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## Service Quality and Customer Satisfaction in Ethiopian Higher Education Institutions: The Case of Oromia State University, Ethiopia

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### **Abstract:**

*High level of service quality is often what customers expect and value in purchasing services from service organizations such as education institutions. It is vital to ensure that satisfactory or even superior service is delivered at the first time to delight customers. Measuring and managing service quality has received increased attention of researchers and practitioners in various disciplines. Service providers must believe that customer as core concept of their business; customer satisfaction is what guarantees the future of education institutions and it is achievable by taking up their services and students' needs. In other words, service quality is typically defined in terms of consumer satisfaction. The purpose of this study was to measure the service quality and its subsequent effect on customer satisfaction at Oromia State University using a model that describes various dimensions of service quality. To this end, the researcher has studied the service quality of the University using SERVQUAL model. Proportional stratified sampling technique was used in the study to take a sample from the population. A total sample of 343 respondents who were senior students at the University was taken as a respondent. A questionnaire was designed based on the model in order to examine all the five factors of service quality in the model for education institutions. It was inclusively concluded that students of Oromia State University were not satisfied with the perceived services of three dimensions of the model and it warns the University to focus on students' expectations. Reliability, assurance, responsiveness, empathy and tangibles were the five features of the model and in assurance and empathy, the students were satisfied, but in the remaining three dimensions, students feel dissatisfied. Managers should train employees, improve teaching aid facilities and coordinate all people, departments and organizations involved with the services. Finally, managers at the University should measure students' satisfaction and service quality seasonally to keep the services corresponded with students' opinions.*

**Keywords:** Service quality, students' satisfaction, SERVQUAL model, Service quality dimensions, students' service quality expectations and perceptions

### **1. Introduction**

The role of the civil service as an instrument in a country's socio-economic and political development is unquestionable. In some parts of the world, however, the civil service seems unable to cope with the prevailing ideological, political and economic changes as well as management innovations. In other parts of the world, especially in Africa, the institutional and capacity weakness of the civil service is considered to be one of the major causes of social and political upheavals and economic crises (Paulos Chanie, 1997). Cognizant of this fact, over the last two decades, many countries are introducing fundamental changes in the structure and operations of their civil services (ibid).

Ethiopia, as part of its general political and economic restructuring programs, is undertaking comprehensive measures to restructure its civil service. The Ethiopian Peoples' Revolutionary Democratic Front (EPRDF), after coming to power in May has been taking different reform measures in the political, economic and social spheres. So far, the government has implemented two phases of civil service reform: Phase I that runs from 1991 to 1996, and phase II from 1996 to present. The second phase of the civil service reform was comprehensive and included five major sub-programs. One of which is civil service delivery and improving quality of services. This sub-program is closely monitored and supervised by the Office of the Prime Minister and is designed to improve the quality of services provided by public sector employees, and includes the establishment of complaint-handling mechanisms as well. The program has been designed to make civil service institutions follow an appropriate and improved system of service delivery so as to give service to the public in an effective, efficient, transparent and impartial manner; the employees of the civil service institutions have the responsibility and obligation to provide quality service to the public fairly, equitably, honestly, efficiently and effectively (Office of the Prime Minister of Ethiopia 1998).

By the same fashion, the Oromia regional state in general and Oromia State University as a capacity building and reform sustaining higher institution in particular, have been implementing the aforementioned civil service reform programs.

However, mere implementation of reform programs doesn't mean that service qualities are improved and customers are satisfied. Rather, to remain competent via meeting the dynamic needs of citizens, service providers must

continuously assess and check the quality of their services in the eyes of customers. Moreover, understanding and meeting customers' expectations in the public sector are important means in order to accomplish institutional mission. Thus, it is with this background fact that this service quality and customer satisfaction assessment was conducted at Oromia State University.

### 1.1. Problem Statement

Oromia State University (OSU) is a regional capacity building university providing holistic capacity building support to the public sectors and to the general public at large in Oromia regional state and beyond.

The University has been accomplishing its mission by providing reform led long term education, training and consultancy services to public institutions in the region. Moreover, the University has carried out a number of reform initiatives with the view to improve its service quality and ensure customer satisfaction. More specifically, as it is stated in one of the recent reform tools, Balanced Scorecard a planning and measurement tool that the University has implemented recently, increasing customer satisfaction has been one of the strategic pillars that has got due emphasis.

In connection with the above stated fact, Zeithaml (2006) clearly stated that service quality is based on customer valuations of the services provided. Thus, it should be seen in the eyes of customers not only from the viewpoints of providers and it requires continuous assessment of their level of satisfaction.

Further, both the Balanced Scorecard and annual plan of the University put it rightly that customer satisfaction survey should be conducted semi-annually to gauge the quality of the service provided and evaluate its subsequent effects on the level of customer satisfaction.

Even though the University had undertaken a thorough service delivery and customer satisfaction survey in the year 2016, since satisfaction survey should be conducted periodically, this study assessed service quality and customer satisfaction for the second time to examine and discuss the service quality provided by the University and its subsequent effects on customer satisfaction during 2017/2018 Ethiopian academic calendar.

### 1.2. Objectives of the Study

The main purpose of this study is to assess service quality using the five dimensions of SERVQUAL model at the University and its subsequent effects on students' satisfaction.

The specific objectives of the study include:

- To measure the satisfaction level among students of the University
- To identify effects of service quality dimensions on the satisfaction level of students
- To find out the most important dimensions of service quality that affect students' satisfaction at the University
- To identify the key challenges and provide alternative options which enable the University to improve its service quality

## 2. Theoretical Framework

### 2.1. Concepts of Service Quality and Customer Satisfaction

Service quality is a concept that has aroused considerable interest and debate in the research literature because of the difficulties in both defining it and measuring it with no overall consensus emerging on either (Wisniewski, 2001). There are a number of different "definitions" as to what is meant by service quality. One that is commonly used defines service quality as the extent to which a service meets customers' needs or expectations (Lewis and Mitchell, 1990; Dotchin and Oakland, 1994a; Asubonteng *et al.*, 1996; Wisniewski and Donnelly, 1996). Service quality can thus be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman *et al.*, 1985; Lewis and Mitchell, 1990).

Always there exists an important question: why should service quality be measured? Measurement allows for comparison before and after changes, for the location of quality related problems and for the establishment of clear standards for service delivery. Edvardsen *et al.* (1994) state that, in their experience, the starting point in developing quality in services is analysis and measurement. The SERVQUAL approach, which will be studied in this paper, is the most common method for measuring service quality.

There are seven major gaps in the service quality concept, which are shown in Figure 1. The model is an extension of Parasuraman *et al.* (1985). According to the following explanation (Curry, 1999; Luk and Layton, 2002), the three important gaps, which are more associated with the external customers, are Gap1, Gap5 and Gap6; since they have a direct relationship with customers.

- Gap1: Customers' expectations versus management perceptions: as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.
- Gap2: Management perceptions versus service specifications: as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting.
- Gap3: Service specifications versus service delivery: as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control systems, lack of perceived control and lack of teamwork.

- Gap4: Service delivery versus external communication: as a result of inadequate horizontal communications and propensity to over-promise.
- Gap5: The discrepancy between customer expectations and their perceptions of the service delivered: as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In this case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.
- Gap6: The discrepancy between customer expectations and employees' perceptions: as a result of the differences in the understanding of customer expectations by front-line service providers.
- Gap7: The discrepancy between employee's perceptions and management perceptions: as a result of the differences in the understanding of customer expectations between managers and service providers.

According to Brown and Bond (1995), "the gap model is one of the best received and most heuristically valuable contributions to the services literature". The model identifies seven key discrepancies or gaps relating to managerial perceptions of service quality, and tasks associated with service delivery to customers. The six of the gaps (Gap 1, Gap 2, Gap 3, Gap 4, Gap 6 and Gap 7) are identified as functions of the way in which service is delivered, whereas Gap 5 pertains to the customer and as such is considered to be the true measure of service quality. The Gap on which the SERVQUAL methodology has influence is Gap 5. Therefore, this study focuses on Gap 5: the difference between students' service expectations and perceptions of services.

