) has proved the size of the ten SERVQUAL, then it was reduced to five SERVQUAL size as shown below.

- 1) **Tangibility:** Includes physical features such as shape of building and ground, Appearance of personnel, and Lighting in class room.
- 2) **Reliability:** This means doing what you will do when you do, and companies must fulfill their commitment to quality standards by meeting customer expectation standards.
- 3) **Responsiveness:** Includes, teacher's and staff's willingness to assist students, teacher's capacity to solve immediate problems, and channels available for complains.

4) **Empathy:** For example, Institution's security, staff's willingness to give individual attention, sufficient computer, and administration giving value to the students by putting in hurt.

5) **Assurance:** for instance, friendly staffs, friend teachers, efficient of teacher's research, and staff's knowledge for rules and procedures.

### B. Customer Satisfaction

It is without doubt that common goal for establishing every business is to generate a profit, there are two ways business to do profit either to manufacture or merchandise products or services then what they need is customer to deliver those service or products, but lack of customer the business cannot sell the service or products and if the business isn't able to sell services or goods then it can't exist or generate profit, so that is why customers are the backbone or stakeholders of every business and their satisfaction is a key point to success or survival of business goals.

Satisfaction is the psychological assessment of the feelings of pleasure of experienced product or service. Satisfaction has a broad definitions but in this study, the definition of satisfaction by SERVQUAL scale perspective is focused on. According to Oliver (1981) as cited in (Luciene Eberle, 2016, p. 1701) discussed that satisfaction or dissatisfaction can be defined by the post-purchase feelings of customers, and the feelings can be either positive or negative inconsistency between the customers' expectations and their actually feeling after purchase (Setó-Pamies, Dolors, 2012). Generally customer satisfaction researches' common similarity is that compliance or non-compliance with client expectation as their standard, and that standard suggests that satisfaction is the consequences of judgement of the process. The clients judge the result of perception of the service with the set of the standards of their expectations, when the perceived service meets with the standard expectation is called compliance, whereas the vice-versa is known as non-compliance. In other statement, when the actually received service quality exceeds the expected this is called positive experience. whereas the vice-versa is negative experience. (Setó-Pamies et al, 2012).

Customer satisfaction is one of the most important strategy in business and it has been subject of discussion by developed countries' businesses since 1980. Customer satisfaction, physical and psychological status of the customer, it depends on the proportional change in behavior (Johnson, 2001). Customers of goods or services of customer satisfaction level of satisfaction or analyzing the results of use for consumers expressed as a cognitive or evaluative if the performance is lower than the customer's expectations, then the customer is dissatisfied, if the performance is equal to the customer, the performance is satisfied, and if the performance is higher than expected, then the customer is very satisfied and pleased (Millán & Esteban, 2004). Increasing the level of education with the customer's awareness, experienced customer competition as a result of competition on technological developments efforts to ensure satisfaction have been accelerated, because high quality offerings are first offered at the point of sale of

a service or products to gain customer perception, and that is the most important thing that leads to satisfaction. In the event that the link between perceived service and customer expectations leads to satisfaction, customer perception and customer satisfaction are almost interrelated. Satisfied customer benefits for companies are as follows; satisfied customer gives a positive recommendation to the population, loyalty to the company, customers repurchase at the highest price. (Reichheld, 1996) as cited in (Angelova, 2011).

### C. Service Quality and Customer Satisfaction in Higher Education Sector

The service quality literature has been crucial contribution and meaning such as, development role in designing and enhancing generic framework for measuring natural problems related with service characteristics such as. Intangibility, perishability, inseparability and heterogeneity (Zeithaml B. P., 1985), recent decades education sector is one of the fast-growing sectors and challenging. Students are the first customers utilize from the services offered by the higher education institution and their satisfaction is very important for survival of the higher education institutions. Crawford (1991) also believes that students are considered decisive customers in higher education, and their satisfaction is considered an indicator of good quality in higher education, as well as the results of the education process.