Clearly, from a Best Value perspective the measurement of service quality in the service sector should take into account customer expectations of service as well as perceptions of service. However, as Robinson (1999) concludes: "It is apparent that there is little consensus of opinion and much disagreement about how to measure service quality". One service quality measurement model that has been extensively applied is the SERVQUAL model developed by Parasuraman *et al.* 1985, 1986, 1994; Zeithaml *et al.*, 1990). SERVQUAL as the most often used approach for measuring service quality has been to compare customers' expectations before a service encounter and their perceptions of the actual service delivered (Gronroos, 1982; Lewis and Booms, 1983; Parasuraman *et al.*, 1985). The SERVQUAL instrument has been the predominant method used to measure consumers' perceptions of service quality. It has five generic dimensions or factors and are stated as follows (van Iwaarden *et al.*, 2003):

- Tangibles: Physical facilities, equipment and appearance of personnel.
- Reliability: Ability to perform the promised service dependably and accurately.
- Responsiveness: Willingness to help customers and provide prompt service.
- Assurance (including competence, courtesy, credibility and security): Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- Empathy (including access, communication, understanding the customer): Caring and individualized attention that the firm provides to its customers.

The service quality literature initially focused on measurement issues. Following the introduction of the SERVQUAL, attention centered on the determinants of perceived service quality with particular emphasis on the service delivery process. SERVQUAL, with its five dimensions (i.e. tangibles, assurance, reliability, responsiveness, and empathy) has come to symbolize the American perspective on service quality (Brady and Cronin, 2001), the European perspective represented by Gronroos service quality model. The SERVQUAL model concentrates on five gaps impairing the delivery of excellent service quality: this study focused on gap 5: the difference between students' expectations and perceptions of service. Before intensive efforts can be successfully undertaken to level out service management problems that impede the delivery of truly excellent service quality, it is essential to know to what degree customer perceptions of existing service fail to meet expectations; this study focused on that primary issue. There after it becomes important to know whether differences exist in management perceptions of customer expectations (Gap 1), a discrepancy in management perceptions and the service specifications that are enacted (Gap 2), etc. Thus, this paper deals with gap 5 which focuses on the differences between consumer expectations and perceptions. This is the only gap that can be examined solely on the data from the consumer.

## 2.2. Service Quality in Higher Education

Higher education institutions faced tremendous changes since 1990s, according to Oldfield and Baron (2000) institutions need to realize that they are in a market and need to have the concept of competitive advantage as there is a massive growth in number of students and institutions globally. This change in circumstances forces institutions to adapt Service-Quality based practices which will allow institutions to see themselves as organizations serving multiple stakeholders. Stakeholders include students, their parents and family, the local community, society, the government, the governing body, staff, local authorities, and current and potential employers. All of these stakeholders are concerned with the 'end product' - the graduate. All of the stakeholders have their differing vested interests towards higher education institutions. For example, employers and society in general are concerned primarily with the 'product' of the system, whereas students, and arguably their families, will also be concerned with the process. It is imperative to note that although higher education institutions are corporate like entities, the primary activities of education institutions are teaching and knowledge enhancement of the students and adding value to their professional and intellectual skills. These two activities are not for commercial purposes and thus it makes them very different from the commercial organizations in this perspective (Quinn *et al.*, 2009).

With the increasing focus on quality measures in all sectors; it is timely for academia to apply Service-Quality concepts into higher education. Service industries are playing an increasingly important role in the economy of developing

and developed nations. It is the most powerful competitive trend shaping businesses of the current era; for example, in the UK 75 % of the total economic growth is from services sector (Ghobadian, 1984). Ziethaml (2000) stress on the Service-Quality as it gives profitability in the long-term. He identified a direct relationship between Service-Quality and profitability. According to a report by Grant Thornton International, Service-Quality is the main source of competitive advantage for more than 70 % of privately held businesses.

The core functions of higher education institutes are general administrative services and education service, which serve as the distinct differentiation strategies. As a result of commercial competition imposed by economic forces resulting from the development of global education markets and the reduction of government funds (Abdullah, 2006), higher education institutes are diverted from their core purposes. The reduction of government funding has led higher education institutes to seek other financial sources. One of the basic sources is the increased tuition fees, followed by a cut in the number and amount of scholarships and tuition fees waiver. The other sources include a reduction in the developmental budgets and attracting national and international students with aggressive promotional strategies. These issues have led higher education institutions to adapt marketing approaches to measure and improve their quality of services.

In higher education context, Rowley (1997) defines Services-Quality as the difference in customers' perceptions between performance and expectation. She believes that the concept of quality varies from one individual to another as satisfaction from Service-Quality comes from the individual experience. Rowley questions whether limiting the Service-Quality concept should be limited to customer satisfaction or be extending it to exciting the customers more than their expectations. Oldfield and Baron (2000) define Service-Quality in three dimensions of processes, interpersonal factors and physical evidence. While Quinn et al (2009) describe higher education operations in three broad categories of educational or instructional, administration and auxiliary processes from a Service-Quality point of view.

Quinn (2009) comments that academic institutions are the most difficult areas for implementation of quality-based practices. Hence, the term Service-Quality is very difficult to define in higher education institutions. As discussed in section 2.1 perceptions of Service-Quality vary from individual to individual. For example, in educational setting one customer may perceive the curriculum and infrastructure to be good, while the other customer may consider them to be mediocre.

In higher education TQM is one commonly used approach for attempting to improve Service-Quality, whilst also improving productivity and decreasing costs (Johnston, 1993) supports the same argument by saying that TQM provides a loop of performance within higher education institutions which then benefits the society. He suggests if a university is producing better quality of students, this would enhance the job performance of the graduates. This in turn will improve the university's reputation and thus the university will be able to attract more potential students. However, Owlia (1997) warned that the lack of quality-based practices or inappropriate implementation of TQM may have negative effects as it will be a 'chain reaction'. TQM has been considered as a tool which can fix the problems of higher education (Venkataraman, 2007). He suggests that TQM has very contagious as it started from manufacturing, then moved forward to services and health care and finally into education. However, despite the creditability of TQM the academic institutions are slow to adopt TQM based practices.

One of the barriers to TQM implementation is lack of necessary knowledge about TQM philosophies in higher education. Harvey (1995) suggests another barrier, which is lack of empowerment and engagement of academic staff in implementing quality policies. However, Venkataram (2007) identifies a reason for the lack of engagement of the academic staff, that is, the academic staffs traditionally expect autonomy and teaching freedom and will resist to any change to implement TQM based practices. Kohn (1993) says that poor curriculum design could lead to quality failure. Thus, a change in academic systems and procedures due to TQM implementation may lead to a failure.

### 3. Research Methodology

#### 3.1. Research Approach and Design

As research methodology generally depends on qualitative and quantitative research approaches, the researcher employed the same approaches in collecting, analyzing and interpreting data.

The research approach in the study can be described as qualitative in that satisfaction can hardly be measured in numerical terminologies; it can be also quantitative in that a thorough comparison of factors of service quality was undertaken as an attempt to find out top priorities.

In order to address the research objectives, an integrated conceptual framework was used to measure customers' service quality perception and the satisfaction they drive. The study aimed at evaluating the service quality of the University by using SERVQUAL model. The model measures the quality of services along five dimensions, namely: reliability, assurance, responsiveness, empathy and tangibles. The research model was also employed to analyze the students' gap between expected and perceived services.

Furthermore, the five dimensions and their respective attributes of the model were expressed using a five-point Likert scale in the following ways: much worse than expected, worse than expected, equal to expected, better than expected, and much better than expected. Five different scores were assigned from 1 to 5 to represent this five-point scale, and satisfied customers must have received perceptions equal to or more than expectations. The hypothesized test value is 3 which separates customers into satisfied and unsatisfied one; the null and alternative hypotheses were specified as:

- Null hypothesis  $H_0$ :  $\mu = 3$ , i.e. customers' perception is equal to expectation
- Alternative hypothesis  $H_a$ :  $\mu \neq 3$ , i.e. customers' perception is different from expectation

The study specifies the level of sampling error (0.05) and thus the two-tailed critical value is  $\pm 1.96$ .

### 3.2. Methods of Sampling and Sample Size

In order to successfully accomplish the research purpose, primary data, using survey method, must be collected from each and every member of the target population. However, due to possible time and resource constraints, the study was confined to sample survey. Thus, multi-stage sampling was employed in order to draw representative sample from the target population. In the first place, the total students in the University were stratified based on their admissions as; Distance, Evening, Regular and Weekend divisions.

Secondly, students at distance and weekend divisions were stratified as Eastern and Western zones based on their location with reference to the main campus, Ziway. Consequently, two centers from each zone of distance learning and one center from each zone of weekend learning having large number of students were selected purposely. Since the service provision to each center is presumed to be similar, the selected centers with large number of students were considered to be representative of the other centers.