Services quality by higher education institutions can be the result of evaluation of student service opportunities, and may include meetings with the administrative staff, lecturers, meetings with librarians, and security personnel, if institutional compatibility provides services at higher levels than customers' expectations, then the services will be rated as high quality, but if services do not meet customer expectations, then poor quality services (Jamto et al, 1996) will be considered. In the field of higher education, the quality of service is considered to be the main determinant of the performance of higher education institutions and, from this point of view, Zeithaml et al (1990) shows that the quality of service is defined as compliance with student specifications. has been done. The result is that the students of higher education institutions determine the value of cognitive perceptions or services based on their previous experience with the services provided and therefore the students' expectations, the process of providing services and services from higher education institutions have an impact on the quality of service.

### D. Conceptual Framework

The purpose of this section is to make the idea from previous studies accurate with the idea of this field of study. The idea that comes from previous literature is that the expectations and perception are the components of satisfaction and it has been proven by (Zeithaml et al., 2006, p.106-107). Another hand, (Sevadas and Baker-Perv., 2000, pp. 73-82; Wang et al., 2002, pp. 50-60, Kuo-YF, 2003, Liang and Zhang, 2009, pages 113-12, Gera, 2011, pp. 2-20) all of these authors have proved that the relationship between service quality and customer satisfaction; The quality of service can also be measured using the five dimensions of the quality of service.

The SERVQUAL model is the most common model for measuring service quality in the service sector, especially in several higher education institutions. Therefore, research from this idea has been adopted from the Parasuraman et al,1985 SERVQUAL model. The dependent variable in this study is that overall student satisfaction is measured by overall satisfaction with HEI. In this study, Independent variables are the quality of higher education services that measure satisfaction with service performance. The dimensions contained in this service quality variable are tangibility, reliability, responsiveness, assurance and empathy).

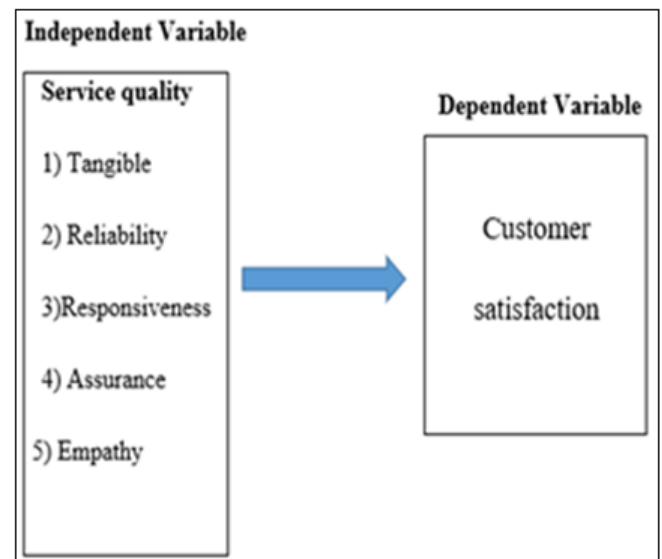


Fig 1:- Conceptual framework

## III. RESEARCH METHODOLOGY

### A. Introduction

The aim of study is to determine the association among service quality and customer satisfaction in education sector especially some selected private universities with respect SERVQUAL model.

Quantitative approach is used for this study because it is the best way to examine perceptions and problems of the research. It involves statistical numbers, list of question raised from the aim and objectives of the study and response are predefined. According to (Bryman & Bell, 2007) it uses deductive approach to test theories about the study to analyze and collect data. The questionnaires were handed out to the customers of Simad and Mogadishu universities via survey link to reach customer easily. Questionnaire included structured question which helped students to spend less time to select suitable option.

The aim of the survey was to find out students' general perception of service quality offered by universities and how it relates with their satisfaction.