Further, students of the selected centers and students at Evening and Regular divisions were again stratified based on their fields of study as; Accounting & Public Finance (ACPF), Agricultural Business & Value Chain Management (ABVM), Governance & Development Management (GoDM), Human Resource Management & Leadership (HRML), Information Technology (IT), and Law. The purpose of these stratifications is to form homogenous groups in order to reduce sampling error. Finally, students were drawn from each field of study using systematic random sampling technique proportional to their size in order to come up with the total number of sample size required.

Equation for determining sample size:

$$n = \frac{z^2 \cdot p \cdot (1-p) \cdot N}{z^2 \cdot p \cdot (1-p) + Ne^2} \dots \dots \dots \text{(Yemane, 1967)}$$

Where:

- n = sample size required
- N= total number of students = 4,054
- P = estimated variance in population (0.5 for 50%-50%)
- e= precision desired/sampling error (5% i.e. 0.05)
- Z= Confidence level (95% i.e. 1.96)

Calculation:

$$\frac{1.96^2 \cdot (0.5) \cdot (1 - 0.5) \cdot 4054}{1.96^2 \cdot (0.5) \cdot (1 - 0.5) + 4054(0.05)^2}$$

302

### 3.3 Methods of Data Collection

In the study a survey with structured questionnaires was applied in order to measure the students' evaluation of the services provided by the University. The contents of the questionnaire were derived from SERVQUAL model that includes all of the 22 items of the original SERVQUAL model rephrased to make them suitable for the services provided by the University.

The questionnaire was structured into two parts: respondent's profile and level of satisfaction related to the five service dimensions. A total of 302 questionnaires for students' sub-population were distributed to samples of 302 students at the University.

### 3.4. Methods of Data Analysis

The data received from the respondents were analyzed using statistical package for social sciences (SPSS), and for the analysis of the five dimensions of service quality and each attribute, a descriptive statistic of mean difference was used and a T-test was also conducted with 5% level of significance or 95% confidence level.

## 4. Findings

This section depicts the main findings of the research with respect to the overall level of service quality and students' satisfaction as well as students' satisfaction in relation to the two demographic variables; admission division and department.

A widely used method of measuring service quality is the gap analysis model, originally developed by Zeithaml, Berry, and Parasuraman in (1998). The model concentrates on five Gaps which can impair the extent of service quality deliver. This study focused on gap five: the difference between students' experiences and expectations of services. The result can be either positive (the experience is better than the students thought it would be) or negative (the experience is worse than expected). Although the other four gaps are also important factors in service quality, Gap five is the only that can be determined solely from data collected from students (customers in general); in order to determine the other gaps, we would require data from the university, itself. In order to measure gap five, which determines the gap between customer expectations and perceptions, the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry in 1985 was adopted. It contains five determinants; they are reliability, assurance, responsiveness, empathy and tangibles. Details of these service attributes are presented in table 1 below.

Service Dimension	No	Symbol	Attribute
Reliability	1	REL <sub>1</sub>	Timely provision of course materials
	2	REL <sub>2</sub>	Timely feedback of exams & assignments
	3	REL <sub>3</sub>	Scheduled beginning & ending of semester classes
	4	REL <sub>4</sub>	Timely provision of grade reports
	5	REL <sub>5</sub>	Coverage of course contents as per the schedule
	6	REL <sub>6</sub>	Fair & equal treatment of students by instructors
	7	REL <sub>7</sub>	Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc.
Assurance	8	ASS <sub>1</sub>	Appropriateness & relevancy of course materials
	9	ASS <sub>2</sub>	Effectiveness of class sessions in facilitating learning
	10	ASS <sub>3</sub>	Interactive, useful & attractiveness of class sessions
	11	ASS <sub>4</sub>	Helpfulness & supportiveness of group work (Raya work)
	12	ASS <sub>5</sub>	knowledge & understanding of assigned instructors on each course
	13	ASS <sub>6</sub>	Clear & simple presentation of lessons by instructors
	14	ASS <sub>7</sub>	Preparation of instructors before coming to class
	15	ASS <sub>8</sub>	The level of information provision to students at weekend & distance centers, and at the campus
Responsiveness	16	RES <sub>1</sub>	Courteous & promptness of instructors in service provisions
	17	RES <sub>2</sub>	promptness or fastness of responses when students interact with the University or representatives of the University
	18	RES <sub>3</sub>	Speed and accuracy of complaint resolution practices of the University
Empathy	19	EMP <sub>1</sub>	The general willingness of the staff to help students regarding a specific problem
	20	EMP <sub>2</sub>	The suitability of class sessions in terms of timing for the teaching-learning practices
	21	EMP <sub>3</sub>	Spontaneous care and concern of the staff for students' needs
	22	EMP <sub>4</sub>	Willingness of the staff to resolve any of student's problems though it is students' mistake
Tangibles	23	TAN <sub>1</sub>	Quality of printed course materials (in terms of paper, printing and binding)
	24	TAN <sub>2</sub>	The easiness and convenience of course materials for handling and carrying
	25	TAN <sub>3</sub>	Sufficiency of library facilities (books, other reference materials, chairs, tables etc.) at the University and at centers
	26	TAN <sub>4</sub>	Availability of internet facilities at the University & at centers
	27	TAN <sub>5</sub>	Conditions of class rooms at the University & at centers to facilitate learning

Table 1: Service Dimensions and Their Attributes

Source: Researcher's Own Design, 2017

#### 4.1. Overall Level of Satisfaction by Service Dimensions and Attributes

Based on the measurement scale for service quality proposed in the previous section, the researcher further analyzed the difference in perceived expected service quality by the students. Here, respondents were asked to separately evaluate each service attribute, according to the gap between their perception and expectation, using a five-point Likert scale: 'Much better than expected', 'better than expected', 'equal to expect', 'worse than expected', and 'Much worse than expected'. Five different scores were assigned: 5, 4, 3, 2, 1, to represent this five-point scale.

The researcher used one-sample t- test for the data analysis. The one-sample t- test procedure tests whether the mean of a single variable differs from a specified constant. This test assumes that the data are normally distributed; however, this test is fairly robust to departures from normality. The sample size in the study is 302 and based on 'Central Limit Theorem' it is presumed that the data are normally distributed approximately. A 95 percent confidence interval for the difference between the mean and the hypothesized test value is supposed. Satisfied students must have received perceptions equal to or more than expectations. So, the hypothesized test value in this study is 3 and it can split students into satisfied and unsatisfied, and the null and alternative hypotheses are specified as:

- Null hypothesis  $H_0: \mu = 3$ , i.e. students' perception is equal to expectation

Alternative hypothesis  $H_a: \mu \neq 3$ , i.e. students' perception is different from expectation

As noted earlier, the study specifies the level of sampling error (0.05) and thus the two-tailed critical value is  $\pm 1.96$ . The below table 2 depicts t-test results of the 27 service attributes.

No.	Symbol	Service Quality Attribute	Test Value = 3						Satisfaction (%)
			t	df	Sig. (2-tailed) P-value	Mean Difference	95% Confidence Interval of the Difference		
							Lower	Upper	
1	REL <sub>1</sub>	Timely provision of course materials	4.275	301	0.000	0.258	0.14	0.38	79.1
2	REL <sub>2</sub>	Timely feedback of exams & assignments	-3.734	301	0.000	-0.235	-0.36	-0.11	55.6
3	REL <sub>3</sub>	Scheduled beginning & ending of semester class	-2.742	301	0.006	-0.185	-0.32	-0.05	56.3
4	REL <sub>4</sub>	Timely provision of grade reports	-7.747	301	0.000	-0.384	-0.48	-0.25	57.0
5	REL <sub>5</sub>	Coverage of course contents as per the schedule	-2.681	301	0.008	-0.172	-0.30	-0.05	60.3
6	REL <sub>6</sub>	Fair & equal treatment of students by instructors	8.743	301	0.000	0.520	0.40	0.64	88.4
7	REL <sub>7</sub>	Proper student's document handling (bank slips, application & previous educational documents, exams, assignments etc.)	-15.927	301	0.000	-0.652	-0.73	-0.57	45.0
8	ASS <sub>1</sub>	Appropriateness & relevancy of course materials	11.011	301	0.000	0.642	0.53	0.76	88.4
9	ASS <sub>2</sub>	Effectiveness of class sessions in facilitating learning	7.131	301	0.000	0.381	0.28	0.49	85.8
10	ASS <sub>3</sub>	Interactive, useful & attractiveness of class sessions	8.015	301	0.000	0.440	0.33	0.55	86.8
11	ASS <sub>4</sub>	Helpfulness & supportiveness of group work (Raya work)	4.280	301	0.000	0.235	0.13	0.34	79.5
12	ASS <sub>5</sub>	knowledge & understanding of assigned instructors on each course	6.384	301	0.000	0.351	0.24	0.46	83.4
13	ASS <sub>6</sub>	Clear & simple presentation of lessons by instructors	6.102	301	0.000	0.351	0.24	0.46	81.1
14	ASS <sub>7</sub>	Preparation of instructors before coming to class	4.895	301	0.000	0.272	0.16	0.38	82.5
15	ASS <sub>8</sub>	The level of information provision to students at weekend & distance centers, and at the campus	2.042	301	0.042	0.119	0.00	0.23	75.5
16	RES <sub>1</sub>	Courteous & promptness of instructors in service provisions	10.669	301	0.000	0.613	0.50	0.73	87.4
17	RES <sub>2</sub>	promptness or fastness of responses when students interact with the University or representatives of the University	-0.958	301	0.339	-0.066	-0.20	0.07	63.4
18	RES <sub>3</sub>	Speed and accuracy of complaint resolution practices of the University	-8.456	301	0.000	-0.407	-0.5	-0.35	64.6
19	EMP <sub>1</sub>	The general willingness of the staff to help students regarding a specific problem	0.159	301	0.874	0.010	-0.11	0.13	70.2
20	EMP <sub>2</sub>	The suitability of class sessions in terms of timing for the teaching-learning practices	4.965	301	0.000	0.268	0.16	0.37	83.8
21	EMP <sub>3</sub>	Spontaneous care and concern of the staff for students' needs	2.402	301	0.017	0.156	0.03	0.28	74.2

No.	Symbol	Service Quality Attribute	Test Value = 3						Satisfaction (%)
22	EMP <sub>4</sub>	Willingness of the staff to resolve any of student's problems though it is students' mistake	0.315	301	0.753	0.020	-0.10	0.14	71.9
23	TAN <sub>1</sub>	Quality of printed course materials (in terms of paper, printing and binding)	10.031	301	0.000	0.599	0.48	0.72	88.4
24	TAN <sub>2</sub>	The easiness and convenience of course materials for handling and carrying	6.125	301	0.000	0.391	0.27	0.52	81.5
25	TAN <sub>3</sub>	Sufficiency of relevant library facilities (books, other reference materials, tables, chairs etc.) at the University and at centers	-1.296	301	0.196	-0.089	-0.23	0.05	64.6
26	TAN <sub>4</sub>	Availability and accessibility of internet facilities at the University & at centers	-4.136	301	0.000	-0.272	-0.40	-0.14	59.3
27	TAN <sub>5</sub>	Conditions of class rooms at the University & at centers to facilitate learning	0.300	301	0.764	0.020	-0.11	0.15	70.2

Table 2: Results of the One-Sample T-Test

Source: Survey Result, 2017

According to the figures listed in table 2, which is from the views of students, it can be observed that perceptions of service quality attributes which were better than expected have positive t-values and service scores while those attributes which were worse than expected have negative t-values and service scores. The factors which have t-values greater than 1.96 are significant in positive direction and the factors with t-values less than -1.96 are significant in negative direction which implies that, in both cases, their p-values approach to zero and their respective mean difference values also largely deviate from the test value '3' as their t-values far from the critical value in both directions. In other words, in both directions the null hypothesis is rejected. On the contrary, those attributes whose calculated t-value lies between -1.96 and 1.96 were statistically insignificant in both directions. That means their mean value do not differ from the test value and thus the null hypothesis is accepted for these attributes, which includes RES<sub>2</sub>, EMP<sub>1</sub>, EMP<sub>4</sub>, TAN<sub>3</sub> and TAN<sub>5</sub>. Accordingly, we can say that in these attributes the University has been performing a service level that is more or less equal to what students expected. Hence, the University needs to strive more to provide a service level that exceeds the expectation of its students.

Again, from the above analysis, for the following attributes; REL<sub>1</sub>, REL<sub>6</sub>, ASS<sub>1</sub>, ASS<sub>2</sub>, ASS<sub>3</sub>, ASS<sub>4</sub>, ASS<sub>5</sub>, ASS<sub>6</sub>, ASS<sub>7</sub>, ASS<sub>8</sub>, RES<sub>1</sub>, EMP<sub>2</sub>, EMP<sub>3</sub>, TAN<sub>1</sub> and TAN<sub>2</sub>; the null hypothesis is rejected as their calculated t-values are greater than the critical value 1.96. In other words, their mean differences are positive and their means are greater than (different from) the test value '3'. Therefore, from the perspective of these attributes, the University has scored a service level that exceeds the performance expectation of its students. But when we look at the specific mean value for these attributes we can say that there is still some ample expectation or need that is not yet met by the actual service provided.

However, for the attributes; REL<sub>2</sub>, REL<sub>3</sub>, REL<sub>4</sub>, REL<sub>5</sub>, REL<sub>7</sub>, RES<sub>3</sub> and TAN<sub>4</sub>, the null hypothesis is rejected as their calculated t-values are less than the critical value -1.96 which implies that the mean differences have negative sign and the means of each is less than (different from) the test value. Therefore, we can say that in these attributes the University has scored a service level that is below what students expected. And when we see their specific mean value the respective value for these attributes are much lower than the test value '3'.

Accordingly, the top six attributes of service quality whose experience have better than expected for students of the University are in the sequence of; ASS<sub>1</sub> (Appropriateness & relevancy of course materials), RES<sub>1</sub> (Courteous & promptness of instructors in service provisions), TAN<sub>1</sub> (Sufficiency of library facilities (books, other reference materials, chairs, tables etc.) at the University and at centers), REL<sub>6</sub> (Fair & equal treatment of students by instructors), ASS<sub>3</sub> (Interactive, useful & attractiveness of class sessions) and ASS<sub>2</sub> (Effectiveness of class sessions in facilitating learning). Fortunately, three of these attributes are from one service dimension i.e. 'Assurance'. This showed that the University has done well in assurance service dimension. On the reverse, the top five worst service quality attributes consecutively are; REL<sub>7</sub> (Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc.), RES<sub>3</sub> (Speed and accuracy of complaint resolution practices of the University), REL<sub>4</sub> (Timely provision of grade reports), TAN<sub>4</sub> (Availability of internet facilities at the University & at centers) and REL<sub>2</sub> (Timely feedback of exams & assignments).

ASS<sub>1</sub> (Appropriateness & relevancy of course materials) is perceived to be much better than expected and is the first best ranked attribute whereas REL<sub>7</sub> (Proper students' document handling like bank slips, filled application format &



previous educational documents, exams, assignments etc.) is perceived to be much worse than expected and is the first worst ranked attribute.

The level of satisfaction for all the five service dimensions (i.e. Reliability, Assurance, Responsiveness, Empathy and Tangibles) in terms of their group average and total mean differences ranged from -0.121 to 0.349 and from -0.85 to 2.91 respectively (table 3). The result showed that the level of satisfaction for 'Assurance' service dimension is the highest, followed by 'Tangibles', 'Empathy' and 'Responsiveness'; whereas 'Reliability' is the first worse than expected dimension from the point of view of students.

No.	Dimension	Total Mean Difference	Average Mean Difference
1	Reliability	-0.850	-0.121
2	Tangibles	0.649	0.130
3	Empathy	0.454	0.114
4	Responsiveness	0.140	0.045
5	Assurance	2.791	0.349

Worst Ranked Dimension

First Ranked Dimension

Table 3: Group Average and Total Mean Differences of the Five Service Dimensions  
Source: Survey Result, 2017

In general, from the survey analysis and from the above explanation, it is found that students are satisfied in twenty service attributes out of the total 27 attributes. But in the remaining seven attributes students are dissatisfied.

With regard to each service dimension, assurance service dimension has the highest group mean difference 0.349. It shows that the University has been performing best in 'Assurance' service dimension so as to improve employees' knowledge and courtesy, and their ability to inspire trust and confidence in the minds of customers. All attributes in this dimension have positive mean differences, especially, "Appropriateness & relevancy of course materials", "Interactive, useful & attractiveness of class sessions" and "Effectiveness of class sessions in facilitating learning" are the first three highest ranked attributes with in this dimension showing that the University gives high priority for interactive and very supportive teaching methodology that could make students active, independent and highly qualified professionals.