### B. Research Approach

Deductive approach is conducted for this study and this approach is used when existing theories are used to generate hypothesis (Saunders et al., 2007) As follows:

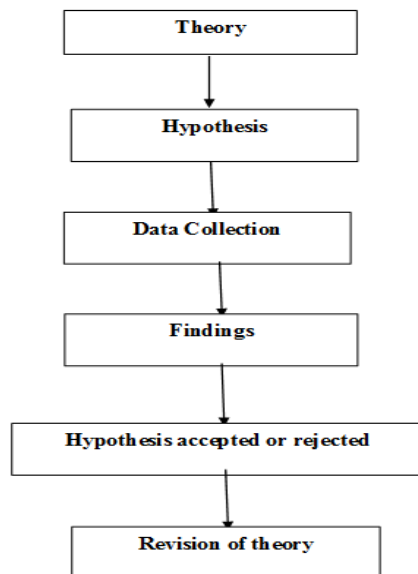


Fig 2:- The Process of Deduction

In research philosophy correlation, a deductive approach is carried out through positivism, looking at the types of research questions such as; Is there an important association among SERVQUAL dimensions and customer satisfaction? Is there an important association among service quality and student's satisfaction? It shows that reality of situation is there, which means that there is evidence provided by previous literature which creates suspicion and directs us to ask whether it is important or not, and it is the current principle Research on the basis of the hypothesis Important for research; To test the hypothesis, they prepared a method to collect quantitative data.

On the other hand, the principle was obtained in previous literature; Service quality, customer satisfaction, and quality of service quality (SERVQUAL models) lead to research questions used to prepare research hypotheses. "Customer satisfaction is an important relationship with the quality of service quality." Service quality is an important relationship with the quality of service dimensions. "Customer satisfaction is an important relationship with the quality of service. Then, by rejecting or confirming modified hypotheses and principles, quantitative data is collected.

#### ➤ *Qualitative and Quantitative Approach*

This research was conducted using various methods, and techniques. However, the most suitable method for conducting research is a qualitative and quantitative approach.

- *Qualitative Approach:*

It's about studying people's behavior, actions and reactions to analyze data that is interpreted and collected (Creswell, 1994). This is used as an inductive approach where interviews and case study methods are used to collect and analyze data.

According to (Garson, 2012), qualitative approaches are used to understand or study the subject in depth by observing these technical techniques.

Qualitative approach feature. non-statistical in nature and used to understand motivation (Creswell, 1994).

- *Quantitative Approach:*

Is the best way to examine perceptions and problems of the research. It involves statistical numbers, list of question raised from the aim and objectives of the study and response are predefined. (Bryman & Bell, 2007). It uses deductive approach to test theories about the study to analyze and collect data. Quantitative approaches are used in this study to achieve the purpose of this study, and quantitative approaches primarily focus on building quantitative data (Kent, 2007).

This study used this method because of the ontological conditions of objectivism, epistemological conditions for positivism and the deductive method of the research strategy. Also, the reason for choosing a quantitative method was that this study gathered quantitative data. We focus on determining the collection and analysis of collected data to test relationships between variables. The purpose of this study was not to develop a new theory, but to test the current principle of the use of numerical data, which is a sign of quantitative methods (Brian and Bell, 2003, page 25). Quantitative is often known as the hypothesis of research. Characteristically, the study begins by describing the theory, through which the concepts of research were achieved. Then, an experimental design was created where variables (dependent variables) are measured in the measurement while controlling the effect of the selected independent variable. These procedures are deductive in nature and contribute to the establishment of scientific knowledge through theoretical tests.

#### *C. Research Design*

Quantitative and descriptive methods were conducted to evaluate data from customer. The reason for conducting descriptive research is that it focuses on explaining the existing situation. The study used descriptive analysis to illustrate the quality of service dimension that leads to customer satisfaction. The study also used explanatory research design to clarify, understanding, and prediction and control of relationships between variables. (Awlchew, 2015).

#### *D. Research Population and Sample Size*

The population of the study is the students of Simad and Mogadishu universities. The reason that is selected two universities is because of they are the most preferred, long-standing and good reputation in education sector in Mogadishu, Somalia. The selection of only these two universities was based on convenience consideration of the time and budget limit faced by researcher.

The sample used in this study consists of 120 students selected from the selected universities. This sample size is based on the results obtained from the literature because the target population of this study is large. Therefore, this sample size selection is guided by literature of the maximum and minimum sample size of at least thirty (30) subjects for each group category for any statistical test (Saunders, Lewis,

& Thornhill, 2009, p. 243). The sample was divided into the above universities as an equal amount (Ali & Mohamed, 2014).

**E. Sources of Data**

Data sources are divided into primary and secondary data sources. Primary data is basically collected data for this purpose. Secondary data is not the primary purpose of collecting data for other data (Saunders et al, 2009). The required data for study comes from the primary source identified by the observation and questionnaire. Uses sources like books, magazines, statistical views, e-books, content, and literary source bookmarks. Other relevant empirical research materials were used as secondary data sources.

**F. Data Collection Tools**

In this study, questionnaire was used to obtain the necessary data. Questionnaire was used based on this research method which is a quantitative method; the best way to collect quantitative data. There are three sections in the questionnaire, Part A profiles of the participants, Part B: Measurement of Service Quality in Higher Education and Part C: Measurement of Student Satisfaction.

In this section, four questions covering Section A, gender, age, marital status, institution name and academic qualification. Subsequently, Section B: Service quality in higher education and Section C: Student satisfaction.

The tool used in this study is adopted by Parasuraman et al. (1990) and some items were adopted from (LeBlanc & Nguyen, 1997) and Hasan et al. (2009). using the five dimensions in service quality (tangibility, assurance, reliability, responsiveness and empathy) using the Likert scale from 1 strongly disagree to 5 for Strongly agree. In measuring student satisfaction, instrument for this variable was adapted from (ATHIYAMAN, 1997). As cited in (Hasan, 2008)In this variable, it has five items with Likert scale ranges from 1 strongly agree to 5 for strongly disagree.

**G. Validity and Reliability**

Validity test is conducted to evaluate the construct for this research study. According to the table 1 the Kaiser-Mayer-Olkin measure of the sample adequacy was 0.819. this implies that adequate inter-correlation although the Bartlett’s Test of Sphericity (Chi-square = 157.119, p<0.05). Both results suggested that the constructs are valid.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.819
Bartlett's Test of Sphericity	Approx. Chi-Square	157.119
	df	15
	Sig.	.000

Table 1:- KMO and Bartlett’s Test

According to (Ndubisi, 2007). As stated in (Kajenthiran & kauranani, 2015, p. 51), internal consistency of the search tool must be tested through reliability analysis. Thus, to study the reliability of

dimensions of the scale, the Cronbach’s Alpha was calculated, because it is the most widely accepted measure of reliability.

According to Malhotra & Peterson (2006), the Cronbach value of the building must meet construct of the minimum reliability of 0.6.

Table 2 Cronbach’s Alpha ( $\alpha$ ) shows the five dimensions of the quality of service and student satisfaction. Since all Cronbach Alpha values for each dimension are greater than 0.7, we can conclude that the measures used here are reliable enough to study.

Dimensions	Cronbach’s Alpha Value
Tangibility	0.733
Reliability	0.707
Responsiveness	0.738
Assurance	0.708
Empathy	0.711
Customer Satisfaction	0.925

Table 2:- Reliability Test

**IV. PRESENTATION AND ANALYSIS**

The data was collected using a random questionnaire distributed to students of two universities in Mogadishu. A sample of 120 questionnaires was distributed, of which only 91 were completed. This gives the researchers a response rate of 76%.

**A. Profile of Respondents**

As mentioned table 3, profile contain the following characteristics of participants gender, age group, marital status education level, and institution name.

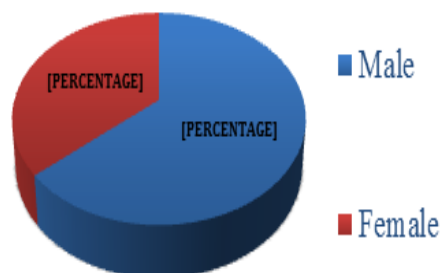


Fig 3:- Gender

In this research 58 (64%) of the respondents were male and 33 (36%) of respondents are female.