Tangibles service dimension has the second highest average group mean difference 0.130. "Quality of printed course materials in terms of paper, printing and binding" and "The easiness and convenience of course materials for handling and carrying" are the attributes that have the highest mean differences respectively in this service dimension; whereas "Availability and accessibility of internet facilities at the University & at centers" is the worst ranked attribute in this dimension.

Empathy with average mean difference of 0.114 and responsiveness with average mean difference of 0.045 are the third and the fourth ranked service dimensions respectively. Within the empathy service dimension, all of the four attributes have positive mean differences, and "The suitability of class sessions in terms of timing for the teaching-learning practices" and "Spontaneous care and concern of the staff for students' needs" are the first two highest ranked attributes. Students are slightly satisfied in responsiveness service dimension, and "Courteous & promptness of instructors in service provisions" is the first highest ranked attribute and "Speed and accuracy of students' complaint resolution practices of the University" is the worst ranked attribute under responsiveness service dimension.

With respect to reliability service dimension which has average mean difference of -0.121, respondents rated lowest satisfaction level as compared to their expectation. Within reliability service dimension, "Timely provision of course materials", and "Fair & equal treatment of students by instructors" are the only attributes that have positive mean differences. Whilst, "Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc.", "Timely feedback of exams & assignments", "Scheduled beginning & ending of semester classes", "Timely provision of grade reports" and "Coverage of course contents as per the schedule" are those attributes that have negative mean differences. Among them, "Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc." is the attribute which is rated the worst by respondents. This showed that the University is very poor at managing different documents of students.

Nonetheless, although the mean scores of the level of satisfaction for all the five dimensions seems encouraging; there are some specific areas of service quality attributes that scored very lower satisfaction level. These areas are summarized in table 4 below.

No.	Service Attributes	Dimension	t-value	Mean difference	Satisfaction (%)
1	Proper students' document handling like bank slips, filled application formats & previous educational documents, exams, assignments, etc.	Reliability	-15.927	-0.652	45.0
2	Speed and accuracy of complaint resolution practices of the University	Responsiveness	-8.456	-0.407	64.6
3	Timely provision of grade reports	Reliability	-7.747	-0.384	57.0
4	Availability and accessibility of internet facilities at the University & at centers	Tangibles	-4.136	-0.272	59.3
5	Timely feedback of exams & assignments	Reliability	-3.734	-0.235	55.6
6	Scheduled beginning & ending of semester class	Reliability	-2.742	-0.185	56.3
7	Coverage of course contents as per the schedule	Reliability	-2.681	-0.172	60.3

Table 4: Specific Attributes which Require Attention (Relatively)

Source: Survey Result, 2017

To sum up, for education delivery core business of the University, service quality from the eyes of customers (students) for all its admissions i.e. regular, distance, extension and weekend has assessed using the five service dimensions and the 27 service attributes designed by the researcher. Accordingly, 78.4% of the respondents are found being satisfied by the service provisions of the University, whereas 22.6% of the sample respondents are not yet satisfied (see table 2).

#### 4.2. Level of Satisfaction of Service Dimensions and Attributes by Admission Division

As we can see from table 5 below, students from distance admission division are found dissatisfied in 3 service attributes out of the total 27 attributes. Two of them; "Timely provision of grade reports" and "Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc.)", having t-values of -2.34 and -10.944 respectively are from reliability service dimension. Whereas, "Speed and accuracy of complaint resolution practices of the University" with t-value -4.934 is from responsiveness service dimension. From the sample respondents of this admission division, 81.13% of the respondents are satisfied whereas, 18.87% are not yet satisfied by the services provided.

With respect to extension admission division, students are found dissatisfied in 8 service attributes out of the 27 attributes. Among these 8 attributes, 5 of them i.e. "Timely feedback of exams & assignments", "Scheduled beginning & ending of semester classes", "Timely provision of grade reports", "Coverage of course contents as per the schedule", "Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc." are from reliability service dimension. Whereas, the two attributes i.e. "The general willingness of the staff to help students regarding a specific problem (t-value -2.920)" and "Willingness of the staff to resolve any of students' problems though it is students' mistake (t-value -2.507)" are from empathy dimension, and the last one "Speed and accuracy of complaint resolution practices of the University (t-value -5.323)" is from responsiveness service dimension. This implies that students at this admission poorly rate reliability service dimension which is similar with all students of the University. Further, out of the total sample respondents of this admission, 62.7% are found satisfied whereas 37.3% are dissatisfied by the services provided (see appendix d).

Regarding regular admission division, students are dissatisfied in 5 service attributes out of 27 service attributes. Of these, while "promptness or fastness of responses when students interact with the University or representatives of the University (t-value -2.112)" is from responsiveness dimension; the remaining 4 attributes; i.e. "Scheduled beginning & ending of semester class (t-value -2.635)", "Timely provision of grade reports (t-value -5.196)", "Coverage of course contents as per the schedule (t-value -4.629)" and "Proper students' document handling like bank slips, filled application format & previous educational documents, exams, assignments etc. (t-value -3.323)" are from reliability service dimension. Out of the sample respondents of this admission, while 67.8% of the respondents are found satisfied by the services provided, the remaining 32.2% of them are not yet satisfied.

Lastly, in weekend admission division, students are dissatisfied in 10 service attributes out of the total 27. Five of the attributes; "Timely feedback of exams & assignments (t-value -4.974)", "Scheduled beginning & ending of semester classes (t-value -7.091)", "Timely provision of grade reports (t-value -8.883)", "Coverage of course contents as per the schedule (t-value -4.114)" and "Proper student's document handling like bank slips, filled application format & previous educational documents, exams, assignments etc. (t-value -10.381)" are from reliability service dimension. Three of the attributes; "Sufficiency of relevant library facilities (books, reference materials, tables, chairs etc.) at the University and at centers (t-value -4.953)", "Availability and accessibility of internet facilities at the University & at centers (t-value -6.436)" and "Conditions of class rooms at the University & at centers to facilitate learning (t-value -2.886)" are from tangibles dimension. Whereas, two of the attributes; "promptness or fastness of responses when students interact with the University or representatives of the University (t-value -2.023)" and "Speed and accuracy of complaint resolution practices of the University (t-value -5.709)" are from responsiveness service dimension. When we look at the overall satisfaction of

this admission division, 61.7% of the sample respondents are found satisfied whereas the remaining 38.3% of them are not yet satisfied by the services.

From the above analysis, we can infer that, there are students from the four admission divisions who experience dissatisfaction by common attributes and there is also a difference from admission to admission. For instance, students from the four admission divisions in common are dissatisfied by "Proper student's document handling like bank slips, filled application format & previous educational documents, exams, assignments etc." and "Timely provision of grade reports" which are from reliability service dimension.

In the service attribute "Speed and accuracy of complaint resolution practices of the University", students from the three admission divisions in common i.e. distance, extension and weekend experienced dissatisfaction.

Students from extension, regular and weekend admissions in common are dissatisfied by "Scheduled beginning & ending of semester classes" and "Coverage of course contents as per the schedule" service attributes. Whereas, students from extension and weekend admissions in common are dissatisfied by service attribute of "Timely feedback of exams & assignments". Besides, students from regular and weekend admissions in common are dissatisfied in "promptness or fastness of responses when students interact with the University or representatives of the University" service attribute. Finally, for the service attributes, "Sufficiency of relevant library facilities (books, additional reference materials, tables, chairs etc.) at the University and at centers", "Availability and accessibility of internet facilities at the University & at centers" and "Conditions of class rooms at the University & at centers to facilitate learning", students only from weekend admission division are dissatisfied.