According to profile finding Figure 3, it shows that there is gender imbalance between males and females because of (64%) of respondents of the study were male and (36%) were female this means that females are less involving in education than males while females are contributing other sides such as; busines.

		Frequency	Frequency (%)
<b>Gender</b>	Male	58	64%
	Female	33	36%
<b>Age</b>	18-23	31	34%
	24-29	55	60%
	30+	5	6%
<b>Educational Level</b>	Undergraduate	23	25%
	Graduate	60	66%
	Master	8	9%
	PhD	0	0%
<b>Institution Name</b>	Simad University	46	51%
	Mogadishu University	45	49%
<b>Marital Status</b>	Single	62	68%
	Married	27	30%
	Divorced / Separated	2	2%

Table 3: Profile of Respondents

Participants aged between 18-23 years old are 31 (34%), participants between 24-29 are 55 (60%), and participants aged 30+ years are 5 (6%).

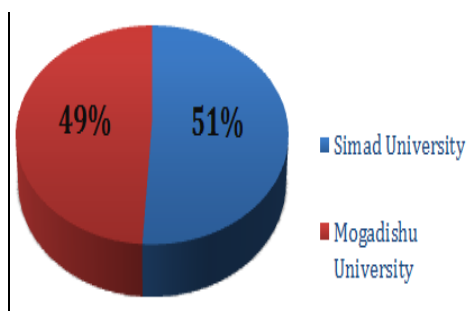


Fig 4:- Institution Name

According to above Figure 4, it shows that 51% of respondents were from Simad University while 49% were from Mogadishu University.

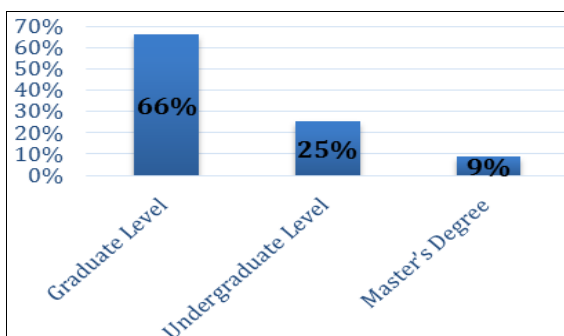


Fig 5:- Educational Level

In the result of student's education level at Figure 5, illustrates that the most of participants were graduate level and contribute a percentage of (66%), followed by undergraduate level with a percentage of (23%), master's degree (11%) and PhD (0%).

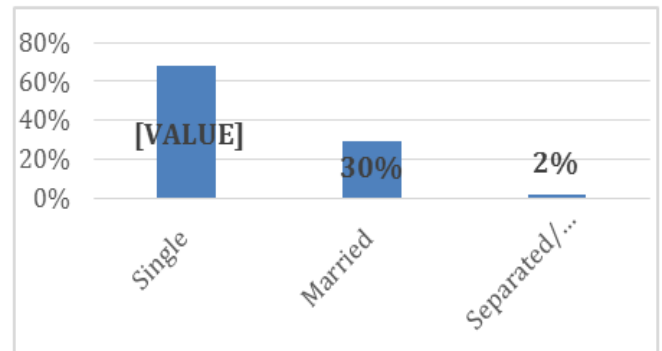


Figure 6: Marital Status

Furthermore, the findings of Figure 6, illustrated that 62 (68%) of participants are single and 27(30%) of the participants are married and 2(2%) of respondents were separated/divorced.

The result of profile of respondents found that majority of respondents are single with percentage of (68.1%). This means that students in Mogadishu universities prefer to stay single while they are studying.

*B. Descriptive Analysis*

By considering Table 4, Tangibility has the greatest mean score of SERVQUAL dimension 3.8901, and lowest score is empathy 3.1896.

Based on the mean value all the respondents perceived the service quality and student's satisfaction favorable. Based on Table 4: Descriptive Analysis, it illustrated that mean of student's satisfaction was 4.0916 and service quality dimensions with an overall mean of 3.5692. Meanwhile, sub dimensions under service quality, tangibility scores the highest mean value, which is 3.8901, followed by assurance 3.7170, reliability 3.6374, responsiveness 3.4121 and empathy 3.1896.

	Mean	Std. Deviation
Tangibility	3.8901	.71609
Reliability	3.6374	.65539
Responsiveness	3.4121	.71528
Assurance	3.7170	.64357
Empathy	3.1896	.72872
Customer Satisfaction	4.0916	.70766

Table 4: Descriptive Analysis

*C. Correlation Analysis*

Pearson's correlation coefficient was used to display both the relationship and the importance of service quality

and customer satisfaction. In addition, it is also conducted to look for the relationship between SERVQUAL dimensions such as; tangibility, reliability, responsiveness, assurance, empathy and customer satisfaction (students). From Table 5, Correlation Analysis, we find that quality of service has a strongly positive relationship with customer satisfaction and a significant level ( $P < 0.01$ ).

In addition to that, it is also revealed that overall service quality dimensions are positively correlated with customer(students) satisfaction. Reliability has Reliability has strongest relationship( $r=0.475^{**}$ ), followed by Tangibility( $r=0.408^{**}$ ), Responsiveness( $r=0.339^{**}$ ), Empathy( $r=0.322^{**}$ ), and Assurance( $r=0.224^{*}$ ).

Dimensions	1	2	3	4	5	6	7
Tangibility	<b>1</b>						
Reliability	0.542**	<b>1</b>					
Responsiveness	0.432**	0.441**	<b>1</b>				
Assurance	0.422**	0.447**	0.491**	<b>1</b>			
Empathy	0.453**	0.324**	0.501**	0.467**	<b>1</b>		
Service Quality	0.764**	0.726**	0.769**	0.744**	0.742**	<b>1</b>	
Customer Satisfaction	0.408**	0.475**	0.339**	0.224*	0.322**	0.472**	<b>1</b>

Table 5:- Correlation Analysis

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

\* Correlation is significant at the 0.05 level (2-tailed)

**D. Regression Analysis**

In general, regression analysis is used to answer the question of how independent variables affect the dependent variable. In this context, the question of research is to what extent does service quality and its dimensions impact on customer satisfaction? Answered. Moreover, if we consider the value of  $R^2$  to be the explanation power of regression model, the 5 service quality variables can clearly explain 29% of the variation of the customer satisfaction.

It means that, in student satisfaction in the private higher education institutions in Mogadishu universities is influenced by the service quality. In additional, Reliability of service quality has the significant impact on customer(student) satisfaction (Beta coefficient B is 0.377 at sig  $T=3.005$ ). Whereas tangibility, assurance,

responsiveness and empathy are not significantly contributed to customer(student) satisfaction. According to Cohen (1988) suggested  $R^2$  values for endogenous latent variables are assessed as follows: 0.26 (substantial), 0.13 (moderate), 0.02 (weak). (Falk & Miller, 1992) recommended that  $R^2$  values should be equal to or greater than 0.10 in order for the variance explained of a particular endogenous construct to be deemed adequate.

Furthermore, there is no tolerance level greater than or equal to 1 and the ideal VIF values are less than 5. It can be clearly observed that the VIF range ranges between 1.653 and 1.625 values below five. On the other hand, tolerance values range from 0.643 to 0.605. Thus, the measures chosen to evaluate the independent variable in this study do not reach levels indicating linear multichannel.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.797	.463		3.879	.000	
	Tangibility	.159	.117	.161	1.363	.177	.605
	Reliability	.377	.125	.349	3.005	.003	.625
	Responsiveness	.101	.116	.103	.877	.383	.616
	Assurance	-.126	.126	-.114	-.996	.322	.637
	Empathy	.134	.111	.138	1.210	.230	.643
	R=0.534						
	R <sup>2</sup> =0.285						
	F value = 6.772						
	Sig. F=0.000						

a. Dependent Variable: Customer Satisfaction

Table 6 Regression Analysis



**E. Hypothesis Test**

Based on the above hypothesis result, overall service quality dimensions (tangibility, reliability, responsiveness, assurance and empathy have significant relationship with customer satisfaction so we accept all alternative hypothesis which are each SERVQUAL dimension has significant relationship with customer satisfaction and overall service quality has significant relationship with customer satisfaction.