Admission	No.	Service Attributes	t-value	Mean Difference	Dimension
Distance	1	Timely provision of grade reports	-2.34	-0.186	Reliability
	2	Proper student's document handling (bank slips, application & previous educational documents, exams, assignments etc.)	-10.944	-0.554	Reliability
	3	Speed and accuracy of complaint resolution practices of the University	-4.934	-0.249	Responsiveness
Evening	1	Timely feedback of exams & assignments	-2.945	-0.524	Reliability
	2	Scheduled beginning & ending of semester class	-4.950	-0.976	Reliability
	3	Timely provision of grade reports	-4.376	-0.452	Reliability
	4	Coverage of course contents as per the schedule	-4.172	-0.786	Reliability
	5	Proper student's document handling (bank slips, application & previous educational documents, exams, assignments etc.)	-5.507	-0.595	Reliability
	6	Speed and accuracy of complaint resolution practices of the University	-5.323	-0.690	Responsiveness
	7	The general willingness of the staff to help students regarding a specific problem	-2.920	-0.500	Empathy
	8	Willingness of the staff to resolve any of students' problems though it is students' mistake	-2.507	-0.500	Empathy
Regular	1	Scheduled beginning & ending of semester class	-2.635	-0.692	Reliability
	2	Timely provision of grade reports	-5.196	-0.692	Reliability
	3	Coverage of course contents as per the schedule	-4.629	-0.769	Reliability
	4	Proper student's document handling (bank slips, application & previous educational documents, exams, assignments etc.)	-3.323	-0.692	Reliability
	5	promptness or fastness of responses when students interact with the University or representatives of the University	-2.112	-0.692	Responsiveness

Admission	No.	Service Attributes	t-value	Mean Difference	Dimension
Weekend	1	Timely feedback of exams & assignments	-4.974	-0.586	Reliability
	2	Scheduled beginning & ending of semester class	-7.091	-0.829	Reliability
	3	Timely provision of grade reports	-8.883	-0.786	Reliability
	4	Coverage of course contents as per the schedule	-4.114	-0.514	Reliability
	5	Proper student's document handling (bank slips, application & previous educational documents, exams, assignments etc.)	-10.381	-0.929	Reliability
	6	promptness or fastness of responses when students interact with the University or representatives of the University	-2.023	-0.329	Responsiveness
	7	Speed and accuracy of complaint resolution practices of the University	-5.907	-0.686	Responsiveness
	8	Sufficiency of relevant library facilities (books, reference materials, tables, chairs etc.) at the University and at centers	-4.953	-0.757	Tangibles
	9	Availability and accessibility of internet facilities at the University & at centers	-6.436	-0.914	Tangibles
	10	Conditions of class rooms at the University & at centers to facilitate learning	-2.886	-0.400	Tangibles

Table 5: Level of Satisfaction of Service Dimensions and Attributes by Admission Division  
Source: Survey Result, 2017

#### 4.3. Level of Satisfaction of Service Dimensions and Attributes by Department

The below table 6 depicts that those service attributes on which students from the six departments have experienced dissatisfaction. Accordingly, students from Accounting and Public Finance are dissatisfied in 5 service attributes out of the 27 attributes. While three of these attributes; "Timely feedback of exams & assignments (t-value -2.215)", "Timely provision of grade reports (t-value -5.148)" and "Proper student's document handling like bank slips, filled application format & previous educational documents, exams, assignments etc. (t-value -10.482)" are from reliability service dimension, the remaining two; "Speed and accuracy of complaint resolution practices of the University (t-value -5.508)" and "Availability and accessibility of internet facilities at the University & at centers (t-value -2.355)" are from responsiveness and tangibles service dimensions respectively. From these five attributes, "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -10.482)" is ranked the worst by students of the department.

Students from Agricultural Business and Value Chain Management are found to be dissatisfied only in 3 service attributes. They are; "Proper student's document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -4.303)", "Speed and accuracy of complaint resolution practices of the University (t-value -2.874)" and "Availability and accessibility of internet facilities at the University & at centers (t-value -2.864)". Like that of ACPF students, it is "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -4.303)" which is ranked the worst in this department too.

Concerning students from the department of Governance and Development Management (GoDM), they are dissatisfied in 5 service attributes out of the total. While two of the attributes; "Spontaneous care and concern of the staff for students' needs (t-value -2.283)" and "Willingness of the staff to resolve any of students problems though it is students' mistakes (t-value -2.590)" are from empathy service dimension, the other two attributes; "Sufficiency of relevant library facilities like books, other reference materials, tables, chairs etc. at the University and at centers (t-value -4.168)" and "Availability and accessibility of internet facilities at the University & at centers (t-value -2.930)" are from tangibles dimension. Whereas, the remaining one "promptness or fastness of responses when students interact with the University or representatives of the University (t-value -2.872)" is from responsiveness service dimension. The analysis shows that students from the department of GoDM are the only students found satisfied in all attributes of reliability service dimension in general and "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc." service attribute in particular that makes them different from the other departments. However, unlike the other departments, "Sufficiency of relevant library facilities like books, other reference materials, tables, chairs etc. at the University and at centers (t-value -4.168)" is ranked the worst by students of the department. This may be connected with its infancy as a newly launching department in the University.

With regard to students from the department of Human Resource Management and Leadership, the experienced dissatisfaction is only in 3 attributes. While two of them; "Timely provision of grade reports (t-value -3.531)" and "Proper

students' document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -7.439)" are from reliability service dimension, the other one "Speed and accuracy of complaint resolution practices of the University (t-value -3.501)" is from responsiveness dimension. Students ranked "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc." the worst attribute.

Students from the department of law are dissatisfied in 6 service attributes out of the total 27 attributes. Of these 6 attributes, 4 of them are from reliability service dimension. They are; "Timely feedback of exams & assignments (t-value -3.113)", "Scheduled beginning & ending of semester classes (t-value -3.224)", "Timely provision of grade reports (t-value -7.424)" and "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -8.201)". Whereas, the remaining two attributes; "Speed and accuracy of complaint resolution practices of the University (t-value -6.308)" and "Availability and accessibility of internet facilities at the University & at centers (t-value -2.074)" are from responsiveness and tangibles service dimensions respectively. Like the other departments, the worst ranked attribute is "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc."

Lastly, regarding students from the department of Information Technology, dissatisfaction is scored in 12 service attributes out of the total 27 attributes. It is the only department in which students are dissatisfied almost by half of the total service attributes. What makes this result very surprising is that the department has registered this score only in two admission divisions i.e. regular and extension which are found in the main campus and relatively easy to serve customers better than the other admission divisions. Out of the 12 service attributes, 4 of them; "Scheduled beginning & ending of semester classes (t-value -3.796)", "Timely provision of grade reports (t-value -2.236)", "Coverage of course contents as per the schedule (t-value -3.796)" and "Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc. (t-value -2.076)" are from reliability dimension; 2 of them; "knowledge & understanding of assigned instructors on each course (t-value -2.236)" and "Clear & simple presentation of lessons by instructors (t-value -2.712)" are from assurance dimension; the other 2 "promptness or fastness of responses when students interact with the University or representatives of the University (t-value -2.000)" and "Speed and accuracy of complaint resolution practices of the University (t-value -2.712)" are from responsiveness dimension; one service attribute i.e. "Willingness of the staff to resolve any of students problems though it is students' mistake (t-value -2.000)" is from empathy dimension, and the last three; "Sufficiency of relevant library facilities like books, reference materials, tables, chairs etc. at the University and at centers (t-value -2.236)", "Availability and accessibility of internet facilities at the University & at centers (t-value -5.000)" and "Conditions of class rooms at the University & at centers to facilitate learning (t-value -2.712)" are from tangibles service dimension. The department is also found to be the only department that scored dissatisfaction at least in one service attribute from all the five service dimensions. It is also the unique department that has scored dissatisfaction in assurance service dimension. This dimension is the first ranked dimension by all students of the University in general and students of each department in particular. Further, of the 12 service attributes, "Availability and accessibility of internet facilities at the University & at centers (t-value -5.000)" is the worst ranked attribute by students of the department.