Furthermore, according above hypothesis result, it illustrates that findings of the impact of each service quality dimensions on customer satisfaction. Thus, we can see that

only reliability is the only sub-dimension of service quality variable which has significant impact on customer satisfaction and service quality has significant impact on customer satisfaction, while other service quality dimensions (Tangibility, Assurance, Responsiveness & Empathy) have not significant impact on customer satisfaction so we accept hypotheses which is reliability has significant impact on customer satisfaction and service quality has significant impact on customer satisfaction but we reject hypotheses of dimensions(reliability, assurance, responsiveness & empathy) because they do not have significant impact on customer satisfaction.

<i>Hypotheses</i>	<i>Score</i>	<i>Results</i>	<i>Tools</i>
Ha1: There is a significant relationship between service quality and customer satisfaction	r= 0.472** P= 0.000 (P<0.05)	Accepted	Correlation
Ha1.1: There is a significant relationship between tangibility and customer satisfaction	r=0.408** P=0.00 (P<0.05)	Accepted	Correlation
Ha1.2: There is a significant relationship between reliability and customer satisfaction.	r=0.475** P=0.000 (P<0.05)	Accepted	Correlation
Ha1.3: There is a significant relationship between responsiveness and customer satisfaction	r=0.339** P=0.000 (P<0.05)	Accepted	Correlation
Ha1.4: There is a significant relationship between assurance and customer satisfaction.	r= 0.224* P=0.000 (P<0.05)	Accepted	Correlation
Ha1.5: There is a significant relationship between empathy and customer satisfaction	r=0.322** P=0.000 (P<0.05)	Accepted	Correlation
Ha2: There is a significant impact of service quality on customer satisfaction	r=0.285 P=0.000 (p<0.05)	Accepted	Regression
Ha2.1: There is a significant impact of tangibility on customer satisfaction	$\beta$ =0.285 P=0.177 (p>0.05)	Rejected	Regression
Ha2.2: There is a significant impact of reliability on customer satisfaction	$\beta$ =0.285 P=0.003 (p<0.05)	Accepted	Regression
Ha2.3: There is a significant impact of responsiveness on customer satisfaction.	$\beta$ =0.285 P=0.383 (p>0.05)	Rejected	Regression
Ha2.4: There is a significant impact of assurance on customer satisfaction	$\beta$ =0.285 P=0.322 (p>0.05)	Rejected	Regression
Ha2.5: There is a significant impact of empathy on customer satisfaction.	$\beta$ =0.285 P=0.230 (p>0.05)	Rejected	Regression

Table 7:- Hypotheses Analysis

## V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

### A. Discussion

The main purpose of this study is to examine the relationship between service quality, and SERVQUAL dimensions (tangibility, reliability, responsiveness, assurance & empathy) with customer satisfaction in education sector by sampling two of reputable universities in Mogadishu/Somalia. Sub-purpose for this study is to determine to what extent five service quality and its dimensions (tangibility, reliability, responsiveness, assurance & empathy) has impact on customer satisfaction?

Based on results of correlation analysis, service quality in education sector especially in higher private institutions in Mogadishu/Somalia has positively Significant relationship with student's satisfaction. On other hand, it was also revealed that five SERVQUAL dimensions have positively significant relationship with students' satisfaction in higher private universities in Mogadishu (Hasan et al, 2008; Ali & Mohamed, 2014; Asaduzzaman et al, 2013; Van Schalvic and Steinkamp 2014; Kundi et al, 2014) proved that service quality, service quality dimensions have significant relationship with student's satisfaction in higher education institutions.

#### ➤ Reliability:

Is the strongest dimension of service quality significantly correlated with customer satisfaction. This means that students were satisfied with ability to perform services that are reliably and accurately requested. However, this finding is consisted with previous study in the field of higher education (Ali & Mohamed, 2014; Parasuraman et al., 1985, 1988; Sureshchandar et al., 2002; Azman et al., 2009; Ravichandran et al., 2010; Rahim et al., 2010).

#### ➤ Tangibility:

The study also shows that tangibility has strong and significant relationship with student's satisfaction regarding service quality offered by universities. This finding indicates that students satisfied with physical evidence of the service such as; physical facilities, appearance of personnel, tools or equipment used to offer service by staff.

#### ➤ Assurance:

The study revealed that assurance has moderate significant relation-ship with the student's satisfaction in the students' perception of service quality rendered by the institution. This finding shows that friendly staffs and friendly teachers are two important factors impact customer satisfaction.

#### ➤ Responsiveness:

Also, seems to have a significant relationship with the student's satisfaction in the students' perception of service quality rendered by the institution. The finding shows that teacher's willingness to help students timely and teacher's willingness to solve problems immediately are the two important factors impacts customer satisfaction.

#### ➤ Empathy:

Also, has weakest relationship with the student's satisfaction in the students' perception of service quality rendered by the institution.

According to the findings of regression analysis, it reveals that service quality has significantly impact on customer(student) satisfaction with significant at  $P > 0.05$  and it shows that 29% (Adjusted  $R^2 = 0.243$ ) of the total variance is explained by service quality. Moreover, customer satisfaction is also impacted by reliability of service quality significantly. Although, other sub dimensions of service quality such as tangibility, responsiveness, assurance, and empathy has not influenced significantly in student's satisfaction.

The findings of the measurement among the five dimensions of service quality identified some important implications. It provides a useful direction to management and practitioners to know that 'reliability' and 'tangibility is perceived as important by the students in term of students' satisfaction from the university.

### B. Recommendations

In this recommendation part will be divide into three section such as recommendation for managements/administration, recommendation for teachers/lecturers and recommendation for future studies.

#### ➤ Recommendation for managements/Administration

- Providing adequate computers with internet access
- Providing up-to-date library facilities
- Enhancing classroom and study room essential facilities to attract students such as comfortable seats, temperature.
- Management/administrations should make feel that students are in their heart and always care about them, so this makes students feel valuable in institution.
- Providing lecturers training or seminars they need to improve teaching capacity and research skills.

#### ➤ Recommendation for Teachers/Lecturers

- Motivate the student to participate in creative works, like doing research, publishing their findings, etc.
- Using update technology to enhance learning of student such as power point slides and other visual tools.
- Helping students to improve presentation skills by giving them projects then to present in classroom.
- To be in class timely and avoiding period cancellation as much as possible.

#### ➤ Recommendation for Future Studies

- Because of this study was only limited to Mogadishu city of Somalia, so potential future studies can focus on education in whole country of Somalia.
- This study used small sample for convenience consideration of time and budget limit so future studies can take large sample to test relationship between service quality and customer satisfaction.

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- This study focused only private higher education institution so future studies should focus on comparing service quality and student's satisfaction in public higher institution and private higher institutions.
- The study found that service quality can clearly explain 29% variation of customer satisfaction, it means that the remaining percentage can be found by using other models than SERVQUAL model so potential future studies should focus on other factors to find the missing 71% such as trying to do factor analysis to find out factors that impact on customer satisfaction beyond service quality.

*C. Conclusion*

According to the findings, correlation analysis revealed that service quality and its five dimensions (Tangibility, Reliability, Responsiveness, Assurance, Empathy) has significant relationship with student's satisfaction.

Reliability and tangibility were the most contributing factors in the service quality model; they are crucial determinants of customer satisfaction in higher education in Mogadishu. So, universities in Mogadishu have to increase the reliability such as, timely and error free registration, providing service at promised time, teaching capability of teachers and tangible facilities such as, lighting in classroom, appearance of building, appearance of personnel and temperature of classroom in order to increase customer satisfaction.

According to findings of regression analysis, it shows that reliability of service quality has the significant impact on student' satisfaction (Beta coefficient B is 0.377 at sig T=3.005).

Whereas tangibility, assurance, responsiveness and empathy have not significantly contributed to student's 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 29% variance in satisfaction.

Furthermore, 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.

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