Department	No.	Service Attributes	t-value	Mean Difference	Dimension
ACPF	1	Timely feedback of exams & assignments	-2.215	-0.208	Reliability
	2	Timely provision of grade reports	-5.148	-0.369	Reliability
	3	Proper student's document handling like bank slips, application & previous educational documents, exams, assignments etc.	-10.482	-0.646	Reliability
	4	Speed and accuracy of complaint resolution practices of the University	-5.508	-0.377	Responsiveness
	5	Availability and accessibility of internet facilities at the University & at centers	-2.357	-0.238	Tangibles
ABVM	1	Proper student's document handling like bank slips, application & previous educational documents, exams, assignments etc.	-4.303	-0.560	Reliability
	2	Speed and accuracy of complaint resolution practices of the University	-2.874	-0.320	Responsiveness
	3	Availability and accessibility of internet facilities at the University & at centers	-2.864	-0.440	Tangibles
GoDM	1	promptness or fastness of responses when students interact with the University or representatives of the University	-2.872	-1.000	Responsiveness
	2	Spontaneous care and concern of the staff for students' needs	-2.283	-0.750	Empathy
	3	Willingness of the staff to resolve any of students' problems though it is students' mistake	-2.590	-0.833	Empathy

	4	Sufficiency of relevant library facilities like books, reference materials, tables, chairs etc. at the University and at centers	-4.168	-1.083	Tangibles
	5	Availability and accessibility of internet facilities at the University & at centers	-2.930	-0.917	Tangibles
HRML	1	Timely provision of grade reports	-3.531	-0.355	Reliability
	2	Proper student's document handling like bank slips, application & previous educational documents, exams, assignments etc.	-7.439	-0.661	Reliability
	3	Speed and accuracy of complaint resolution practices of the University	-3.501	-0.371	Responsiveness
Law	1	Timely feedback of exams & assignments	-3.113	-0.403	Reliability
	2	Scheduled beginning & ending of semester classes	-3.224	-0.418	Reliability
	3	Timely provision of grade reports	-7.424	-0.746	Reliability
	4	Proper student's document handling like bank slips, application & previous educational documents, exams, assignments etc.	-8.201	-0.731	Reliability
	5	Speed and accuracy of complaint resolution practices of the University	-6.308	-0.627	Responsiveness
	6	Availability and accessibility of internet facilities at the University & at centers	-2.074	-0.343	Tangibles
IT	1	Scheduled beginning & ending of semester classes	-3.796	-1.167	Reliability
	2	Timely provision of grade reports	-2.236	-0.500	Reliability
	3	Coverage of course contents as per the schedule	-3.796	-1.167	Reliability
	4	Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc.	-2.076	-0.833	Reliability
	5	knowledge & understanding of assigned instructors on each course	-2.236	-0.500	Assurance
	6	Clear & simple presentation of lessons by instructors	-2.712	-0.833	Assurance
	7	promptness or fastness of responses when students interact with the University or representatives of the University	-2.000	-0.667	Responsiveness
	8	Speed and accuracy of complaint resolution practices of the University	-2.712	-0.833	Responsiveness
	9	Willingness of the staff to resolve any of students' problems though it is students' mistake	-2.000	-0.667	Empathy
	10	Sufficiency of relevant library facilities like books, reference materials, tables, chairs etc. at the University and at centers	-2.236	-0.500	Tangibles
	11	Availability and accessibility of internet facilities at the University & at centers	-5.000	-0.833	Tangibles
	12	Conditions of class rooms at the University & at centers to facilitate learning	-2.712	-0.833	Tangibles

Table 6: Level of Satisfaction of Service Dimensions and Attributes by Department

Source: Survey Result, 2017

## 6. Conclusions and Recommendations

### 6.1. Conclusions

The study aimed at assessing service quality and its subsequent effects on the level of customer satisfaction at Oromia State University. It also tried to identify service dimensions and their attributes that contribute for more customer satisfaction and those that resulted in customer dissatisfaction.

Accordingly, the study shows that the level of customer satisfaction for 'assurance' service dimension is found to be the highest followed by 'tangibles' and 'empathy'. Though students' perceived satisfaction for 'responsiveness' is not

satisfactory, it is ranked as the fourth service dimension. Whereas, 'reliability' service dimension is found to be the worst from the eyes of students.

Further, the analysis also reveals that out of the 27 service attributes designed, students are satisfied in 20 attributes and dissatisfied in the remaining 7 attributes. Out of the 20 attributes, the top six attributes of service quality whose experience have better than expected for students of the University are in the sequence of; ASS<sub>1</sub> (Appropriateness & relevancy of course materials), RES<sub>1</sub> (Courteous & promptness of instructors in service provisions), TAN<sub>1</sub> (Sufficiency of library facilities like books, other reference materials, chairs, tables etc. at the University and at centers), REL<sub>6</sub> (Fair & equal treatment of students by instructors), ASS<sub>3</sub> (Interactive, useful & attractiveness of class sessions) and ASS<sub>2</sub> (Effectiveness of class sessions in facilitating learning). On the reverse, the top five worst service quality attributes consecutively are; REL<sub>7</sub> (Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc.), RES<sub>3</sub> (Speed and accuracy of complaint resolution practices of the University), REL<sub>4</sub> (Timely provision of grade reports), TAN<sub>4</sub> (Availability of internet facilities at the University & at centers) and REL<sub>2</sub> (Timely feedback of exams & assignments). Whilst, ASS<sub>1</sub> (Appropriateness & relevancy of course materials) is perceived to be much better than expected and is the first best ranked attribute whereas REL<sub>7</sub> (Proper students' document handling like bank slips, application & previous educational documents, exams, assignments etc.) is perceived to be much worse than expected and is the first worst ranked attribute. Of the four admission divisions in general, 78.4% of students are found satisfied by the services provided whereas 22.6% of the students are found not yet satisfied.

## 6.2. Recommendations

In order to meet, at least at par, if not exceeded the high expectation of customers, several measures need to be taken to enhance the quality of services offered to them. Thus, based on the major findings of the study the following recommendations, which are thought to have significant importance for future implementation activities, are forwarded:

Primarily, it can be inclusively inferred that in reliability service dimension of the model, students are not satisfied with the provided services. Out of the 7 attributes designed for this dimension, students are satisfied only in 2 attributes whereas in the remaining 5 attributes the University has scored below what students have expected. With respect to each attribute, proper students' document handling like bank slips, filled application formats and previous educational documents, exams, assignments etc. is the most serious factor that greatly contributes to students' dissatisfaction for all admission divisions, departments and both sexes. Therefore, the University should devise an effective, efficient and accountable student document handling system in order to properly collect, submit and file any document of students from registration till graduation and post-graduation.

Regarding the next two worst ranked attributes of reliability dimension; timely provision of grade reports and timely feedback of exams and assignments, the University should commit all the necessary resources and strictly adhere to its Business Process Re-engineering standards so as to respond to these problems.

Concerning, scheduled beginning and ending of semester classes and coverage of course contents as per the allotted time, another two worst ranked attributes of reliability which are commonly observed in extension, regular and weekend admission categories, the University should avoid too much flexibility in its academic calendar and built stability and consistency for its different programs. Besides, the University should have a system to ensure and monitor the proper coverage and completion of each and every course content in all admission and departments in every semester.

Coming to the remaining four service dimensions; assurance, responsiveness, empathy and tangibles; taking their cumulative results, more or less, as it can be inferred from the analysis, the University has been performing well to satisfy its students. However, when we look at each attribute, speed and accuracy of complaint resolution practices of the University from responsiveness service dimension is the second worst ranked attribute by students from all admissions, departments and both sexes. Therefore, the University should design students' complaint resolution mechanisms that could ensure accountability and easy supervision by higher concerned body and respond promptly and correctly to students' complaints.

Regarding availability and accessibility of internet facilities at the University and at centers which is an attribute from tangibles service dimension, and worst ranked by students from IT department and students from weekend admission division in general; the University should do its best to make all the required facilities available and accessible for IT students whereas for weekend students, the University should lower students' expectation of these facilities since it is very difficult to have an internet rooms at weekend centers.

Further, the survey analysis shows that students from the department of IT are the only students dissatisfied by assurance service dimension in general and these two attributes in particular i.e. "knowledge & understanding of assigned instructors on each course" and "Clear & simple presentation of lessons by instructors". Since, it is in assurance service dimension that the actual teaching-learning practices take place, the dimension has a great contribution in keeping the quality of educational services as per goals of education programs or professional qualities of graduates, therefore, the concerned body should reconsider both instructor recruitment and selection process as well as instructor assignments and capacitating existing staff.

Finally, in taking any remedial action and measurement, the University should consider this survey results of each admission division and department in order to account their respective weaknesses.

## 7. References

- i. Abdullah, F. (2006), "Measuring Service quality in higher education: HedPERF versus SERVPERF", Marketing Intelligence and Planning, Vol. 24, No.1, pp 31 – 47

- ii. Asubonteng, P., McCleary, K.J. and Swan, J.E. (1996), "SERVQUAL revisited: a critical review of service quality", *Journal of Services Marketing*, Vol. 10, No. 6, pp. 62-81.
- iii. Berry, L.L., Zeithaml, V.A., Parasuraman, A.(1990) Five imperatives for improving service quality. *Sloan Management Review*, Vol. 31 No. 4. p. 29
- iv. Bolton, R. & Drew, J., 1994. Linking customer satisfaction to service operations and outcomes. *Service Quality: New Directions in Theory and Practice*, pp. 173-200.
- v. Brady, M.K. and Cronin, J.J. (2001), "Some new thoughts on conceptualizing perceived service quality: A hierarchical approach", Vol. 65, pp 34 – 49
- vi. Brown, J.B., and McDonnell, B. (1995), "The Balanced score-card: short-term guest or long-term resident", *International Journal of Contemporary Hospitality Management*, Vol. 7, No. 2/3
- vii. Brown, S.W., Swartz, T.A. (1989) "A gap analysis of professional service quality" *Journal of Marketing* Vol.53 No. 2 pp.98
- viii. Brysland, A., Curry, A. (2001). Service improvements in public services using SERVQUAL. *Managing Service Quality* Vol. 11 No 6 p. 391
- ix. Cuganes an, S., Bradley, G. and Booth, P. (1997),"Service quality and organizational performance indicators", Kunst, P. and Lemmink, J. (Eds.), *Managing Service Quality Volume III*, Paul Chapman Publishing Ltd, London, pp.161-181.
- x. Curry, A. (1999), "Innovation in public service management", *Managing Service Quality*, Vol.9, No.3, pp. 180-190.
- xi. Cuthbert, P.F. (1996), "Managing service quality in HE: Is SERVQUAL the answer?", *Managing Service Quality*, Vol. 6 No. 2, pp. 11-16.
- xii. Dotchin, J.A. and Oakland, J.S. (1994a), "Total quality management in services: Part 2 Service quality", *International Journal of Quality & Reliability Management*, Vol. 11, No. 3, pp. 27-42.
- xiii. Edvardsen, B., Tomasson, B. and Ovreteit, J. (1994), *Quality of Service: Making it Really Work*, McGraw-Hill, New York, NY.
- xiv. Ford, J.B., Joseph, M., and Joseph, B. (1999), "Importance- performance analysis as a strategic tool for service marketers: the case of service quality perceptions of business students in New Zealand and the USA", *Journal of Services Marketing*, Vol. 13No. 2, pp. 171-186.
- xv. Fornell, C. (1992). "A National Customer Satisfaction Barometer: The Swedish Experience." *Journal of Marketing*, Vol. 56, p.6-21.
- xvi. Gabbott, M., and Hogg, G. (1997), "Service dimensions and service quality: An asymmetric approach", Kunst, P. and Lemmink, J. (Eds.), *Managing Service Quality Volume III*, Paul Chapman Publishing Ltd, London, pp.1-9.
- xvii. Ghobadian, A., Speller, S. and Jones, M., (1994), "Service Quality Concepts and Models", *International Journal of Quality & Reliability Management*, Vol. 11, No. 9, pp 43 – 66
- xviii. Gronroos, C. (2001). The perceived service quality concept- a mistake? *Managing Service Quality*, Vol. 11 No 3, pp.151
- xix. Grönroos, C. (1984), "Defining marketing: A market-oriented approach", *European Journal of Marketing*, Vol. 23No. 1, pp. 52-60.
- xx. Gronroos, C. (1982). "Strategic management and marketing in the service sector." Helsinki: Swedish School of Economics and Business Administration
- xxi. Gupta, A., McDaniel, J. & Herath, S., 2005. Quality management in service firms: sustaining structures of total quality service. *Managing Service Quality*, Volume 15, pp. 389-402.
- xxii. Harvey, L. (1995). Beyond TQM. *Quality in Higher Education*, Vol. 1 No. 2, pp. 123- 46.
- xxiii. Iacobucci, D., Ostrom, A. & Grayson, K., 1995. Distinguishing service quality and customer satisfaction: the voice of the consumer. *Journal of Consumer Psychology*, Volume 4, pp. 277 303.
- xxiv. Johnston, R. (1995), "The determinants of service quality: satisfiers and dissatisfiers", *International Journal of Service Industry Management*, Vol.6, No. 5, pp 53 – 71
- xxv. Kohn, A. (1993) "Punished by Rewards: The Trouble with Gold Stars, Incentive Plans, A's, Praise and other Bribes", Boston: Houghton Mifflin, pp. 13.
- xxvi. Kotler P., Armstrong G., Saunders J. Wong V. (2002) *Principle of Marketing*, 3<sup>rd</sup> edition, Prentice Hall Europe.
- xxvii. Lewis, B.R. and Mitchell, V.W. (1990), "Defining and measuring the quality of customer service", *Marketing Intelligence & Planning*, Vol. 8, No. 6, pp. 11-17.
- xxviii. Luk, Sh.T.K. and Layton, R. (2002), "Perception Gaps in customer expectations: Managers versus service providers and customers", *The Service Industries Journal*, Vol.22, No.2, April, pp. 109-128.
- xxix. Oldfield, B. M. and Baron, S. (2000), "Student perception of service quality", *Quality Assurance in Education*, Vol. 8 No.2, pp. 85-95.
- xxx. Ooi, K., Abdul Rahman, T., Lin, B. T. B.-I. & Yee-Loong, C. A., 2011. Are TQM practices supporting customer satisfaction and service quality?. *Journal of Services Marketing*, pp. 410-419.
- xxxii. Owlia, M.S. and Aspinwall, E.M. (1997), "A framework for the dimensions of quality in higher education", *Quality Assurance in Education*, vol. 4 No.2, pp. 12- 20
- xxxiii. Palmer, A. (2001), *Principles of services marketing*, 3<sup>rd</sup> ed., McGraw-Hill, UK.
- xxxiv. Parasuraman, A., Zeithaml, V.A., and Berry, L.L. (1985), "A conceptual model of service quality and its implication for future research" *Journal of Marketing*, Vol. 49, pp. 41-50.



- xxxv. Quinn, A., Lemay, G., Larsen, P. And Johnson, D. M. (2009), "Service quality in higher education", *Total Quality Management and Business Excellence*, Vol. 20 No. 2, pp 139 – 152
- xxxvi. Robinson, S. (1999), "Measuring service quality: current thinking and future requirements", *Marketing Intelligence and planning*, Vol. 17, No. 1, pp 21 – 32
- xxxvii. Rowley, F. (1997), "Beyond service quality dimensions in higher education and towards a service contract", *Quality Assurance in Education*, vol. 5, No. 1, pp 7 -14
- xxxviii. Saunders, M., Lewis P. and Thornhill A. (2009) *Research Methods for business students* 4th edition Pearson education limited.
- xxxix. Smith, G., Smith, A. and Clarke, A. (2007), "Evaluating service in universities: A service department perspective", *Quality Assurance in Education*, Vol. 15 No. 3, pp. 334- 351.
- xl. Sureshchandar G.S., Rajendran C, & Anantharaman R.N. (2002) the relationship between service quality and customer satisfaction – a factor specific approach, *Journal of Services Marketing*, 16(4), 363 – 379.
- xli. Tikkanen , H. & Alajoutsijau, K., 2002. Customer Satisfaction in industrial market: opening of the concept. *Journal of business and industrial marketing*, Volume 17, pp. 25-42.
- xlii. Tse, David K. & Peter, C. Wilton. (1988). *Models of Consumer Satisfaction: An Extension*, *Journal of Marketing Research*, 25 204-212.
- xliii. Umashankar, V. And Dutta, K. (2007), "Balanced scorecard in managing higher education institutions: An Indian perspective", *International Journal of Educational Management*, Vol. 21, No.1, pp 54 – 67
- xliv. Van Iwaarden, J., van der Wiele, T., Ball, L., and Millen, R. (2003), "Applying SERVQUAL to web sites: An exploratory study", *International Journal of Quality & Reliability Management* , Vol.20, No.8, pp. 919-935.
- xlv. Venetis, K. (1997), "Service quality dimensions of professional business services: Structure and dynamics within long term relationships Kunst, P. and Lemmink, J. (Eds.), *Managing Service Quality Volume III*, Paul Chapman Publishing Ltd, London, pp.89-105).
- xlvi. Wisniewski, M. (2001), "Using SERVQUAL to assess customer satisfaction with public sector services", *Managing Service Quality*, Vol.11, No.6, pp. 380-388.
- xlvii. Zeithaml, V.A., Parasuraman, A., Berry, L.L. (1988). "Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence." *Journal of Marketing* Vol. 52 No. 3 p.3
- xlviii. Zeithaml, V.A., Berry, M.J., and Gremler, D.D. (2006), *Services Marketing: Integrating Customer Focus Across the Firm*, 4th ed., McGraw – Hill, Singapore.
- xlix. Zeithaml , V. & Bitner , M., 2003. *Services Marketing: Integr*